

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE 1600

TRANSCRIPT OF HEARING

JULY 15, 1959

DEARNLEY - MEIER & ASSOCIATES  
INCORPORATED  
GENERAL LAW REPORTERS  
ALBUQUERQUE, NEW MEXICO  
3-6691 5-9546

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO  
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IN THE MATTER OF:

CASE 1600 (continued) In the matter of the application :  
of M. A. Romero and Robert Critchfield con- :  
cerning the operation of gas prorationing :  
in the Blanco Mesaverde Gas Pool and the :  
ratable taking of gas from said Blanco :  
Mesaverde Gas Pool in Rio Arriba and San :  
Juan Counties, New Mexico, as well as from :  
the Choza Mesa-Pictured Cliffs Gas Pool in :  
Rio Arriba County, New Mexico. :  
: :  
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BEFORE:

Gov. John Burroughs  
Murray Morgan  
A. L. Porter

T R A N S C R I P T    O F    P R O C E E D I N G S

MR. PORTER: Take up next Case 1600.

MR. PAYNE: Case 1600. (continued) In the matter of  
the application of M. A. Romero and Robert Critchfield concerning  
the operation of gas prorationing in the Blanco Mesaverde Gas Pool  
and the ratable taking of gas from said Blanco Mesaverde Gas Pool  
in Rio Arriba and San Juan Counties, New Mexico, as well as from  
the Choza Mesa-Pictured Cliffs Gas Pool in Rio Arriba County, New  
Mexico.

MR. ANDREWS: May it please the Commission, my name is  
Frank Andrews from Seth, Montgomery, Federici & Andrews, and I

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would like to enter my appearance and that of Mr. Ben R. Howell on behalf of El Paso Natural Gas Company.

MR. ERREBO: Burns Errebo, Modrall, Seymour, Sperling, Roehl & Harris, appearing on behalf of Pacific Northwest Pipeline Corporation.

MR. VERITY: George L. Verity, appearing for Southern Union.

MR. PORTER: Are there other appearances in this case?

MR. CAMPBELL: Jack M. Campbell of Campbell & Russell, Roswell, New Mexico, appearing on behalf of the Applicant.

MR. PAYNE: Gentlemen, if I am correct, I understand that you are going to argue the legal point today on the motion to strike various paragraphs in the application of Romero and Critchfield, is that correct?

MR. ERREBO: Yes, sir, that is correct.

MR. PAYNE: How much time did you have in mind for argument?

MR. ERREBO: I think for Pacific and El Paso we had in mind half an hour total. Is that correct, Mr. Howell?

MR. HOWELL: That is right.

MR. PAYNE: Is half an hour sufficient for you, Mr. Campbell?

MR. CAMPBELL: I assume so. I don't know what they are going to say, but it ought to be enough.

MR. HOWELL: Can't you talk twice as fast as we do,

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Jack?

MR. CAMPBELL: Probably.

MR. PAYNE: How about you, Mr. Verity?

MR. VERITY: I will require a very small amount of time.

MR. PORTER: Depends on how close it is to noontime. We will limit each side to thirty minutes, and ask El Paso and Pacific to lead off because they filed the motion to strike. Either one, not both at the same time.

Mr. Errebo, you may proceed with your argument.

MR. ERREBO: If it please the Commission, this hearing this morning is on the motion of El Paso Natural Gas Company and Pacific Northwest Pipeline Corporation to strike certain paragraphs of the Applicant's Application and Bill of Particulars.

The Pacific Northwest Pipeline Corporation is the operator of the 28-4 and 29-4 Units which are producing gas from the Mesaverde formation in the Blanco Mesaverde Pool. Our Motion to Strike is directed to three features of the application; namely, that the Commission should take jurisdiction of the manner in which an operator completes a well, that the Commission should take jurisdiction of the connection of gas transportation facilities to gas wells, and further, that the Commission should take jurisdiction and exercise control over the pressures at which operators of natural gas pipelines shall operate those pipelines.

We contend that this Commission has jurisdiction and has the

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authority to determine its own jurisdiction in applying the Oil Conservation Statutes. Certainly, in issuing every order that this Commission issues, it must first determine that it has jurisdiction under the statutes to issue the order. There are cases which state that, such as Dobson vs. Oil and Gas Commission of Arkansas, 235 Southwest Section, 33. In any circumstances where a Statute is reasonably open to conclusion, we think the Commission does have the power, as in the first instance, to determine administratively its own jurisdiction. This same question is digested quite thoroughly in Key No. 330 under the section of Administrative Law in the West Publishing Company Digest.

As to the question of the jurisdiction of the Commission over the manner in which an operator completes a gas well, the general power of the Commission to prevent waste and protect correlative rights are set forth in Chapter 65, Article 3, Section 10 of the New Mexico Statutes which provides:

"The Commission is hereby empowered and it is its duty to prevent the waste prohibited by this Act and to protect correlative rights, as in this Act provided. To that end the Commission is empowered to make and enforce rules, regulations and orders, and to do whatever may be reasonably necessary to carry out the purposes of this Act whether or not indicated or specified in any section hereof."

However, this Commission is authorized to do only what is "reasonably necessary" to prevent waste and to protect correlative rights. And, therefore, we contend that the Commission does not have the authority to grant the relief sought by the applicants in this matter because the manner of well completions is not a



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subject which can be reasonably considered by this Commission, and it is not reasonably necessary action by the Commission. In that regard it is not reasonably necessary to prevent waste or to protect correlative rights. See Oklahoma Natural Gas Company vs. vs. Choctaw Gas Co. 236 Pacific Second 970.

In other words, when this Commission acts, it must be based upon the protection of correlative rights or the prevention of waste.

Chapter 65-3-11 contains an enumeration of the specific powers of this Commission. There are 14 of them, and not a single one of those powers include the authority of the Commission to regulate the manner in which an operator may complete his well. Thus, it is necessary to look to the general authority of this Commission, and in that case, the exercise of that general authority, as I have just pointed out, must be reasonable. We believe that it is unreasonable to put an operator in the position of acting at his peril in the completion of a well lest it later be determined on the application of some party that he acted imprudently or that he did not act and complete that well in accordance with the generally accepted practices of the field. Who is to determine what the generally accepted practices of the field are, and what are they? Likewise, if this Commission should take jurisdiction over deciding such a question, it would naturally follow then that it would require an operator to submit in advance of his drilling a well what his completion procedure would be, what would be the manner of com-



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pleting the well, how it would be perforated, how many pounds of sand to frac, what intervals, and so forth. From an operating point of view, this would be impossible, we contend. After all, the details of certain of the completion procedures cannot be determined. You don't know what you are up against until you penetrate the formation, look at the log, look at the samples and take advantage of other datum which is available. That's the reason geologists and engineers sit on the well. The decision as to completion of those wells must be made in a very short period of time; there is no time for an administrative body to act in determining how that well should be completed.

In attempting to regulate the completion of wells, this Commission would be assuming a heavy administrative burden and a grave responsibility to the owners of the wells, which we believe was never intended by the legislature of this state.

We made a careful search of decisions in the oil and gas regulations of other states and have found not a single instance in which this type of regulation, which the applicant proposes, has ever been contemplated or even considered. How can this Commission and its staff be expected to instruct the operators how and in what manner that the hundreds of wells which are completed each year in this state should be completed, and we believe it is -- would be a heavy responsibility and a very grave responsibility for this Commission and its staff to make decisions which may effect the success or failure of wells that cost hundreds of



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thousands of dollars, and yet this is exactly the situation which this Commission would be in if it were to assume jurisdiction and hear the applicant's complaints in this regard. The applicants complain that their correlative rights have not been protected, yet Chapter 65-3-29 defines correlative rights as used in the Act as follows:

"Correlative rights means the opportunity afforded, so far as practical to do so, to the owner of each property in a pool to produce without waste his just and equitable shares of the oil and gas, or both, in the pool being an amount so far as can be practically determined and so far as being practically obtained without waste," etc. etc.

We believe that the correlative rights of the applicant have been protected in this instance, and under this definition, the key word in the definition is "opportunity afforded." Here, we believe, that the opportunity has been afforded by the adoption of special rules and regulations for this pool whereby the applicants may receive their just and equitable share of the gas produced from the pool and having been afforded this opportunity, as contemplated by the statute, they cannot now expect the Commission to go further and, by interfering with an impairing contractual relationship, determine for the parties how and in what manner they will proceed to exercise the rights which they have been given.

The authority of this Commission, therefore, we contend, is at at end, when field rules providing for the drilling of wells and allocation of production has been established, thereby preventing waste and protecting correlative rights. The Commission, in order



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to protect correlative rights, is not required by the Statute, nor should it go further and tell the operator how and in what manner he should avail himself of the rights he has been given when historically this has been left up to the sound judgment of the operators based upon engineering, geological and business considerations. Today, under the guise of seeking protection of correlative rights, applicants seek to have this Commission tell the operator how and where to perforate a well or how and where to fracture.

Granted this request today, the applicant may come before this Commission tomorrow and request that it determine why an operator and how and when an operator shall drill his next well on the lease; that would be the next step the Commission might be requested to take. Thus, it is apparent that the applicant's complaint is not related to correlative rights but instead to a breach of duty, if such exists, between the operator and the overriding royalty owners which should be adjudicated by the Court of this State and not by the Commission.

The powers of this Commission are limited to the extent that they may not encroach upon the powers of the Court of the State. As a general result, administrative officers and bodies cannot consider or adjudicate contractual rights between parties unless they have been granted the power to do so by organic or valid statutory enactment. See 73 CJS, paragraphs 67 and 68 at Pages 392 and 393. Also see Independent Oil and Gas Company vs. Mooney 103 Pacific Second 557. Applicant's rights, whatever they may be, arise out of the unit agreement, and the unit operating agreement,



which they ratified. Applicants have, therefore, chosen the wrong forum. We must look at the Courts of this State rather than this Commission.

Pacific Northwest Pipeline Corporation also contends that this Commission is without jurisdiction or statutory authority to hear a complaint that applicants have neglected and failed to provide gas pipeline facilities with pressure which will permit the entry and transmission of applicant's gas under conditions of deliverability. This is a request for regulatory action by this Commission which is unheard of under the Conservation Statutes of this state or any other oil and gas producing state.

Many of the arguments which I have just presented to you in connection with this previous matter, I think, apply to this situation here. This Commission has been created by the legislature, and, therefore, has only such powers as are delegated to it by statutory provisions, and they cannot assume additional powers. Now, this, what the applicant asks in this case, is for the Commission to assume additional powers. That theory has been fully supported by the case of Ferguson Steere Motor Co. vs. State Corporation Commission, 63 NM, 894, and by other cases arising against the Oil and Gas Commission of the States of Arkansas, Oklahoma and Kansas. In this case, there is no allegation that the applicants have tendered gas to El Paso or Pacific Northwest of a like quantity, quality and pressures available from other wells and that said companies have refused to take it in accordance with the statute.

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The applicants own no gas wells, they operate no gas wells, but are simply owners of fractional interests which by their very nature have no operating rights, but instead have simply the right to receive a certain percentage of the proceeds from production if gas is produced and marketed by the owner of the operating rights. The pipeline operators have constructed their gathering systems so as to serve a large area of this pool. They stand ready, willing, and able to purchase gas pursuant to the rules and regulations of this Commission now in effect from wells which are capable of producing gas in a quantity and at pressures which will justify their connections, but there is nothing in the laws of this State nor the rules of this Commission which require an operator to operate his pipeline at any particular pressure. Historically, this matter has also been left to the sound discretion and judgment of the pipeline operators, and as a result, we can find no decisions or orders by oil and gas administrative bodies which require an operator of a pipeline to operate these facilities at any particular pressure.

As we have previously pointed out, this Commission has discharged its obligations to protect its correlative rights when it affords the operator, or a producer, an opportunity to produce its fair and just share of the gas. Correlative rights do not exist, as such, beyond the right to such opportunity.

Thus, we see that the legislature has not delegated to this Commission either expressly or by implication the authority to regulate pipeline pressures, nor does the statutory authority to



protect correlative rights extend to a situation such as this. We further see that there is absolutely no precedent in this state or in any other oil producing state for the regulation of gas pipeline pressures.

Thus, the trail which the applicants are asking this Commission to take leads inevitably to a trackless and unexplored area of oil and gas regulation, which has been wisely avoided by other states.

MR. PORTER: Mr. Howell.

MR. HOWELL: I would like to reserve a portion of the time in this statement to a few minutes for a reply, if the Commission will permit.

MR. PORTER: We had expected to allow additional time for rebuttal, Mr. Howell.

MR. HOWELL: May it please the Commission, this application made by Mr. Campbell's client, granted, would open the door to this Commission taking jurisdiction over matters which wisely and heretofore has always been left to the parties and their private contracts. It would impose upon the Commission judicial duties in determining the rights of private parties as to their contractual relationship.

The Supreme Court of this State has said that the legislature has no power to create a Commission with such judicial duties. I'm sure you are familiar with the Hovey Concrete Block Company case in which that determination was made.

Now, let's analyze very briefly the Application and the Bill of Particulars which were filed. It seems to me that there are



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four points that the applicants in this case are complaining about. First of all -- and the easiest to shoot at from our standpoint is certainly their complaint as to the manner in which wells have been completed. I can't add anything to what Mr. Errebo said on that except this; that not only historically but legally and in the realm of common sense, the party that pays the cost of completing the well has got the right to determine how he is going to complete it. The fellow that puts up the money is going to determine how many gallons of oil or water, how many pounds of sand, how much pressure, how much money he is going to spend, and we think that this is certainly a novel proposal that this Commission should ~~second~~guess and review the manner in which the operator that paid the bill elected to complete the well. The allegation is made that wells -- certain wells have not been connected. Again, the matter of connection is primarily a matter of contract between the parties. If the applicants have some gas which they are authorized to sell, they would be required to make -- enter into a contract before selling that gas. If there be such a contract, the enforcement of that contract and its interpretation and determination is a matter for the Courts and not for this administrative Commission whose responsibility is that of the prevention of waste and protection of correlative rights. Now, the statute does provide in Section 13, I believe it's sub-paragraph C of that Section, that in the event the Commission finds that any well is unreasonably being denied a connection, it may



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place that well upon the allowable schedule for a pool. It would include that well. That would seem to limit the only action that could be taken, and the applicants in this case are not asking for that relief, they are not asking to have that done.

The next point which they raise is the matter of the pressures at which pipelines are operated. I can add very little to what Mr. Errebo has said in connection with the matter of pressures. But pressures at which pipelines are operated depend to a large extent upon the amount of compression which is available to the transmission system. The amount of compression that is available again depends on how much money the operator has spent and how much authority he has obtained to construct facilities for such compression. Again, a matter that never has been acted upon by this Commission and ought not to be acted upon.

Finally, there is a shotgun allegation that there is a failure of ratable taking. Let us say that we agree that this Commission has jurisdiction to hear complaints as to ratable taking. We agreed this Commission has the power to enter orders which will require the ratable taking as long as those orders are based upon the prevention of waste and protection of relative rights. Now, our position is that having adopted proration rules for a pool, that jurisdiction of the Commission has been exercised, the Commission has established in the Blanco Mesaverde Pool the basis for which ratable taking is required. As, I might merely throw in a statement which the testimony will prove, that



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insofar as El Paso Natural Gas Company is concerned, we are not purchasing gas from the wells that are listed as ours. We are the operator of those wells, and the owner of a majority of the interest, and we are taking the gas produced from those wells into our system and accounting to the royalty owners and overriding royalty owners for the value of that gas. The interest of the applicants in one block consists of a five percent overriding royalty and an interest which is denied, called by them a ten percent carrying working interest. Again, it is between the parties as to what is the rights of the respective parties, the interest in another block is that of a two and a half percent of seven-eighths of overriding interest. The interest of the third block is a five percent of seven-eighths interest in overriding royalty. The applicant has certainly in many of these places no right which is alleged, to take gas and sell it, doesn't allege it made a contract or it intends to make a contract, but we are certainly not purchasing, we are taking. The statute prohibits us from discriminating against our own wells. I guess we might read into it that it prevents us from discriminating in favor of our wells, and I guess we might as well read into it that it prevents us discriminating against our own wells, but it is our wells we are talking about in this case.

Now, the Commission, having exercised its jurisdiction by entering an order establishing the proration rules for the Blanco Mesaverde, the Commission has prescribed what is the basis for ratable taking, and again, if this



applicant has any cause or criticism, it is a matter of contract between the applicants and the operators, and not a matter to take the time of this Commission. Thank you.

MR. PORTER: Mr. Verity, do you have anything?

MR. VERITY: Your Honor, I just would like to make a statement more than anything else on behalf of Southern Union Gas Company. We have no interest in this particular controversy, but we do believe that if the Commission undertook to regulate how operators can complete wells or what pressures a pipeline company must operate their taking of gas, that they would be undertaking to go down a road that has a very long winding course that they could never complete. It would mean that this Commission would have to have as many engineers as there are now employed by all of the companies in the State, and we feel that this is absolutely an impossibility, that the statute never intended it, and agree with Mr. Errebo's statement in this regard. We think that he has properly pronounced the law to be that if there is a proper complaint that the applicant has in this matter, and we do not contend to know whether there is or is not, but if he does have a complaint, we think that his form of relief is in the District Court. And in behalf of Southern Union Gas Company, we should like to urge the Commission to rule that they do not have any jurisdiction of saying how an operator can complete a well in a pool or how it can operate its pipeline taking with regard to pressures.

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MR. PORTER: Mr. Campbell.

MR. CAMPBELL: If the Commission please, I am constantly amazed at the flexibility with which people approach this Commission, and I do not mean to suggest that I have not been guilty of it myself. When we are seeking something from the Commission, its powers are virtually unlimited; when we are resisting something, its powers are almost non-existent.

We have heard lengthy cases before this Commission which involve in some minute detail questions of the method of completion of wells. Suddenly it has become a subject which is taboo, that this Commission has no business considering how an operator should complete his wells. As to whether if the Commission denies the motion, we are taking unheard of action, I am not particularly concerned about that. The field of regulation of oil and gas is a relatively new field. I'm sure that before the lines are fully drawn upon the authority of Commissions and upon the extent of self regulation or public regulation of oil and gas production that there will be many features of this business that are unheard of now that will later be fully accepted by everyone concerned.

In this situation, I think we are dealing not particularly with a general approach, we have alleged in our application that El Paso Natural Gas Company, at least for a portion of the period that will be involved in the hearing, was the operator of the units. They drilled the wells, they completed the wells, they

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connected the wells, they extended the transportation facilities, they provided the gas pipelines, they established the pressure for those pipelines. I cannot conceive that it is beyond the power of this Commission, under those circumstances, and to some extent it is true of Pacific, that they should be permitted to insulate themselves from the statutes of New Mexico and the regulations of this Commission with regard to the protection of correlative rights by falling back on their contracts.

I can remember in the original gas proration hearings that some people, including myself, expressed serious concern about the effect of gas prorating on contracts, which has, incidentally, to some extent, resulted, but at that time the contracts didn't seem to have the integrity and the significance that they have at this moment.

I believe that the general powers of the Commission and the duty of this Commission to protect correlative rights is not confined, and the statutes do not confine it to the correlative rights of those with large interests. I do not intend to get on a soap box here, but I constantly listen to people saying that they own the big interest, they own the seven-eighths, and they own everything except two and a half percent overriding royalty or ten percent carrying working interest, and that they are the ones that are going to make this decision. I don't think so, when it comes to the right of an interest owner, however small it may be, to recover or have the opportunity to recover his fair



and just share of the oil or gas as well as can practicably be determined that underlies his tract.

We will introduce evidence, if we are permitted to do so, that in this particular area, not only are the circumstances present which I mentioned with regard to essential control of the right of anyone else to recover their share of the gas -- for example, this suggestion that we have **never** tendered any gas, we have no control, the operator is the purchaser, and the pipeline company -- what good would it do us to tender gas if they don't want to take it, in the first instance? I think that in this area we can establish, if we are permitted to do so, due to the somewhat peculiar conditions in the reservoirs involved, that there is a direct and reasonable relationship between the manner in which a well is completed and the allowable granted to that well on the basis of deliverability. Deliverability, to me, is a two-way street, not a one-way street. Once we accept the proposition that a producing capacity of a well, to some extent, determines the amount of gas available to any owner of however small an interest, then I think the question of the nature of the completion of the well as related to its producability is a pertinent one for this Commission. I do not think, of course, that anyone should have to or would have to come before this Commission and get prior authority as to how to complete wells. I think the burden is upon the applicant here to establish that there are wells in which he has an interest, which have been unreasonably

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completed, and that by virtue of that, they are being denied access to their share of the production from the reservoir. I think it is an appropriate inquiry under the general powers and obligations of this Commission to protect the correlative rights. The rules and regulations of this Commission are full of regulations as to completion of wells. True, most of them are related to waste and not to the protection of correlative rights, but there is nothing in our statutes that differentiates between the obligations of this Commission in that regard. As a matter of fact, the statutes contain a provision that requires wells to be drilled, operated and produced in such manner as to prevent injury to neighboring leases or properties. This Commission has that specific power, and I think that specific obligation.

If we are permitted to offer evidence, I believe we can show that due to difference in methods of completion of wells within this unit area in which we have an interest and adjoining unit areas, that there has been an advantage resulting to other parties in other adjacent areas to ours.

Now, with regard to pipeline facilities and pressures, apart from the proposition that here we are talking about essentially one and the same person when we talk about the operator, the producer, and the pipeline company, that is not true in most areas or many areas of New Mexico, and I think that that has a significant part in the determination by this Commission properly as to whether here, in order to protect our correlative rights,



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they may be obligated to go further than they would where this situation does not exist. But, be that as it may, I cannot agree that the situation with regard to pipeline pressures and pipeline facilities is unrelated to the rights of parties to recover their fair share of gas, particularly where deliverability is a factor in the formula.

As I have said, it would be unavailing to us if we had the power to tender gas. The operator here is the one to extend the gas to the gas transportation facilities, and we are powerless, unless this Commission gives us some relief, if he fails to do that.

Now, with regard to pipeline connections, I think it is true, generally speaking, under our gas statute, with which Mr. Howell and I, I think, are pretty well acquainted with the background; I'm fully aware that it is not as strong with regard to the requirement to make connections as is the oil statute, and that about the only relief, under normal circumstances, that a producer has is that the Commission put his wells on the allowable schedule and hope that by the passage of time the thing will become so far out of kilter that the pipeline purchaser will have to connect to his well in order to get his gas supply. But even if we assume that that be the case, that, too, is a matter of protecting the correlative rights of the producer, and I don't think there is anything in our application that would limit us, if we are permitted to do so, to offer evidence with regard to



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our unconnected wells and to ask the Commission at the least to put them on the gas proration schedule under that provision of the statute.

I'm pleased that apparently, at least temporarily, the moving parties here have at least recognized a portion of the applicant's request for relief. I recognize, too, that this, to some extent, is an unusual and perhaps far-reaching application. But from my limited knowledge of the nature of the reservoir involved here, and the method of completion of some of these wells as related to other wells in the unit and between units, and with regard to the pipeline pressures that are maintained in the area, that this Commission should look into the situation to determine whether the correlative rights of the producers, and interest owners, royalty owners, and others are being properly protected.

I sincerely believe that the Commission can take jurisdiction, can hear evidence on these questions, and should, and I think it is an essential part of protection of correlative rights, and I don't think it is any answer to say to an interest owner or producer, "You go to the Courthouse." This Commission with its staff is in a better position to determine the reasonableness of these things, and I would be willing to rely upon it more than I would upon most Courts to determine the reasonableness with which wells have been completed as related to the right to get your share of the gas allocation, and with regard to pipeline pressure and that sort of thing. And I urgently request the Commission to



deny the motion, let us put on our testimony, it being subject, I assume, to objection, before the Commission, so that we can undertake to obtain some of the relief that we seek.

MR. PORTER: Mr. Howell, how much time do you anticipate that you will need for rebuttal?

MR. HOWELL: Five minutes.

MR. PORTER: Each side will be limited to five minutes.

MR. HOWELL: May it please the Commission, I don't think I will take the entire five minutes. I just want to reiterate the position, particularly as to well completions and pose the question as to what relief would the Commission grant should the Commission find that an operator had not completed a well in a manner which would give that well its greatest deliverability. What relief would the Commission order, what power has the Commission to tell an operator under those circumstances in the absence of any findings or determination that the manner in which the well is completed has injured a neighboring lease or a neighboring well. What could the Commission do if it made that finding? Could it tell the operator, "You spend \$20,000 in refracting this well?" Suppose the Commission is wrong and it killed the well. And I merely leave that one thought, what relief, what legal order that would be upheld could the Commission grant if it did make such a finding, what endorseable order could a Commission enter to order someone to construct additional compression facilities, to spend millions of dollars required for con-

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struction of additional compression facilities? Does anyone here think that the Commission would have the jurisdiction to do that? So we reiterate that the only purpose that this application, if granted, could achieve would be to use this Commission as a sounding board for any complaints that the applicants might have. We think they are correct that for them the sounding board is that forum which determines matters of private contracts between parties. Thank you.

MR. PORTER: Mr. Campbell, do you desire any time for rebuttal?

MR. CAMPBELL: No, I don't have anything. Mr. Director, maybe to keep the record straight, I'd better say this. I think there is relief that the Commission can grant. If it finds that a well is not adequately or reasonably completed, and is not recovering its reasonable share of the reserves, it can certainly in the proration allocation allocate that well the amount of gas to which it would be entitled. Were it properly completed, I think the result ultimately would be an improvement in the deliverability of the wells which are improperly completed.

MR. PORTER: The Commission will consider the arguments which have been advanced concerning the issues involved, and we will issue an order stating what issues, whether any or all of these issues, whether the Commission will assume jurisdiction over any or all the issues, and in this order we will set forth the -- if any are left, or in all events, we will set forth what



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issues will be heard, and the order will establish a date for such hearing. I don't anticipate that the hearing will be before the September regular hearing because of our loaded docket and because of our legal staff being tied up in a Court case next week, and which may take more than next week. Actually, we don't know what our schedule will be, but that is our decision at this time.

We will recess the hearing now until one-thirty.

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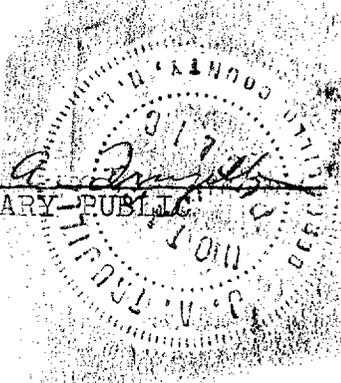


STATE OF NEW MEXICO )  
 ) ss  
COUNTY OF BERNALILLO )

I, J. A. Trujillo, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in Stenotype and reduced to typewritten transcript by me, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this, the 29<sup>th</sup> day of July, 1959, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

*J. A. Trujillo*  
NOTARY PUBLIC



My Commission Expires:  
October 5, 1960

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ALBUQUERQUE, NEW MEXICO



BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE 1600

TRANSCRIPT OF HEARING

DEARNLEY - MEIER & ASSOCIATES  
GENERAL LAW REPORTERS  
ALBUQUERQUE, NEW MEXICO  
Phone CHapel 3-6691

March 18, 1959

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO  
MARCH 18, 1959

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IN THE MATTER OF: :

CASE 1600 In the matter of the application of M. A. :  
Romero and Robert Critchfield concerning :  
the operation of gas prorationing in the :  
Blanco Mesaverde Gas Pool and the ratable :  
taking of gas from said Blanco Mesaverde :  
Gas Pool in Rio Arriba and San Juan Coun- :  
ties, New Mexico, as well as from the :  
Choza Mesa-Pictured Cliffs Gas Pool in Rio :  
Arriba County, New Mexico. :

-----  
BEFORE:

A. L. Porter  
Murray Morgan

T R A N S C R I P T O F P R O C E E D I N G S

MR. PORTER: Take up next Case 1500.

MR. PAYNE: Case 1600. In the matter of the appli-  
cation of M. A. Romero and Robert Critchfield concerning the opera-  
tion of gas prorationing in the Blanco Mesaverde Gas Pool and the  
ratable taking of gas from said Blanco Mesaverde Gas Pool in Rio  
Arriba and San Juan Counties, New Mexico, as well as from the Choza  
Mesa-Pictured Cliffs Gas Pool in Rio Arriba County, New Mexico.

MR. PORTER: Mr. Campbell.

MR. CAMPBELL: If the Commission please, in view of  
the fact that I have not as yet furnished the interested parties  
with a bill of particulars, which the Commission directed me to

provide them, I would like to request that Case 1600 be continued to the regular April hearing of the Commission. I will furnish them with a bill of particulars within two weeks.

MR.PORTER: Any objection to Mr. Campbell's motion for continuance of Case 1600? Case will be continued, and the Commission will ask you, Mr. Campbell, to have that bill of particulars to us within the next two weeks.

I understand that you have some duties in connection with the legislature for the last month.

MR. CAMPBELL: Yes, sir, and we worked a little overtime and haven't gotten to it.



BEFORE THE  
OIL CONSERVATION COMMISSION  
HOBES, NEW MEXICO

IN THE MATTER OF:

Case No. 1600

TRANSCRIPT OF HEARING

APRIL 15, 1959

DEARNLEY - MEIER & ASSOCIATES  
GENERAL LAW REPORTERS  
ALBUQUERQUE NEW MEXICO  
Phone CHapel 3-6691

BEFORE THE  
OIL CONSERVATION COMMISSION  
HOBBS, NEW MEXICO

IN THE MATTER OF:

Case 1600 In the matter of the application of M. A. Romero and Robert Critchfield concerning the operation of gas prorating in the Blanco Mesaverde Gas Pool and the ratable taking of gas from said Blanco Mesaverde Gas Pool in Rio Arriba and San Juan Counties, New Mexico, as well as from the Choza Mesa-Pictured Cliffs Gas Pool in Rio Arriba County, New Mexico.

Hobbs Auditorium  
1300 East Scharbauer  
Hobbs, New Mexico  
April 15, 1959

BEFORE:

Mr. A. L. Porter, Jr.  
Mr. Murray Morgan  
Governor John Burroughs

TRANSCRIPT OF HEARING

MR. PORTER: We will call next Case 1600.

MR. PAYNE: Case 1600, "In the matter of the application of M. A. Romero and Robert Critchfield concerning the operation of gas prorating in the Blanco Mesaverde Gas Pool and the ratable taking of gas from said Blanco Mesaverde Gas Pool in Rio Arriba and San Juan Counties, New Mexico as well as from the Choza Mesa-Pictured Cliffs Gas Pool in Rio Arriba County, New Mexico."

Mr. Commissioner, we have received a communication from both, or two interested parties in this case recommending that the case be continued either to the June or July regular

hearing. I would recommend that the case be continued to the July regular hearing.

MR. PORTER: Any comments or any objections to the motion for continuance of Case 1600?

Case 1600 will be continued to the regular July hearing date.

STATE OF NEW MEXICO )  
: ss  
COUNTY OF BERNALILLO )

I, JERRY MARTINEZ, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing were reported by me in Stenotype, and that the same was reduced to typewritten transcript by me and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

DATED this 18th day of April, 1959, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Notary Public

My Commission Expires:  
January 24, 1962

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE NO. 1600

TRANSCRIPT OF HEARING

DEARNLEY - MEIER & ASSOCIATES  
GENERAL LAW REPORTERS  
ALBUQUERQUE NEW MEXICO  
Phone CHapel 3-6691

February 18, 1959



Roswell, New Mexico, appearing on behalf of the applicant. As I previously advised the Director of the Commission, we desire to request a continuance of this case to the regular March hearing due to the fact that, due to the press of other business, I have not had an opportunity to be ready to present this case today. It is my understanding that El Paso Natural Gas Company seeks to have more detailed information as to the complaint of the applicants, and I wish to state to the Commission that we certainly have no objection to presenting them or the Commission or both with a bill of particulars with regard to our complaint as to the taking of gas from these pools.

MR. ERREBO: Burns Errebo of Modrall, Seymour, Sperling, Roehl and Harris appearing on behalf of the Pacific Northwest Pipeline Corporation.

We are the operators of the wells covered by this application and the units covered by the application. We certainly are in favor of having a continuance of this matter. There is one matter, however, I would like to call to the attention of the Commission at this time, and that is with regard to Paragraph 6 of the Application. That states that the operators in substance have failed and neglected to complete the applicants' wells in a prudent manner. Applicants are entitled to relief so that its wells may be completed in such a manner as to provide maximum deliverability.

If the Commission please, we would like at this time to

move that the Commission strike that paragraph of the application on the basis that the Commission does not have the authority nor the jurisdiction nor the precedent to enter into an investigation and to receive evidence and to judge the manner of completion of a well, the pounds of sand that were injected, fraced, the type of frac job, the location of the perforations, and so on. We contend that that is a matter between the interested parties and is not a matter for consideration by the Commission.

MR. CAMPBELL: If the Commission please, it seems rather odd that we spent a number of days in the Jalmat gas case relating to deliverability, talking about the completion of wells, additional costs required in order to increase deliverability of wells, looks like this is a one-way street. It seems to me that the word deliverability is a factor; never entered my mind that completion wasn't also a factor, because deliverability is, as was so fully brought out in the Jalmat case, which related to the completion of the wells. The Commission has chosen to include deliverability as a factor in the pools involved here, and we think it is very material as to the nature of the completion of the wells and their present producing abilities in order to provide the deliverability factor or the allocation of gas in these pools. We certainly don't think this paragraph should be stricken.

MR. PORTER: Just one moment, please sir. The Commission has before it the motion of Mr. Errebo. Is there any

further discussion of the motion for continuance?

MR. HOWELL: Ben Howell, representing El Paso Natural Gas Company. We certainly concur in the motion for continuance. We are purchasers of gas in the general area which is described in the application, and we certainly feel that both the Commission and the industry are entitled to something in the nature of some specific information of what these applicants are complaining about. The application as filed neither states what their exact interest is, nor are we able to determine exactly what interests these applicants have.

The application refers, for example, to the Choza Mesa-Pictured Cliffs Gas Pool, and the prorating order in the Choza Mesa-Pictured Cliffs Pool. This application, as Mr. Errebo pointed out, goes into the manner of completion, and it also involves or seeks to have this Commission interest itself as a Commission acting by itself, in the matters that are the unit, operators of a unit, and we certainly think that the applicants should be required to specify first of all their exact interest, and second, what it is they are complaining about. I think that the present application is so general in its nature that not only Paragraph 6, but all of it should be stricken and the applicants be required to make some specific statement of what they want this Commission to decide.

MR. PAYNE: Mr. Howell, in regard to your motion of

the Choza Mesa-Pictured Cliffs Pool not being prorated, that's correct, and the advertisement should read, "...concerning the prorating of gas production in the Mesaverde Gas Pool and the ratable taking of gas from the Blanco Mesaverde Pool and the Choza Mesa-Pictured Cliffs Pool," and if the case is continued, we will readvertise it that way.

MR. PORTER: The Commission will continue this case to the regular March hearing, and request the applicants to furnish the Commission and the interested parties with a bill of particulars, and as to the second motion, we will carry that over until the March hearing, at which time we will rule on it.

At this time we will take a short recess.

(Recess.)



BEFORE THE  
OIL CONSERVATION COMMISSION  
SPECIAL HEARING  
October 22, 1959

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IN THE MATTER OF: :

The application of M. A. Romero and Robert :  
 Critchfield concerning the operation of gas : Case 1600  
 prorationing and the ratable taking of gas :  
 in the Blanco Mesaverde Gas Pool in San Juan :  
 and Rio Arriba Counties, New Mexico. :

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BEFORE:

Mr. A. L. Porter, Jr.  
Mr. Murray Morgan

TRANSCRIPT OF HEARING

MR. PORTER: The hearing will come to order, please.  
The case to be considered this morning is Case 1600, which was  
continued from September 17th after a portion of the testimony  
was heard.

The Commission will recognize Mr. Campbell at this  
time.

MR. CAMPBELL: If the Commission please, I have been  
requested to briefly summarize the point to which the hearing has  
proceeded to this time.

At the last hearing the witness, Henry Birdseye,  
presented certain exhibits and testimony with regard first to some  
unconnected wells in the two townships that are involved in this  
hearing, and second, a series of exhibits relating to pipeline  
pressures on each of the wells in the two townships involved, with

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particular reference to variations between pipeline pressures of those wells connected to Pacific Northwest system and to El Paso Natural Gas Company system; with regard also to the general inverse relationship, as he called it, between pipeline pressures and production from the wells in the two townships.

The testimony further pointed out that since the first part of 1959, pipeline pressure generally in the two townships have been reduced, and that El Paso Natural Gas Company and Pacific Northwest Pipeline Company line pressures since that time have been fairly comparable; and finally, in that testimony, he stated on each well the amount of underproduction that had been accumulated and the amount of underproduction that had been cancelled.

We had proceeded to the point where we were beginning to make reference to wells and comparisons between wells in this area and wells in other areas not covered by the Bill of Particulars, and at that time the El Paso Natural Gas Company and Pacific Northwest requested that they be furnished with a list of wells to which we intended to make or might make reference in this hearing. We were furnished, or they were furnished with such a list, and at our request furnished us with pipeline pressure data for 1958 and the first six months of 1959 on all of the 115 wells.

We're at that point, and I would like to recall Mr. Birdseye to at this time proceed with the presentation of testimony.



HENRY BIRDSEYE

called as a witness, having been previously duly sworn, was recalled to the stand and testified further as follows:

DIRECT EXAMINATION

BY MR. CAMPBELL:

Q Mr. Birdseye, in connection with this case, were you furnished by El Paso Natural Gas Company with a breakdown of pipeline pressures, average pipeline pressures during the year 1958 and the first six months, 1959, on the wells in Township 28, 4, and 29, 4, which are involved in this case?

A Yes, sir.

(Applicant's Exhibits No. 3,4,5, 6, marked for identification.)

Q I have handed you what has been identified as Applicant's Exhibit No. 3 and ask you to state what that is, please.

A This is a summary provided by El Paso Natural Gas Company of average pipeline pressures per well per month, which are connected to the El Paso system in Township 28 North, Range 4 West, and Township 29 North, 4 West, for the 12 months of 1958 and the first seven months of 1959.

Q I notice that there have been averages compiled on there, those are your compilations, are they?

A These are my compilations worked out on a calculator.

Q I hand you what has been identified as Applicant's Exhibit 4 and ask you to state what that is.

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A Applicant's Exhibit No. 4 is a similar tabulation of pipeline pressures furnished by Pacific Northwest Pipeline Corporation for the appropriate applicant's wells in Township 28 North, Range 4 West, and 29 North, 4 West, showing the average pressure per well per month from July, 1958 through June of 1959, and on this tabulation I have also averaged the pressures for all the wells in a given month, and for each individual well over the series of months.

Q Now, referring to Exhibits 3 and 4 and your compilations of averages, will you state to the Commission what the compilations reflect with regard to average pipeline pressures between Pacific Northwest wells and El Paso Natural Gas Company wells?

A Well, these compilations and averages show that in 1958 the average pressure, overall pressure of all the wells for all the months these wells which are connected to El Paso Natural Gas Gathering System was 532.04 pounds per square inch. For the wells connected to Pacific Northwest, the overall average was 521.1 pounds, approximately eleven pounds less.

Now for 1959, the months which these tabulations include, which is January through July, for El Paso, and January through June for Pacific Northwest, the El Paso Pipeline average has been 544.75 pounds. The pressure for the wells, the pipeline pressure for the wells connected to Pacific Northwest has been 491.4, a differential of approximately 53 pounds per square inch.

Q So over the period of time covered by these figures,



there has been generally somewhat higher pipeline pressures on the wells connected to El Paso Natural Gas Company than to Pacific Northwest?

A Yes, sir.

Q Have you made any compilations with regard to production from the wells connected to Pacific Northwest Pipeline Company and the wells connected to El Paso Natural Gas Company?

A Yes, sir, I have.

Q For the year 1958?

A Yes, for the year 1958, there were six wells of the applicants connected to the Pacific Northwest Pipeline system. These six wells had a total deliverability of 2681 mcf per day on the deliverability tests. The production in 1958 was 242,393 mcf. Now there were ten wells connected to and producing into the El Paso system. They had a total deliverability of 3375 mcf. The total 1958 production was 195,940 mcf for the year 1958. If you reduce this to a factor of production divided by deliverability, the wells connected to Pacific Northwest Pipeline produced on the average 90.41 times their deliverability. The wells connected to El Paso Natural Gas Company produced 58.056 times their deliverability, roughly two-thirds as much on the production deliverability factor basis.

Q In your opinion is there any possible relationship between the fact that the El Paso Natural Gas Company wells did not produce as much as Pacific Northwest wells in relation to

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deliverability and the pipeline pressures to which you have referred?

A I think there was a clear relationship. We have satisfied ourselves, at least, in previous testimony, that there is a rather consistent inverse relationship between production and pipeline pressure, and that the higher the pressure goes the lower production is for the corresponding month. This seems to hold true over the period of a year which we have just mentioned.

Q Mr. Birdseye, at the last hearing you were requested to furnish the pipeline companies with a list of wells to which you might make reference and comparisons in connection with your additional testimony in this case; and that list of wells was furnished to pipeline companies, was it not?

A Yes, sir.

Q I refer you to what has been marked Applicants' Exhibit No. 5 and ask you to state what that is, please.

A This exhibit is a map of that portion of the San Juan Basin which includes all of the Blanco-Mesaverde Field. It is on a scale of two miles to the inch, which may not be very visible to some who are myopic like myself.

Each of the wells which was specified as one of the 116 which we would like to discuss at this hearing is encircled in red. These are the applicants' wells in Township 28 and 29 North, 4 West. The balance of these additional 116 wells were chosen as best we could throughout representative portions of the Blanco-Mesaverde Field, in order to illustrate points which we will

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illustrate.

Q Now in connection with the 116 wells to which you have referred and which are identified on Exhibit No. 5 as circled in red, were we furnished by the pipeline companies with average pipeline pressures for those wells in the Blanco-Mesaverde Pool?

A Yes, sir, we were.

Q Have you made any comparison between the average pipeline pressures -- first let me ask you this. What was the general basis on which you selected those wells, Mr. Birdseye?

A Well, these wells were chosen out of some 1660 wells in the Blanco-Mesaverde Field because they illustrate one of our primary points in our Bill of Particulars; namely, non-ratable take, that is, in comparison with our own wells. They were further chosen because they represent a wide geographic distribution within the length and breadth of the Blanco Field.

Q Go ahead and state if you can what comparisons you were able to make between the average pipeline pressures furnished to you for these wells as related to the average pipeline pressures to which you have testified concerning the two wells in the two townships directly involved in this application.

A What I have done is this: We have a list of pipeline pressures from El Paso Natural Gas Company showing line pressures per well per month for the years 1958 and 1959, from January through August insofar as pertains to the 107 wells which are connected to the El Paso system out of the 116 wells which we chose for this

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study. I have averaged the pipeline pressure for each well over the twelve-month period of 1958 and the eight-month period of 1959; then, in order to come at some even more glorious general conclusions I have taken these 1958 figures for each well, 107 wells, added them all together and taken an arithmetic average to show what the actual monthly pipeline pressure was for each of those 107 wells for each month on the average in the year 1958.

I have done the same thing for the eight months of 1959. The results are that in the average pipeline pressure, averaging all months for all wells, these 107 wells connected to the El Paso system in the year 1958 was 495.7 pounds per square inch. For the first eight months of 1959, the average pressure for all wells per month was 504.5 pounds per square inch. You may recall that this is by comparison; we might mention again our figures for the applicants' wells in Township 28 North, 29 North, Range 4 West, the wells connected to the El Paso system for all months in 1958 averaged a line pressure of 532.04 pounds versus 495.7 pounds for these 107 wells.

In 1959, the first seven months of this year, the applicants were facing a line pressure of 544.7 pounds, compared to 504.5 pounds for these other 107 wells.

Q Do you believe, Mr. Birdseye, that the thirty to forty pound pressure differential would have or could have a bearing on the amount of gas that the applicants' wells are able to produce as related to the amount other wells of comparable deliverability



are able to produce?

A I think as a matter of common sense we would definitely say that, and as a statistical analysis we can prove it without any question.

Q Have you made a study of the 116 wells to which your list made reference, with regard to the production from those wells as compared to the reported deliverability of those wells?

A Yes, sir.

Q Mr. Birdseye, I have handed you what has been identified as Applicants' Exhibit No. 6, and ask you to state what that is please.

A Applicants' Exhibit No. 6 is a list of the 116 wells in the Blanco-Mesaverde Pool, aside from the applicants' wells, which we have brought up for consideration in this case, shows the well number, the location, the operator. I have added to this tabulation the deliverabilities per well as taken from the State-wide proration schedule. I have also added the 1958 total production for each well. In the right-hand column shows the production of each well cumulatively for the year 1959 from August through July.

Q From January?

A I am sorry, from January through July, 1959, the column to the left is for the entire year 1958 except where there is a number in parentheses to the right of the production; this indicates that the well produced less than a year and it shows how many months it did produce.

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Q I notice at the bottom of the list there are at least four wells, including the Johnson Federal Nordhaus, the Trigg, and the Turner State wells, that are included in this list, but seem to have considerably higher deliverability than the other wells. Would you state if there is a distinction between those wells and the wells that we're going to refer to here initially?

A Well, there certainly is a great distinction between the magnitude of those other four wells. The 116 wells, actually there are 112 wells, neglecting those four very large wells, there are 112 wells which were chosen by me specifically because they fall within the deliverability range of the applicants' wells. That is, somewhere between zero and roughly 1700 mcf. The remaining four wells, which you see on here, are included not because there's anything remotely comparable to them in the applicants' wells, but simply because they are spectacularly large and are shown for purposes of comparison. To illustrate this statement, the 112 ordinary size wells, as you might call them, on this list, have a total deliverability of 71,669 mcf. These other four wells at the bottom of the sheet have a deliverability of 73,626 mcf, or considerably more than the other 112 combined.

Q Does the fact that there is a marked difference, very wide variation in deliverabilities apparent from this list and in the Blanco-Mesaverde Pool make the pipeline pressure situation in your judgment a critical factor in the production that is obtained



from the low deliverability wells?

A Yes, I think pipeline pressure has been clearly demonstrated to anyone who will study it, the fluctuations in pipeline pressure have a much greater effect on a well of moderate or low deliverability than it does on a well of high deliverability; consequently the so-called weaker wells are much more greatly affected by fluctuations in line pressure and they are effectively choked back in production by increases in line pressure.

Q Is there any particular well on this list to which you could make reference to point out a basis for your conclusion that the line pressures have an effect upon the production that a well with low deliverability can deliver?

A Yes, sir. As you will note on this Exhibit 6 there are quite a number of wells which are included which are certainly in no danger of blowing off the wellhead fittings. There's one which has a deliverability of 13 mcf; one of 33, and several others in that range. Now, there is a well in Township 30 North, Range 12 West, which is approximately 17 wells from the bottom of the page. It is the Northwest Production No. 1-A Blanco Unit in Section 4, Township 30 North, Range 12 West. This well has a deliverability, according to the test, of 33 mcf per day. One would ordinarily not expect much production out of such a well. However, we also examined the line pressure against that well, if I can find it in this ream of material, and we find that for the year 1958 the average line pressure, monthly line pressure

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against that particular well with a deliverability of 33 mcf was 238 pounds per square inch, and for the first eight months of 1959 the average line pressure against that well was 225.8 pounds per square inch. In other words, slightly less than half of the average line pressure of all the other wells which we are including in this study.

Q Have you made any comparison between the production from that well and production from wells of comparable deliverability in the townships in which the applicant owns an interest?

A Yes, sir. In order to arrive at some scientific and some consistent basis of comparison of the production of the wells which we're including in this matter, we have arrived at a production versus deliverability factor which is taken very simply by dividing the production for a given period of time, in this particular instance the year 1958, by the deliverability of that particular well.

Now if you take this well in Section 4 of 30 North, 12 West, with a deliverability of 33 mcf, and you divide that 33 into the production for the year, which was 11,184, you see that it has produced somewhat more than 300 times its actual deliverability in the year 1958. We have comparable wells amongst the plaintiffs' wells. I'll pull the information out in just a minute.

While we are looking at this entire sheet, this Exhibit No. 6, let me point out that of these 112 wells with a total deliverability of 71,669 mcf, the total production for 1958



was 10,702,740 mcf. Divide the production by deliverability and you arrive at a factor of 149.335 times the deliverability is the actual amount of gas produced.

Now the applicants' wells produced in the same period, 1958-9, a ratio of production over deliverability of roughly 90, compared to 149. These are the wells connected only to Northwest production. The wells which were connected to the El Paso system produced a factor of production over deliverability of slightly over 58, with an overall average for the sixteen applicants' wells of 72.38, compared to an overall average of these other 112 typical wells of 149.335.

Now, we have one of the applicants' wells here to compare what we have in the way of production -- if I might take applicants' well 28-4, Unit No. 1-18, Section 18 of 28 North, 4 West. This well has a deliverability of 31 mcf, very close to the 33 mcf which we have discussed with this other well. Its total production in 1958 was 1790 mcf. This other well, with a deliverability of 33 produced 11,184, which if my heady arithmetic is anywhere right, is approximately eight to one on this factor basis of production over deliverability, which after all should be an accurate parameter, since in gas proration in New Mexico it is assumed that deliverability has a direct relationship with the reserves and productive capacity of the wells.

So it is therefore, we assume, reasonable to work on such a factor and to compare the production of our wells, our

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applicants' wells versus these or any other wells in the Blanco Field.

Q Have you made a similar analysis of other wells included in this range of deliverabilities that you refer to and shown on Exhibit 6 as the 112 wells where you have made comparison?

A Well, the only other wells on Exhibit 6 which we have not mentioned are the four.

Q Now I'm referring to the 112, have you made comparisons between the wells of the applicants that had deliverabilities comparable to those listed here for various wells and made comparisons with the amount of production from the wells listed in the amount of production from the applicants' wells?

A Yes, I have.

Q Do you have some other examples that you wish to point to?

A Yes, indeed. I would point out by comparison as a typical example, and this is not an unusual example, applicants' well No. 5-32 in Township 28 North, Range 4 West.

Q Which system is that connected to?

A I'm sorry, No. 9-32 in Township 38, Range 4 West.

Q What system is this connected to?

A It's connected to the El Paso system. This well No. 9-32 in 28 North, Range 4 West, has a deliverability of 1686 mcf per day. You will find many wells of comparable deliverability on this Exhibit 6. There are perhaps thirty wells, forty wells of

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comparable deliverability. Now applicants' well No. 9-32 with a deliverability of 1686 mcf per day produced in 1959, the total year, it actually produced only ten months, but in the total year of 1959 it produced 59,000.

MR. HOWELL: Ten months hasn't passed in 1959. Do you mean '58?

A I'm sorry, 1958. Thank you for the correction. These are all 1958 figures to which I am now referring. In the ten months in which it produced in 1958 it produced 59,662 mcf. Suppose we pick another well of comparable deliverability. The first one that strikes my eye is the El Paso No. 1 Dawson, Section 30, Township 31 North, Range 8 West, approximately forty percent of the way down the page. This well has a deliverability of 1662 mcf, which is for all intents and purposes identical to that one of the applicants. It produced in the year 1958 165,271 mcf, which is very slightly less than three times the amount that the applicants' well of the same size produced. Now if you will scan your list you'll see many similar examples.

Q (By Mr. Campbell) Refer to the El Paso Grambling A, no, Grambling 2G2729 about halfway down the page, with a 1663 deliverability.

A Yes.

Q What was the production from that well?

A The production --

Q In nine months of 1959.



A 156,109 MCF in nine months, our well with a deliverability of 1686 MCF; in other words, 23 MCF greater deliverability in a ten months period compared to this nine months period, produced slightly less than 60,000 compared to 156, so the discrepancy--

MR. HOWELL: May I interrupt again and identify the last well?

MR. CAMPBELL: It's the first of the four Grambling wells listed half-way down the page, 2G2729.

Q (By Mr. Campbell) On down the page, refer to the Kelly A well, which is code identified on the schedule as 3G153110. Do you find that well?

A Yes.

Q Will you make a comparison there? That well appears to have a deliverability of 1680 MCF.

A Which is virtually identical to the deliverability of the applicants' well which we're now discussing with 1686 deliverability. This Kelly A well produced in 1958, 191,478 MCF. Applicants' well produced 59,662, slightly less than one-third as much.

Q Refer then to a well further down on the list which is 297 San Juan, identified by code as 52-H7297, it's in the third dark section, fourth dark section up from the bottom of the exhibit, with a deliverability of 1328. Will you make a comparison there?

A The production of that well which had a deliverability of some 360 MCF per day less than the applicants' well which we're

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discussing, produced in 1959, in 1958 209,139 MCF, compared to 59,662 MCF; and for the first seven months of 1959 that well has produced 154,404 MCF.

Q That is 134,000 -- no, excuse me, 154,000?

A I think it's 154.

Q Do you have a comparative figure on the other well?

A No, sir. Well, no, I have only applicants' wells' production for the first five months.

Q Have you made similar comparisons between the applicants' wells with comparable deliverabilities and the balance of the wells listed, the 112 wells to which we have been referring on Exhibit No. 6?

A Yes, sir. In fact, that was the method by which these 112 wells were chosen.

Q So that you have made comparisons with wells of comparable deliverability on the total production in 1958 from those wells, as related to the applicants' wells in these two townships, is that correct?

A Yes, sir.

Q And based upon those comparisons, Mr. Birdseye, without going into each and every one of the comparisons on the 112 wells, what conclusions do you draw with regard to the wells listed on Exhibit 6, the 112 wells to which we have been referring, and the applicants' in Township 28, 4, and 29, 4?

A Well, the only conclusion that you can draw is that

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by a straight statistical analysis, is that these 112 wells both individually and average, have produced generally on the average very considerably more than twice the amount of gas in 1958 for a given deliverability, more than twice as much as the applicants' wells have.

Q Have you been able to determine yourself any reason why this apparent statistical discrepancy exists between the production from these wells and the production from the applicants' wells?

A Well, one of the reasons unquestionably is the differential in line pressure where these, for example, these El Paso wells, 107 out of the 112 wells, had an overall average line pressure of 504 pounds per square inch, whereas applicants' wells connected to El Paso in 1958 had line pressure of 532 pounds.

Q Do you think that thirty-pound approximate difference in line pressures will make a difference in the amount of gas that can be delivered into the line?

A Yes, sir. I certainly would say that and that the effect of higher line pressures will certainly be greater on the wells of lower deliverability.

Q Do you have any other comparisons, specific comparisons you wish to make at this time with regard to the wells listed on Exhibit No. 6, the 112 wells to which we have been referring?

A I don't think so at the present time.

Q Mr. Birdseye, did you make an analysis previously of



comparisons between the average deliverabilities and average production of wells in the townships in which the applicant owns an interest, and in the immediately adjacent townships referred to in the Bill of Particulars?

A Yes, sir.

Q I'll refer you to Exhibit No. 1 and ask you to make those comparisons for 1958 as to the two townships immediately west of the townships directly involved in this hearing.

A This map is to the scale of two miles to the inch, has the townships in which applicants' wells are located outlined in red, as you may be able to see here. The township adjacent to the west, Township 28 North, 4 West; in other words, Township 28, 5 West, in that township the average Mesaverde well had a deliverability of 521 MCF compared to the average deliverability of applicants' wells in Township 28 North, 4 West were 454 MCF; in other words, in 28 North, 5 West, the deliverability was slightly larger, 527 versus 454. The production in 1958 per well, per Mesaverde well in 28 North, 5 West, was 57,353 MCF on the average versus 26,115 MCF for applicants' wells in 28 North, 4 West. In other words, in these two adjacent townships, the westernmost township 28 North, 5 West had average deliverabilities of some twelve percent higher than applicants, but the average production was approximately 112 percent higher. I don't know how many copies of this masterpiece are floating around, but there are other maps.

Q So far as the two townships are concerned as mentioned

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in the Bill of Particulars, what is your conclusion with regard to the statistical basis, on the average, on the basis that you have between the ones involved in this case directly?

A Well, it's quite obvious from a statistical analysis that more gas is being taken from wells of comparable size in the township which is adjacent to the west.

Q With regard to your list of wells, 116 wells on Exhibit 6, you referred to the fact you had included four wells in that that were obviously exceptional wells in the Blanco-Mesaverde Pool, did you not?

A Yes, sir. These are probably the four largest wells in the Blanco-Mesaverde Pool.

Q Did you make any analysis to check the deliverability on those wells, the comparative deliverabilities over a period of time?

A For the year 1958 I did, I came up with this production versus deliverability factor which we have applied previously against the other wells. It shows that the four wells averaged together, despite the fact that they had a tremendous deliverability of 73,626 MCF per day, they produced 5,217,002 MCF in 1958, which gives us a ratio of production over deliverability of 70.8 compared to the ratio for the other 112 wells of production over deliverability of 149.3, compared to the applicants' production versus deliverability rate of 72.38.

Q So based on reported deliverabilities, the four large



wells to which you have referred are not out of proportion with regard to the amount of production as related to deliverability, are they?

A Not as far as compared to applicants' wells.

Q Now with regard to the Johnson Federal Well, what information do you have with regard to the deliverability of that well?

A The deliverability of that well up until August of 1958 had been 2235 MCF. In September of 1958 it jumped to 24,253 MCF.

Q That was an increase of about ten times in deliverability, was it not?

A Yes, sir.

Q Do you know of any particular reason why that well's deliverability might have been increased so drastically in that period of time?

A I don't know the reason for it. There are several possible explanations, but I don't know the reason for it.

Q It is the latter deliverability figure on which you based your calculations to the portion of the production from the pool that this well was permitted to have in 1958?

A That is quite true. Actually the higher deliverability obtained only for the last four months of the year, and the lower deliverability of 2235 MCF obtained for the first eight months of the year.



Q Now, referring to the Nordhaus Well that you have listed on Exhibit 6, what is the situation with regard to deliverability on that well?

A In the Nordhaus Well in Section 12 of 31 North, 9 West, had from April through August of 1958 a deliverability of 5681 MCF. From September, 1958, on, the deliverability is listed at 16,242, an increase of roughly three times.

Q Do you presently know of any basis for that marked increase of deliverability of that well at the test taken at a later date over the prior deliverability?

A No, sir, I don't know what the reason is.

Q Your computations, again, with regard to the share of the allowable from that well that it has been allowed to produce, are based on the larger deliverability figure, are they not?

A This is quite true. In other words, if we had taken a weighted average of the deliverability of these wells which we have just discussed, weighted them for the eight months at the lower deliverability and four months at a higher deliverability, then the ratio of production versus deliverability would have been much higher than seventy, certainly it would have been probably over the 149 which is the ratio pertaining to these other 112 wells.

Q Based upon your analysis of the allowables and the deliverability and the production from the wells in this pool which you have studied, in relation to the applicants' wells, what



is your conclusion with regard to the amount of production that has been permitted from the amount of gas that has been taken from the applicants' wells?

A I am sorry, will you go by that again?

Q I had better. Based upon your study of the pool, the Mesaverde Pool, in relation to allowables, deliverability, and actual production, what conclusion do you draw with regard to the treatment of applicants' wells in these two townships as related to other wells in the pool of comparable deliverability?

A The statistics we have introduced here show rather clearly, I don't like to use that nasty word, "discrimination", but at least a vast discrepancy between wells of comparable size of applicants compared to comparable wells of other operators.

Q Based upon your studies, does it appear to you that pipeline pressures do or do not have some relationship to this situation?

A They very definitely have a relationship to production.

MR. CAMPBELL: I would like to offer in evidence Applicants' Exhibits 1 through 6.

MR. PORTER: Mr. Campbell --

MR. CAMPBELL: The series of exhibits is 3 through whatever the last letter was. The first exhibit I offered today was No. 3.

MR. PORTER: Is there objection to the admission of



the exhibits?

MR. CAMPBELL: I would like to put in one additional piece of testimony, if I may.

MR. PORTER: The exhibits will be admitted to the record.

Q (By Mr. Campbell) I believe when you went through Exhibit 2 on each individual well that you stated at that time for each well what its status was with regard to underproduction and with regard to underproduction that had been cancelled, and at this time was uncanceled. Have you got those figures for the overall number of wells in these two townships?

A Yes, sir.

Q What is that figure?

A For these sixteen applicants' wells which are and have been producing into the pipeline systems of Pacific Northwest and El Paso Natural Gas through July, 1959, the accumulated total underproduction as related to allowables was 244,521 MCF, and there has been cancelled back allowables in the amount of approximately 85,400 MCF, which have been cancelled due to failure to produce the gas.

Q Failure to make it up?

A Yes, sir.

Q So that leaves approximately how much underproduction from these wells that is presently not cancelled?

A At the end of July, 1959, the figure was 159,135 MCF.

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I have not made a subsequent tally.

MR. CAMPBELL: That's all.

MR. PORTER: Does anyone have a question of Mr. Birdseye?

MR. HOWELL: I might have a question or two. I would like to ask for a recess of about ten minutes to review briefly some of these wells, the data on some of the wells which were mentioned.

MR. PORTER: I think this is very well timed, Mr. Howell.

(Whereupon, a short recess was taken.)

MR. PORTER: The meeting will come to order, please. Mr. Howell, I believe you said you had a few questions.

CROSS EXAMINATION

BY MR. HOWELL:

Q Mr. Birdseye, in your testimony you have frequently referred to applicants' wells. Just for the sake of getting the record straight, isn't it a fact that every single one of the wells that you're discussing in Townships 28, 4 and 29, 4, were wells which were drilled either by El Paso Natural Gas Company, Pacific Northwest Pipeline Company, or purchased by those two companies from the people who did drill them, and not a single well was actually drilled by the applicants in this case?

A This is quite true. However, speaking --

Q You have answered the question, sir.



MR. CAMPBELL: Let him go ahead.

MR. PORTER: Let him qualify his answer.

A Applicants' wells in the same way you say "my well" if you have got a five percent override. In this case, it's mostly an abbreviation, so as to not go through the routine, "the wells in which the applicants have an interest or overriding royalty."

Q Actually the major portion of the production of all of the wells is either that of El Paso Natural Gas or Pacific Northwest Pipeline Company?

A This is very true, as pointed out in the Bill of Particulars.

Q What studies did you make, Mr. Birdseye, in reaching the conclusions to which you have testified here? Will you tell the Commission just exactly what studies you did make?

A Which conclusions are you referring to, Mr. Howell? There are quite a few.

Q Well, let's take the question of the pipeline pressures as related to the production of wells. What studies did you make?

A Well, the fruits of that particular study are shown in the Applicants' Exhibits 2-A through T, or so -- here, these graphs on which are plotted pipeline pressures, allowables and actual monthly production.

Q Now, the pipeline pressures were the pressures which the meters maintained or the charts, rather, maintained at the meters reflected for each month of the year, as furnished to you



upon your request for that information from the pipeline companies?

A Is that a question?

Q Is that correct?

A Yes, sir.

Q Now then, the production which you took and which you used as a graph is the total production for each month from a particular well, is it not?

A In most cases, yes, sir.

Q Let's see if there are any cases in which it isn't the total production from that well for the month on this Exhibit 2.

A These are production figures which were drawn in the case of -- prior to December, 1958, they're production figures from the annual production summary of the New Mexico Oil and Gas Engineering Committee in some instances; however, the vast bulk of the production statistics are from the monthly schedules of the Oil and Gas Commission.

Q All right. Let's look at this exhibit, I believe it's 2-A, that refers to the Well 17-20. You have one line of your graph which is charted production, isn't that correct?

A Yes, sir.

Q What is the basis that you set your points for each month from which you drew that graph?

A The basis is the scale on the left side of the graph.

Q How did you determine that you would put your point here or here or here?

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A According to the recorded production figure.

Q Now that is the production for the entire month?

A I presume so.

Q Well, what is the figure you used? That's what I'm trying to get.

A I have the figures right here. Time did not permit having a draftsman put each of those figures on here. This figure here, which is at approximately thirty --

Q You misunderstand my question. The point I'm getting to, Mr. Birdseye, is this; that in making these graphs the only figure that you considered for production was the total production shown for that well for that month, was it not?

A Yes, sir, I can think of no exceptions to that.

Q That's true of every graph you have on your series two exhibits?

A These are figures taken from the records of the O.C.C. as the monthly production for each of those wells.

Q All right, now, let us refer to Exhibit No. 2-A, which is the top exhibit there. From that study which you made a comparison of the pipeline pressures and the production figures, you concluded that higher pipeline pressures reduced production from this particular well, did you not?

A In a general sort of way, that is correct, with that well and other wells. However, if you recall, there were other circumstances which also can affect production, simply the turning



of a valve is the simplest one.

Q Did you consider in this particular instance that in the month of December of 1958, that well produced twenty-seven days in order to achieve this figure; that in the month of January it produced fourteen days; in the month of February it produced seven days; in the month of March it produced eight days; did you consider those factors?

A We were very much aware of that, Mr. Howell, not the exact number of days but that the number of days which these different wells produced fluctuate very much according to how they're operated.

Q Now, your testimony up to the present time doesn't reflect any such consideration, does it?

A We don't have detailed day by day data as to a daily breakdown within a given month of the production history of the well.

Q And you didn't attempt to get any, did you?

A I don't believe we did on these particular wells.

Q Now referring to your Exhibit 2, either N or M, which is 11-3L, the Well 11-3L, this I believe was the well that is connected to Pacific Northwest system?

MR. PORTER: Is that Exhibit 2-N or M, Mr. Howell?

MR. SETH: They're not all marked.

MR. HOWELL: It looks as if it's 2-N.

A N, I think it is.



MR. PORTER: Thank you.

Q (By Mr. Howell) I believe you referred to a mechanical difficulty in connection with this well, but as a matter of fact, you were advised beforehand that the difference between the chart or the manner in which the charts are taken on Pacific Northwest's pipeline and El Paso's pipeline is that the meter is placed upstream of the choke on Pacific Northwest and downstream from the choke on El Paso's wells, is that correct?

A That's what we're informed.

Q And that instead of any mechanical difficulty, it's just simply a fact that when a well is first turned on, that the pressure between the well and the choke is going to be higher than it is in the pipeline?

A Well, when we discussed this particular graph a month ago, this point was brought out after we had been informed by Pacific Northwest the reason for that extraordinary line pressure.

Q Now in reaching your conclusions as to the relative effect of line pressures and production, did you consider, Mr. Birdseye, that in the month of August, 1958, that this well was on the line, in the month of July, 1958, and in August, 1958, this well was on the line one day each month; that in September it was on the line sixteen days; that in October it was on the line two days; that in November it was on the line three days?

A There are some months in which they weren't on the line at all, Mr. Howell.



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Q Did you consider those factors in reaching your conclusions?

A Very definitely.

Q What weight did you give them?

A Very little, sir.

Q That seems apparent. Now, Mr. Birdseye, did you consider the ability, the physical ability and capacity of wells to produce under conditions that may exist within the well bore?

A Yes, sir.

Q What data did you have to base that consideration on?

A We had rather incomplete data, enough to lead us to the conclusion that some of the wells should have mechanical difficulties because of their archaic completion methods, archaic in present-day terms; that others should have virtually no production difficulties.

Q Did you consider the relationship of the actual producing capacity of various wells, the way they perform when tied into the line, as compared to tests?

A When you say actual producing capacity, when they're tied into a line, I think that you apparently are talking about something which is quite similar to deliverability.

Q May I find out, Mr. Birdseye, if you determined, made any effort to determine the average daily actual producing capacity of any of these wells?

A The State has done that in taking average deliverability



tests. We have not obviously gone out and run capacity producing tests or deliverability tests on each well. As you have pointed out, the applicants are not working interest owners.

Q All right, now, let's compare one of your exhibits as to the actual producing capacity of a well and the pipeline pressures as they are to Exhibit 2-E.

A What well number is that?

Q I believe this is E-1429, it's either E or L. Unfortunately, I can't read Oliver Seth's --

MR. SETH: That's L.

Q (By Mr. Howell) Now as shown by your graph for the months of March, April, May, June, and July, 1959, the pipeline pressures were on rather flat plane there running from 525 pounds, 515 pounds, 506 pounds, 510 pounds, 492 pounds. Did you consider that the daily producing capacity of this particular well as determined by the actual production during those five months was 270 MCF per day at a pipeline pressure of 525; was 176 MCF per day at a pipeline pressure of 515; was 200 MCF per day at a pipeline pressure of 506; was 211 MCF per day at a pipeline pressure of 510; and was 181 MCF per day at a pipeline pressure of 492 pounds? Now, assuming that those figures are correct, and we expect to put them into testimony, that well doesn't indicate any decrease in production resulting from fluctuation in pipeline pressures, does it?

A On the face of it, it would certainly seem not to.



Q Now, Mr. Birdseye, in considering your, making your determination as to cancellation of over and under production and your cancellation of underproduction, I see you have included a number of wells that are marginal. Are you aware, sir, that under the rules of the Commission that the allowable for a marginal well is the amount it makes?

A Yes, sir. I think that the reason that some of these wells are now marginal is that they were not allowed to produce their allowables when they were non-marginal and consequently they were reclassified and back allowables were cancelled, future allowables were reduced.

Q But a marginal well is permitted its allowable, actually, as that which it makes?

A In general terms, I think that's correct.

Q You have included a number of marginal wells in determining the amount that you contend was cancelled for underproduction in this particular area?

A Well, I have numerous individual well records here which show where allowables were, back allowables were cancelled and future allowables were reduced and the well was classified as a marginal well precisely because it did not make its previous current allowable.

Q Let's see how well you did go into this question of allowable on your chart. What effort did you make to pick up the Commission's supplemental allowables and put them on your chart?



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A As of what month?

Q As of the beginning of your chart. Let's refer to your Exhibit No. 2-11. Did you know that the -- by supplemental order this well, which is well No. 14-29 was given an allowable retroactive to the month of April of 5,035,000; month of May, 5,035,000 cubic feet; month of June, 6,667,000; that the allowable for July was reduced from the figure you show to 1,573,000; that that month there was a redistribution of allowable to the well of 4,862,000; the month of August the allowable was 200, was increased to 249 MCF; and that the month of September the allowable was 2,797,000 instead of the 7,944,000. Did you go into the Commission's files and get any of these supplemental allowables and correct your figures accordingly?

A Not to the extent of going to the ledger book and getting an up-to-date day by day revision of them, because this case has been going on now for some months and it's quite a project to go through the ledger book for all the wells each month.

Q Did you show any well on your list in which a retroactive allowable was granted in the year 1958, and this exhibit covers the year 1958, the months which I have just mentioned?

A Would you mind repeating that?

Q Did you get any supplemental allowable and post it on your schedule here, on this exhibit?

A These figures were taken in July, 1959, from the records of the O.C.T.I.B.M. figures, or whatever they are.



Q You didn't include in your figures any supplemental allowables which the Commission issues after a well comes on production, did you?

A Well, this well has been on production since June -- May, 1958.

Q Exactly, and your graph doesn't show any allowable for the months of May and June. You didn't consider any allowable whatsoever for those two months, did you?

A I simply, because I had no record of it; the first record --

Q You didn't get any supplemental records, did you?

A The first allowable of which I have record is June of 1958, and it shows on the graph; if there was an allowable in May, 1958, I did not have that information. I can't imagine why in June, 1959, when this well was already 17,000,000 feet behind, it would be given a supplemental allowable.

Q Mr. Birdseye, apparently you are not aware of the way that after a well is completed and commences production, that some two months later the Commission assigns an allowable to that well back to its date of first production. You weren't aware of that?

A I'm sure that's the intention of these allowables which are assigned after the well has been producing.

Q Well, you didn't attempt to find and include in your status any of these supplemental orders granting any of these

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allowables, did you?

A Partially, as a matter of time and partly as a matter of common sense, it seemed unnecessary to go through the ledger book for each individual well, each individual month, and get this information. I would say that these data are substantially 95 or 98 percent correct. Now a mere arithmetic mistake, as there will undoubtedly -- will be in error; an omission of that type certainly does not discredit the whole technique.

Q Let's see what else you did, how carefully you made this study; what consideration in computing your figures for the year 1958 did you give to the status of the individual well in which you studied as to whether it was overproduced or underproduced at the beginning of the year 1958?

A Well, a great many of these wells were not producing at the beginning of the year 1958.

Q Just tell me one well in all the studies that you've made that you gave any consideration to the status of that well on January 1, 1958.

A Well, actually I gave attention to all of the wells as of January 1, 1958, insofar as the production was concerned for the previous year. As far as revised allowables or supplemental allowables is concerned, this data was not available to me in the twenty-four hours which exists in a day.

Q Is there one of your exhibits that shows the status of a single well as to over or underproduction on January 1, 1958?



A Which shows the status of a single well after January 1, 1958?

Q As of January 1, 1958, as to whether or not that well was overproduced or underproduced on that day.

A Why, yes. Number 7-8 in 29, 4, is one. Number 11-31 in 28, 4; number 12-33 in 28, 4; number 2-17 in 28,4; number 5-32 in 28, 4.

Q Where in the exhibit, just show me the exhibit which shows the status of that well as to over or underproduction?

A These exhibits behind me went back only to January, 1958, just because they didn't make that size graph paper.

Q Where on one of these exhibits is the over or under-produced status of the well on January 1, 1958, shown?

A Not there, but I have them right here.

Q It hasn't been introduced in testimony, has it?

A No, sir.

Q Now then, let's take and see if you considered that factor in some of the conclusions which you have testified to here.

I believe your testimony was to the effect that during the year 1958 the Pacific Northwest connections, six wells, were produced to a greater degree than the ten wells connected to the El Paso system?

A That is very true.

Q Did you consider that at the end of 1958 the six wells connected to the Pacific Northwest system were underproduced



a total of 45,249,000 cubic feet, and the eleven wells, or the ten wells connected to the El Paso system were overproduced a total of 5,078,000 cubic feet?

A Are you including cancelled back allowables?

Q We are including the status of the well at that particular point.

A Then you aren't including cancelled back allowables because those do not show on the net current allowable. This is a substantial difference. If you look at the net current allowable underproduction as of the present, as of the end of July, these sixteen wells have an underproduced back allowable of approximately 249,000,000 feet, and there have been 85,000,000 feet of it cancelled which does not show at all.

Q Well, now, Mr. Birdseye, are you aware that the Pacific Northwest wells which had been completed were shut in for a period of time starting the year 1958, with a substantial overproduction; therefore, under the proration system in use, it's entirely proper to produce -- that it had a substantial underproduction, I am backwards in my statement, because they had not been taking the quantities initially to which the wells would be entitled. Are you aware of that fact?

A I am not aware, as I pointed out, of the individual day by day reasons for a well's non-production.

Q Let's take some testimony as to your particular well, I believe the horrible examples that you used, you selected in

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Township 28, 4, the number 9-32 well.

A Yes, sir.

Q Are you aware that on December 31, 1958, that that well was 15.2 million overproduced and it had no cancellation during the year 1958?

A Well, now, I might become aware of it if you'll give me just a minute. As of when?

Q December 31, 1958.

A Oh, yes, it was very substantially overproduced.

Q Well, that's one of the wells that you are complaining about not getting its share of production, isn't it?

A I am. If you would care to look at the status as of July, 1959, you'll find that it is seriously underproduced.

Q Mr. Birdseye, you are aware that the law and the Commission's rules provide six months balancing period in which wells may be balanced, and that it is a customary and usual thing for a well to go from overproduction to underproduction, and underproduction to overproduction?

A Well, if you check the monthly production figures, the monthly allowables and the cumulative allowable and cumulative production figures, you'll find that there are fluctuations only in the eight months production which are tied into fluctuations in the line pressure. The allowables were not seriously changed, except if anything they increased very substantially.

Q Nevertheless this well which is one you are complaining



about, ended the year 1958, which is the point covered by your testimony, in an overproduced status, isn't that correct?

A This is correct. May I point out that in the five months ending January, 1959, this well produced a grand total of slightly more than 500 mcf in five months; in that same five months its allowable was 1638, around 60,000,000 feet.

Q Around how much?

A About 60,000,000 feet in the same five months in which it produced 500,000.

Q And as of July, you say it is, your testimony is now that it was in an underproduced status?

A As of the end of July, just as it shows on the graph.

Q Let's refer to the No. 1 Dawson which you compared. Are you aware that at the beginning of 1958, the No. 1 Dawson was in a status of 37.8 million overproduced?

A I shouldn't be a bit surprised.

Q That at the end of 1959, it was 12,000,000 overproduced but had been in balance in both balancing periods?

A Well, this is something --

Q Well, are you aware of that?

A No, I'm not aware of that.

Q Just answer that question.

A No, sir.

Q Did you consider that in your testimony?

A No, I wish that time had permitted it, Mr. Howell,



but it didn't.

Q Are you aware of the fact that on August 1st, 1959, that well was in a status of 1.9 million overproduced?

A August, 1959?

Q 1959.

A No, sir. These figures do not go that recently.

Q Well, you like to use them in '59 for the well preceding, but you don't like to use them for this well, do you?

A I have figures through July, 1959, on that well, Mr. Howell.

Q Let's go to the Grambling No. 2-G, which is the next well you testified about. Did you investigate enough to discover, Mr. Birdseye, that this Grambling No. 2-G is a transfer well involved in a pressure build-up test to which allowables from other wells have been transferred because the other wells were shut in?

A No, I'm not aware of that until now.

Q You didn't consider the fact that this well was producing its allowable and some of the allowable of shut-in wells, did you?

A I'd say more power to that well, Mr. Howell.

Q Well, you drew a conclusion from using that well without taking the trouble to investigate enough to determine it was a test well. As a matter of fact, on your list of 112 of those wells, there are at least a dozen of those wells that are test wells in



similar situations, aren't there?

A How about the other hundred wells?

Q But you included the test wells?

A I had no way to know whether they were being shut in for some sort of test or not.

Q You didn't examine the Commission's orders to find out whether any of these wells were given an order by the Commission granting them special allowables because they were involved in tests, did you?

A No, sir.

Q Now let's go to the Kelly No. 83 well. Are you aware that on the 1st of January, 1958, that well was 27.8 million overproduced; that it was balanced in both proration periods; at the end of 1958 it was 35.9 million overproduced, but on July 31, 1959, it was 1.2 underproduced, and balanced in all three producing periods?

A I'm aware of it now, Mr. Howell.

Q And that the line pressure against which it produced in 1958 was a 501 pound line pressure. Now let's go to the 29-7 San Juan No. 52. Are you aware, sir, that at the beginning of 1958 that well was 2.9 million overproduced?

A Excuse me, would you mind repeating the designation of that well?

Q That's the 29-7 of the San Juan 52 well, the last of your horrible examples.

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A All right.

Q The beginning of 1958, that well was 2.9 million overproduced; at the end of 1958, that well was 43.8 million underproduced.

A Well, I don't for the moment question your figures, Mr. Howell. Do you have an explanation for them?

Q Have you in any of your testimony? It happens that you are the witness, not I, Mr. Birdseye.

MR. CAMPBELL: That's questionable.

Q (By Mr. Howell) You are the expert.

MR. CAMPBELL: I'm just wondering about that.

Q (By Mr. Howell) Have you considered in any of your testimony, have you made any study that includes considering the overproduced status of wells or the underproduced status?

A We attempted to do this by procuring and bringing with us an up-to-date proration schedule which shows the net status of that well at the present time, Mr. Howell. We were physically incapable of going back through all the records of all of these wells, 116 wells, in the time since the last hearing, and carrying on a month by month tabulation the way we did on our own wells.

Q Did you attempt to even consider a year by year tabulation as to the over or underproduced status of a well?

A As I say, time did not permit us to do that. What we were faced with was pulling out production figures on wells at a given deliverability of our applicants' wells, wells of a



wide variety of deliverabilities of other operators widely distributed through the Blanco-Mesaverde Field and drawing therefrom a comparison and a conclusion.

Q And you didn't take into consideration in reaching your conclusion the beginning status of the wells as to whether in the period which you covered by your study the wells were underproduced or overproduced at the beginning point of your study, did you?

A No, sir.

Q Okay. I'm glad that you finally answered that one. Now did you give any consideration whatsoever to any elements of force majeure in connection with winter months, with reference to the wells located in Townships 28, 4 and 29, 4?

A Yes, indeed. I'm very familiar with that country up there.

Q And you are aware that that's high country with deep canyons and in the snow at times it's impassable?

A Very definitely.

Q And you will concede that in winter months there are going to be periods in which it is impossible to reach those wells for switching purposes?

A We all, as a matter of common sense and knowledge, are aware of these troubles and that is one reason why we are a little bit at a disadvantage to understand why Pacific Northwest, which operates in rougher country generally speaking, in 29 North, 4



West, than El Paso does, how they are able to take fifty percent more gas from their wells than El Paso was.

Q Mr. Birdseye, apparently you aren't aware of the fact that by contract the El Paso personnel operate all of the wells in that area, and that there isn't a single Pacific Northwest employee that goes out there to do any switching; that all of it is done by El Paso. Were you aware of that?

A I shouldn't have doubted it a bit.

Q Were you aware of it? You just made a statement that indicated that you --

A Well, we are shown that six of these wells are tied into, quote, Pacific Northwest Pipeline Company, ten wells are tied into, quote, El Paso Natural Gas Company, although for a long time they have been practically an entity, so without getting into company politics, I have no idea as to whose hired hand goes out there.

Q You were interested in making statements without knowing anything about it just a minute ago, in which you stated that Pacific was able to do it and El Paso doesn't?

A Well, this is the record.

Q Well, let's look at the connection system a little bit. I refer to your testimony given at the recessed hearing, on page 8 of your testimony you refer to a well located in Section 26, Township 28 North, Range 4 West, as one of the unconnected wells. Are you aware, sir, that that well was, had water in both

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the Mesaverde and the Pictured Cliffs?

A Would you give me a moment to check?

Q And had never been completed?

A Would you give me a moment to check? This is Section 26 and 28, 4, Mr. Howell?

Q Yes. The portion of your testimony at the bottom of the page; El Paso No. 4-26 Well.

A According to my records on that, Mr. Howell, while they were gas drilling the Menefee, they ran into water, a wet zone which prohibited further drilling; the logs and other data indicated it would have been a successfully completed well if a casing had been run through the Mesaverde and perforated and fracked.

Q However, it has never been drilled and completed as a producing well?

A Not to my knowledge.

Q It's one of the wells that you are complaining about not being connected?

A This is one of the wells which we specified for query, this is correct.

Q Let's go over to page 9. I'm just interested in seeing how much investigation the applicants in this case made as a basis for complaint.

MR. CAMPBELL: What's the number of the first well?

A No. 4-26, Section 26, Township 28 North, Range 4 West.



Q (By Mr. Howell) Go over to your testimony on page 9, the first question refers to the No. 6-11 Well in Section 11, 28, 4.

A Yes, sir.

Q Are you aware, sir, that the Pictured Cliff showed a gauge of 631 MCF per day, and not the Mesaverde, and that the well is connected and producing in the Pictured Cliff system and not in the Mesaverde? It was never completed in the Mesaverde.

A They attempted to complete in the Mesaverde with three sets of perforation; the last information I have on it, Mr. Howell, is that they were planning to work it over.

Q And that was plugged and abandoned on January 16, 1958, which was some months before you began your investigation?

A That's entirely possible.

Q Your investigation didn't go far enough, though, to discover the plugging and abandonment of this well, did it?

A Unfortunately the scouting services are not always very efficient.

Q Now referring to your testimony on page 9, the Well No. 12-18, did your investigation ever proceed far enough to determine that this well was never completed -- was never connected, let me correct that -- has never been connected to a pipeline system? Your testimony was to the effect that it was.

A The pipeline map, I believe, shows that well connected. We are complaining because if it is connected there has been no



gas taken from it. All of our information shows that it is a completed well and should be connected and should be producing.

Q All right, now, referring to your map over here, you show a well in 28, 4, in Section 14; that's the 3-14 --

A Is that a Pictured Cliffs or Mesaverde Well?

Q -- are you aware, sir, that it's a plugged and abandoned Mesaverde?

A I don't think that we represented it as being producing.

Q Your plat shows it connected to the system, connected to a pipeline.

A I don't think we made any allegations about that well, Mr. Howell. Our records show that it was drilled to a total depth of 6619, plugged back to 4363, and was a natural completion in the Pictured Cliffs, and it may have been subsequently abandoned but it is not shown as one of the wells in any of our testimony or on that map.

Q All right, your map discloses a well located in the Northwest Quarter of Section 34 of 29 and 5, the well 8-34. Are you aware, sir, that is temporarily abandoned, has never been connected or completed?

A No. 8-34, I think it is a well of which we have said nothing.

Q Let's go up to Section 22 in the same Township. Your map shows it connected to a pipeline system. Are you aware, sir, that well was plugged and abandoned?



A Mr. Howell, all these last three wells that you are pointing out are, or were, in the *Chosama Mesa* Chosama-Pictured Cliffs Field, and this is not, as I understand it, pertinent.

Q Will you point out where the Chosama-Pictured Cliffs Field boundaries are, where it was included over there?

A Well, this is in the producing area, the Chosama-Mesaverde Field, whether the boundaries reach down to here or up to here I don't know, but we have never represented this was an unconnected Mesaverde well, even though it was drilled to the Mesaverde and plugged back. Frankly, our opinion is that those wells could be properly completed in the Mesaverde.

Q Would the applicants desire to furnish the capital to rework the wells?

A I'm not one of the applicants, Mr. Howell, I don't know.

Q If they'll say so strongly enough, I can say that the door is always open.

A I would say it is certainly good economics to spend five thousand on a well and increase its deliverability by five hundred percent.

Q Mr. Birdseye, in that area there, some of the deliverability that you would increase, according to the completion data, would be of water instead of gas, but we'll pass that by.

Mr. Birdseye, let's see if we can summarize generally the conclusions which you have reached and the facts that you have



made from the study you have made upon which you base your conclusions, you have taken into consideration the Mesaverde wells located in Townships 28-4 and 29-4, and you have used for one basis of comparison the State deliverability tests, is that correct?

A Definitely.

Q Now, for example, in your testimony as to the well located in 28-4, Well No. 1-18, you testified this morning that the State deliverability was 31,000 MCF --

A No. 1-18?

Q Yes.

A No, sir, I certainly didn't say it was 31,000 MCF. It might have been 31 MCF.

Q Well, 31 MCF, pardon me. What was the year of the test upon which that deliverability was based?

A Well, let me pull out the August proration schedule and see if perhaps that's the one given as the current test. This is a September proration schedule, and it doesn't show the deliverability test.

Q As a matter of fact, Mr. Birdseye, did you know that test was taken in 1956?

A No, sir, I did not.

Q And you are comparing this well, with a 1956 test, which hasn't been able to pass a satisfactory test in the last two years, with other wells. Mr. Birdseye, you have taken the



deliverability tests, and as shown at least in this instance, you used deliverability that's somewhat out of date. You have averaged deliverability as one factor in reaching your conclusions, is that correct?

A Yes, sir, definitely.

Q Then you have taken gross production, and you have used that generally as the other factor in reaching your conclusions?

A Versus deliverability, yes, sir.

Q That is, you've compared deliverability versus production and drawn your conclusions from that comparison?

A Yes, sir, in a general sort of way, that's quite correct. The reason being, among other things, that deliverability does not change rapidly from year to year unless there has been a remarkable drawdown in the well; and certainly the rate at which that one well had been produced, which has been as high as, that one particular well has produced as high as 350,000 feet of gas a month, I'm sure that it has not depleted the reservoir, and if a deliverability test was taken now on the same basis as it was taken three years ago, it should be nearly the same.

Q It is a marginal well, is it not?

A I believe this could pass as one.

Q Yes, and you haven't eliminated from your allowable calculations the marginal wells, have you? You have used in your calculations for marginal wells the initial allowable which was given a well, regardless of whether or not the well was actually



able to produce that allowable, have you not?

A Well, as far as I know, we have a complete table of the monthly allowables. These data are taken from the records of the Oil Commission, and if a well is given an allowable of ten million feet a month and for a period of many months it produces two million feet, then it gets looked at, regardless of the reason for why it produced only a very small portion of its allowable.

Q Well, in your considerations of allowables, the figure that you have consistently used has been the initial allowable given to marginal wells, has it not?

A No, sir. Not at all. These graphs here show great fluctuations in allowable. It looks like Mount Everest side by side with Mount McKinley.

Q But in computing, you have testified to cumulative allowables given to certain wells in the case of marginal wells, Mr. Birdseye, did you or did you not compute that cumulative allowable by using the initial allowables, I mean the allowables given to the well prior to its being declared a marginal well?

A I think I can answer that with an example here, Mr. Howell.

Q I believe you can answer that question, sir, yes or no. Did you or did you not use those figures? It seems to me that is the simple question.

A Yes, sir, I certainly used the monthly allowable figures as appeared in the proration schedule of the Oil Commission.



I have one well here, for example, that was given an initial allowable of 10,054 MCF per month; after seven months it was failing to make that allowable for reasons which we don't know, but which may very well be tied in with the line pressure and the allowable was dropped to 744. A year later, it was still not making that allowable, so that the allowable was reduced to 527 MCF, still in a time of which we have no record of line pressures or operation of the well.

And, finally, in September, 1957, this well's allowable was reduced to 94 MCF and all we know since then is line pressures, which have averaged well over 500 pounds.

Q All right, now, I believe you can answer this question, Mr. Birdseye. In the testimony relating to allowables as to that well, the figures that you have used have not been those used by the Commission after the well became a marginal well, but with the allowables allocated prior to determination that the well was a marginal well. Is that or is that not true?

A I don't believe that is true. To the best of my knowledge, we were using all allowable figures, and they are represented on these graphs here, and they are represented on this tabulation.

Q With a marginal well, did you use in computing your allowables a figure in excess of the production made by that marginal well?

A In computing which allowables?



Q An allowable for marginal wells.

A I'm sorry, would you repeat the whole question, please?  
I'm not sure I'm with you.

Q Mr. Birdseye, I'm simply trying to find out what figure you used when you got hold of one of these marginal wells and testified to the allowable which had been granted that well. Did you use the figures which included the allowables granted during the period that the well was unable to make allowables and became classified as a marginal well, or did you do as the Commission does and go back and establish the well's production as its allowable, now which did you do?

A Well, I think we have accomplished both things. We have the current monthly allowable for each well for each month, the cumulative allowable of that well, and also a notation as to which of the back allowables have been cancelled.

Q And, Mr. Birdseye, the conclusions which you have reached have been based upon arithmetic averages, which represent the totals of production for any given month from one well, is that correct?

A Yes, it's taken from the files of the Oil Commission.

Q And you did not in reaching any of your comparisons between deliverability and the production, consider the number of days during the month that that well actually produced?

A I think that's entirely irrelevant, Mr. Howell, as you know, there are --



Q Please answer the question and then go ahead and make the explanation that you want.

MR. CAMPBELL: He has testified several times that he did not, I think, Mr. Howell.

MR. PORTER: Will you answer the question again, Mr. Birdseye?

A We did not have that information.

MR. PORTER: Will you answer the question again?

A We did not, as far as ascertaining how many days each well was on production, we did not. We have it on scattered wells throughout the Basin. We did not have it on all of our own wells or all of these 116 wells. It was a physical impossibility to digest it in the time allotted.

Q (By Mr. Howell) And in connection with your line pressures, the line pressures of course which were furnished you were the averages for the time that the well was on production during any month?

A That's correct.

Q And that average which you have thrown into your figures, you have given the same weight to an average line pressure based upon one day's production that you have given to a line pressure based on thirty days production, have you not?

A Inasmuch as we were not informed how many days these line pressures pertained to, that is correct.

MR. HOWELL: Thank you.



A There were some months in which there was simply a notation, "line pressures not available". Perhaps it means the wells were shut in for thirty days, that I don't know.

Q (By Mr. Howell) But in your arithmetic computations, you made no allowance whatsoever for the time factor?

A We had insufficient data to do that.

MR. HOWELL: Thank you.

MR. PORTER: Mr. Payne.

BY MR. PAYNE:

Q Mr. Birdseye, in attempting to determine whether there is discrimination between takes from wells of comparable deliverability in the same pool, it would seem, would it not, that the actual production rather than the number of days that the well produced would be the important factor?

A Very definitely. You know yourself, Mr. Payne, that with an oil well, for example, and with many gas wells, you can produce its whole month's allowable in one or two days.

Q Now, Mr. Birdseye, in calculating allowables in the Blanco-Mesaverde Pool, the only factor in the proration formula other than acreage is deliverability, as reflected by the deliverability tests of the Commission, accepted by the Commission, is that right?

A So far as I know.

Q So also in attempting to determine whether there is discrimination, would it show that you should go to well's



deliverability as reflected by such tests, rather than attempting to determine a well's capability of producing against any assumed line pressure?

A Well, actually that's what we have done, Mr. Payne. This is a statistical -- this statistical analysis is based on the deliverability tests, and while we have ascertained line pressure for our own information in an attempt to explain why our applicants' sixteen wells, which are comparable, say, to somebody else's sixteen wells elsewhere in the pool, why our wells have produced less gas, we come to the inescapable conclusion that a factor in this is line pressure, since we are fighting or have been fighting a substantially higher line pressure; but this statistical analysis is based entirely on deliverability versus production with no variable included as line pressure.

Q It would be very difficult, would it not, to determine the capability of the well's producing rate against an infinite variety of assumed line pressures?

A Oh, definitely, and there wouldn't, I can see no point in it.

MR. PAYNE: That's all. Thank you.

MR. PORTER: At this point we will recess the hearing until 1:15.

(Whereupon, a recess was taken.)



AFTERNOON SESSION  
October 22, 1959

MR. PORTER: The hearing will come to order, please. Does anyone else have a question of Mr. Birdseye? Mr. Greiner. Mr. Greiner, are you associated with Southern Union?

MR. GREINER: Yes, Mr. Verity introduced me at the first hearing. I'm sure he will be glad to do so again.

MR. PORTER: It won't be necessary.

CROSS EXAMINATION

BY MR. GREINER:

Q Mr. Birdseye, I wasn't entirely clear that I understood all of the conversations between you and Mr. Howell as to just what these allowables were that you used in preparing your D-A through D whatever -- I mean 2-A through whatever 2 -- your 2 series of exhibits. As I understand it, on the Commission's monthly proration schedules, they will assign a well an allowable which is based on nominations and then a couple of months later, when they find out what the actual production from the well has been, why, there will be a revision of the allowable as originally assigned so that the total allowable for the field for that month is substantially identical to the total production of the field for that month?

Is this in accord with your understanding of the way that works?

A Approximately, aside from the six month periods of re-evaluation of past allowables --

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Q Yes.

A -- and the subsequent six months period.

Q Leaving out of consideration these cancellations of underproduction and re-assignment of those, generally speaking there is for each month an allowable assigned, and then two months later a revised allowable assigned on the basis of actual production, is this in line with your thoughts?

A Is that correct, Mr. Porter? Frankly, I can't answer that question.

MR. PORTER: What was the question, Mr. Greiner?

MR. GREINER: I was asking whether or not the original allowables as assigned to the well were not assigned mechanically, as the Commission proration formula works, if they are not corrected some two months later when actual production figures come in so that we know what the total production was.

MR. PORTER: I believe that was two months later when actually the actual production becomes allowable.

Q (By Mr. Greiner) My question, then, is, Mr. Birdseye, whether the allowable figures that appear on the charts comprising your Exhibit 2, whether those were the ones as first assigned, or sort of tentatively assigned to the wells on the basis of nominations, or whether those are the corrected allowables as assigned to wells after the production for the period has become known.

A Well, it is my understanding that these allowable figures as shown on those exhibits are month by month allowables.



In other words, the January allowable is the one which is shown in the January proration schedule, February, et cetera. You will note if you have scrutinized some of this month-by-month information carefully, that periodically some of the unproduced allowable has been cancelled, and then we start out on a whole new basis in many cases with the applicants' wells with a much reduced allowable because the production did not reach the previously assigned allowable.

Q And yet it's not until two months later, according to what Mr. Porter tells us that we know what the final allowable is for this well. We got an allowable for the well in January, in the January schedule for the month of January, but it's not until two months later when we get to the March schedule that we actually know what the well did produce in January and know what the final allowable for the well for that month was, isn't that correct?

A I think that probably is correct, yes, sir.

Q Did you take that at all in account in the preparation of your exhibits?

A Well, that was taken into account in the method of preparing these exhibits, these graphs, over an eighteen months period, so that while there may be a two months lag as regards one specific month, that within the subsequent two months you would note an adjustment of the allowable to make up for that.

So that over any given period of greater than a few months, you should arrive at approximately a net figure.



Q So that it may not be right on a month-by-month basis, but over a period of time you feel that your method is correct?

A I think it's a valid method over a period of time, yes, sir.

Q I believe you also said in response to questioning by Mr. Howell this morning that you understood that in the case of wells which were classified as marginal, that their allowable was what the wells actually were able to produce?

A This was Mr. Howell's statement.

Q Don't I understand your testimony this morning --

A Which I think, as I understand prorationing, this is correct.

Q You are not quarreling with the statement, whether it was your own or Mr. Howell's?

A No, sir.

Q Or mine?

A No, possibly through the technique of this month-to-month business.

Q Are any of the wells which are represented on these graphs comprising your exhibit 2 now classified as marginal wells or have any of them been classified during the period covered by those charts?

A Yes, sir.

Q Which ones would those be?



A I wish you hadn't asked that. There'll be a short delay here. As a matter of fact, I'm not sure without referring to a proration schedule that I can tell you that.

Q Well, maybe we can go at this a little bit differently then. Would you be good enough to turn to Exhibit 2-G, please?

A Do you know the well number? No, it's got "G" on it there. I was just looking at it a few minutes ago. I think it's the next one from where you are.

Q Yes, this is the one. This shows a well which has a perfectly flat allowable all the way through, and this is the well No. 2-17, according to the markings on the exhibit. Can you tell me whether or not this well is a marginal well?

A Well, in order to get the answer to that, we'll have to -- since this is an older producing well, we should go back to its producing history prior to January, 1958.

This well first produced gas in April, 1955, and the first allowable assigned to it was 1054 MCF per month. In December, 1955, that was, the allowable was reduced to 744 MCF because of the well's failure to produce its assigned allowable in the preceding interval.

By November, 1956, the allowable had been reduced to 527 pounds --

Q What?

A To 527 MCF, again because it had failed in the preceding period to produce its allowable. Finally, in December, 1957,



which -- subsequent to which this graph covers the entire period, the allowable since then has been 94 MCF per month.

Q Now this, then, surely cannot be a figure which relates at all to the actual production of this well. If it is marginal, the final allowable of the well should be just the same as the production figure which we see here, should it not, Mr. Birdseye?

A Well, under ideal conditions the well should produce this allowable each month.

Q Now if it's a marginal well, however, the allowable is what it produces, is it not, so that in that sort of a situation the two lines would be in complete parallel, if we took into account this two-month time lag which you have indicated you didn't feel to be of much importance?

A Well, let me come around through the back door for a minute in discussing this. As of the end of July, 1955, this well had produced a cumulative total of 22,288 MCF. Its cumulative current allowable at that time was 17,961 MCF, so on the face of it it had overproduced some four and three-tenths million feet.

However, back in October, 1955, 8,330 MCF of under-production was cancelled, so this is a peculiar system. You can note the line pressure on the well for the period from January, 1958, on which generally was in excess of 500 pounds, and which certainly has, as you can see here, a direct relationship to the production; the line pressure decreased, the production increased.

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When the line pressure increased, the production decreased.

This rather consistent inverse relationship, now, we do not have records of line pressures previous to January, 1958, for a period of two and a half years, and therefore it's difficult to see why this well which originally had a monthly allowable which averaged 1,050 MCF was over a period of two and a half years reduced to 94 MCF, which is its current allowable.

Q I wasn't attempting to get into that. You have told us about a lot of things here that I didn't think were implicit in my question. Would it be possible for you, by checking your records, to determine -- I mean, do you have information here which, say at the next break, would enable you to determine whether this well is or is not a marginal well, and if it is one, when it was so classified? I think that this information is rather important as to this group of wells.

A I guess we could find that out with the Oil Commission. I do not, I presume it was classified as a marginal at the end of November, 1955, when its allowable was reduced and 330 MCF production was cancelled due to the failure to make that.

Q That would be my assumption also. Here, turning to this Exhibit 2-H, I assume, because it's the next one after 2-G -- we again have a situation, do we not, where a perfectly straight allowable line running across the face, the lower face of your chart here; now that plainly is not a thing which compensates even on a two-month time lag basis, is it, for actual allowables

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attributed to this well, the actual final allowables attributed to it, if it is non-marginal, or actual production if it is marginal?

A Well, unfortunately, again this is an instance where our line pressure data commenced in January, 1958, and it was in September, 1957, that the allowable, monthly allowable for that well was reduced from an average of four million feet per month to 334 MCF, I'm sure as a result of the well's failure to produce its previously assigned allowable; so it must therefore have been reclassified as a marginal well at about that time.

Q If it is a marginal well, then it just can't be right, can it, that the allowable would be running along on so different a plane than the jagged line of production which is shown on the chart?

A Well, I don't know what the total production in this period will amount to, as compared to the total allowable. In some places it's above, it zigzags up and down, it looks to me offhand as though the total production in that period was slightly under the total allowable assigned the well.

Q What I was getting at, Mr. Birdseye, I thought that we had come to an understanding that in the case of marginal wells the allowable is the production. Now I'm trying to find out if that is so, that the allowable is the same as the production, how these charts can consistently show an allowable different from the production?

What is the reconciliation of those two things? That's



really the whole basis of my line of questioning.

A In other words, why does the production of a gas well fluctuate, and why is it not a constant figure?

Q No, no, that is not my question. My question is how, why and how can there be a different allowable line than the production line? I'm assuming that you have correctly charted the production on here. Why is it, when the allowable is the same as the production figure in the case of a marginal well, that this allowable line is not super-imposed completely at every point on the production line? How does this straight one come into being?

A Let me restate my previous -- your previous question. What you are asking me is why is not the allowable the same as the production?

Q That's a good way to put it.

A Or in other words, why are there fluctuations in production?

Q No, that's not the same question. I'm asking, in the light of the proration mechanics as adopted and effectuated by this Commission, and which provide very specifically in the case of these marginal wells that they get as their allowable what they do produce, so long as they are marginal wells, how we can have a chart which shows different figures for allowable and production when the Commission says the two are going to be the same?

A Well, sir, I wish I could answer that question, but



I cannot, because my clients do not operate these wells.

Q They don't operate the Commission's proration system, either, I gather. You don't know why this is that the two lines are not together?

A I can think of mechanical reasons for it, but I do not know the real reason.

MR. GREINER: Thank you.

MR. PORTER: Does anyone else have a question? Does that conclude your questioning, Mr. Greiner?

MR. GREINER: Yes.

REDIRECT EXAMINATION

BY MR. CAMPBELL:

Q Mr. Birdseye, on your charts you simply showed on the chart month by month what the allowable schedule reflected the allowable for that well to be, didn't you?

A Exactly, and for the same month, the allowable and the production as recorded in the records of the Oil Commission.

Q Any reason why, considering the two-month lag, that the allowable and the production are not the same, you don't know why that's the case? That's just what the proration schedule shows, is that correct?

A That's what the production schedule shows.

Q Well, your allowable line, you plotted that off the allowable for the wells, didn't you?

A I am not sure I am with you, Counsellor.



Q How did you get your allowable line?

A It was set up in the monthly proration schedule of the Oil Commission. In this particular instance, it's been 334 MCF for that well per month since October, 1957.

MR. CAMPBELL: That's all.

MR. PORTER: I would like to say at this point that my answer to Mr. Greiner's question applied only to marginal wells.

MR. GREINER: Yes, sir. I thought that I was making that clear that I was inquiring only about marginal wells. Certainly as to others, what I was saying about production being the same as allowable would not be the same.

MR. PORTER: Does anyone else have a question of the witness? You may be excused.

(Witness excused.)

MR. CAMPBELL: If the Commission please, that's all of the evidence we have at this time. I do want to get into the record the latest deliverability data on the wells in these two townships, but Mr. Rainey tells me he intends to offer testimony in that regard, so that will take care of that.

MR. PORTER: Who wants to be next? Mr. Howell.

MR. HOWELL: If it please the Commission, we are prepared, since we apparently are the target here. I think we might as well come on the stand next.

We have two witnesses; we may have another, possibly, but I believe our testimony will be presented by Mr. Rainey and

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Mr. Logan.

MR. GREINER: Mr. Porter, I would like to enter a motion at this point that the application be dismissed in its entirety for want of evidence, before we go any further with this matter.

I think it's rather clear what we have had presented up to now is merely a set of statistical data which as clearly revealed in the cross examination have failed to take into account some rather important and significant aspects of the basic problems going to why certain wells produce more than other wells and why certain wells have more allowables than other wells and why certain wells have greater deliverabilities per test than other wells.

We have had no indication up to the present time of any relief which is sought here. We have had nothing specific presented to us in the way of corrective or curative action desired of this Commission.

I just don't see what the Commission has to proceed on at this particular point. We have just had a sort of a generalized problem stated to us, and nothing has to be done about it.

Now I don't see how the Commission can grant the relief at this point, where nothing has been asked for, and I therefore move that the application be dismissed.

MR. PORTER: Mr. Greiner, the Commission will deny your motion.



DAVID H. RAINEY

called as a witness, having been first duly sworn on oath,  
testified as follows:

DIRECT EXAMINATION

BY MR. HOWELL:

Q Will you state your name for the record, please?

A David H. Rainey.

Q Will you also state briefly, Mr. Rainey, your technical  
educational experience, and the position which you presently hold?

A Yes, sir, I was educated at the University of Texas  
for B.S. in Geology. After leaving school I worked for the  
Railroad Commission in the Midland District Office of the Railroad  
Commission for approximately one year. During about six months of  
that time I was Acting District Engineer for that West Texas  
District for the Railroad Commission, and I had charge of over-  
seeing all the tests that are required by the Railroad Commission  
in the State of Texas.

In October, 1952, I went to work for El Paso Natural  
Gas Company as a Petroleum Engineer in their Reservoir Department  
and served in that capacity for approximately three and a half  
years in their Houston Office in the Reservoir Section, during  
which time I made studies of various types of reservoir work,  
particularly emphasizing the San Juan Basin Area.

In April, of 1956, I moved to El Paso as Administrative  
Assistant in the Proration Department, which position I still hold.



Q Does the Proration Department in El Paso have supervision of determining the quantities of gas taken from wells in the Blanco-Mesaverde Pool?

A We determine the quantities to be taken in accordance with the proration rules as established by the Commission. It is our business to try to help the field, to see that we produce the proper wells at the proper time.

Q In order to cut a little time in the record, I shall ask you generally were all of the exhibits which you propose to introduce in your testimony prepared under your supervision and direction?

A In a general way, yes, sir.

Q Do they correctly reflect the facts which they relate to?

A As near as the files of El Paso Natural Gas Company, Pacific Northwest Gas Pipeline Corporation, and the Commission reflect, they are the true facts as they now exist.

Q Now, behind you on the board is placed an exhibit which we shall designate as El Paso's Exhibit No. 1. Will you please state to the Commission what El Paso's Exhibit No. 1 reflects?

(El Paso's Exhibit No. 1 marked for identification.)

A Yes, sir. This is a system map showing both El Paso Natural Gas Company Pipeline System and Pacific Northwest Pipeline System in the San Juan Basin Area.

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Outlined in red over here is the four township area that we first thought this hearing was going to be confined to. The purpose of this exhibit is merely to show the existence of the pipeline system and the distance from the Blanco Plant, which is the plant into which all the wells in this area produce and are connected.

The distance from that plant out to these units, both from El Paso Blanco Plant and Pacific Ignacio Plant, these arcs across here are five mile increments drawn generally down the pipeline.

If you will notice, on the El Paso System pipeline, it doesn't go straight through here, it comes up and goes back down, and the other portion connected in here goes down this way. Generally, this will give the relationship between this area and the plant.

Q What is the function of the plant with reference to the determination of gathering and the commencing of main line transmission?

A All of these many gathering laterals and trunks and individual well ties collect the gas and feed them into a main trunk, any one of several main trunks, as a matter of fact, going into the plant.

At that point, the gas is compressed and is treated, I mean it's treated and then compressed, and goes into the main line system. The pressure at the plant, the so-called suction



pressure at the plant must of necessity be less than the pressure at the end of the line, or the gas is not going to flow. It's just like water flowing uphill. You have to have something to move it along.

Unless the pressure here is less than elsewhere in the field, the gas will not flow, it will sit there static in the pipeline, and it can, if this pressure got too high, cut off somewhere in the field, because the well is not capable of flowing.

Q What would be the effect of maintaining in a gathering system the same identical pressure from one end of the system to the other?

A The gas would just sit there, there would be no flow.

Q In order to gather and produce the gas from the wells into a point in which it is compressed for long range transmission, the very physical facts require that the pressures closer to the plant be lower than the pressures at a distance from the plant?

A Yes, sir. That's correct.

Q What is the location of Townships 28, 4, North, and 29, 4, North, with reference to the field, generally? Are those townships located at an extreme edge or are they somewhere near the center?

A No, sir, those two townships are located at the extreme eastern edge of production in the Blanco-Mesaverde Pool. There are a few wells, and that's a pretty small scale, but there are a few wells to the east in 28 and 3, and about four or five



wells to the east in 29, 3. East of that there's no Mesaverde production in the 28 or 29 Township.

Q Mr. Rainey, are you familiar with the arrangements under which both the Pacific Northwest and El Paso Natural Gas Company gathering systems are operated in the Blanco-Mesaverde Pool?

A Yes, sir, in a general way. There is what we term our agency agreement with Pacific Northwest Pipeline, which was entered into in an effort to cut out duplication in switchers and various other types of personnel that operate, actually operate the field. Under that agency agreement, El Paso personnel switched the wells and controlled the production of the wells which are connected to Pacific Northwest Pipeline system.

We have no control, under this agency agreement, over any physical changes that may be necessary to be made in the well. In other words, the separation equipment or intermitters or if the well needs a workover, anything of that type does not come under this agency agreement.

It's purely a production agency agreement is all it is.

Q Well, for all practical purposes, is the gathering of Pacific Northwest and El Paso Natural Gas conducted as if it were one system?

A Yes, sir. That's, of course, subject to the demand of each pipeline system, but as far as the actual physical operation

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of putting the gas into the pipeline, it's all one system.

Q Does the same man switch a Pacific well or an El Paso well when they are located in the vicinity?

A Yes, sir.

Q Does your proration system also make studies concerning the status as to overproduction or underproduction of Pacific Northwest wells in the same way as you do with El Paso wells?

A Yes, sir.

Q Is there any other matter in connection with that map that you would like to testify about, before we leave the first exhibit?

A I might point out on this map, since this will be an official exhibit, the other copies that have been passed out don't have this on here. We did it basically for our own purposes to start with, but I thought since the other wells are going to be discussed, we might have this here.

The wells circled in red on this map are the wells, the so-called 112, 116 well list. Now you'll note that some of the wells also have a red square around them. Those wells are wells which are involved in pressure buildup tests. There are eleven of them shown on this that also have red circles.

If the well in a red box and a red circle is colored in green, it is the test well itself. It's not a transfer well, not the offset well, it's the test well itself. For purposes of reference, or for our own benefit more than anything else, we



boxed in the test wells in green, to show their relationship to the wells that were on the list, if the test well wasn't actually on that list.

Q Mr. Rainey, now have you prepared a more detailed plat or map of the area which embraces the four townships which were originally listed as the only items in the Bill of Particulars?

A Yes, sir, I have. It's Exhibit No. 2-A.

(El Paso's Exhibit No. 2-A  
marked for identification.)

Q Will you please refer to El Paso's Exhibit No. 2-A and tell the Commission what that exhibit reflects?

A This exhibit is a large scale plat, I believe it's approximately an inch and a half to the mile is what it looks like, of the four Township area comprising Townships 29 North, Range 4 and 5 West, Township 28 North, Range 4 and 5 West. It's the same area that was outlined in red on the larger map we put up a minute ago.

This plat shows the existing pipeline systems of El Paso Natural Gas Company and the Pacific Northwest Pipeline. The El Paso system is the solid line on the plat, the dashed line through here.

Q That's through the left-hand lower corner of the map?

A Yes, sir. And connecting to the wells in the southernmost edge of the 28-4 Unit is the Pacific Northwest Pipeline system, and the line running eastward from Section 17, 29, and 5 to connect to the 7-2947-8 Well in Section 8, which is shown by a



dashed line and a dot between the dashes, is a temporary line which has been in there for about two years, as I recall, and was originally laid to deliver drilling gas to drill the wells in this area and it was left in there, and the 7-8 well is now producing back the other way through that line at the present time. It's a temporary three-inch line, I believe, laid on top of the ground.

Q What do the colored circles or blocks on Exhibit 2-A indicate?

A The orange circles show the completed Mesaverde wells in the 28-4 and 29-4 unit. If the pipeline goes to them, why, they are connected to the system. There's no line drawn showing the pipeline connection. Those wells are not connected to the system.

I think Mr. Birdseye's map showed two or three wells connected that are not actually connected. It's possible that he got hold of one of the preliminary maps, and there was a tentative plan before the wells were completed, probably.

The hexagonal design colored a yellow are wells that have penetrated the Mesaverde, but are temporarily abandoned in the Mesaverde.

The wells that are colored, just the well symbol itself that are colored in yellow are wells that are officially plugged and abandoned in the Mesaverde. They are wells that have penetrated the Mesaverde and are officially plugged and abandoned in the Mesaverde.

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Q Have you prepared at this point, or would you like to go into a discussion of the individual wells, or would you prefer to go ahead with the other exhibits under the series 2?

A These are the other exhibits under Exhibit 2, the well data sheet.

Q You would like to go ahead with that?

A Yes, I would.

(El Paso's Exhibits 2-B and 2-C marked for identification.)

Q Would you please testify what the exhibit 2-B, El Paso's Exhibit 2-B is?

A El Paso's Exhibit 2-B is a well data sheet showing certain types of completion information on the wells in the 28 and 4 unit.

Exhibit 2-C is a well data sheet showing certain types of completion information on the wells in 29 and 4 unit.

If I might, I will try to hurriedly run down these data sheets and indicate the location of the well on the map at the same time that I'm doing it.

Referring first to Exhibit 2-B, the data sheet for the 28-4 unit, the first well is the 1-18 well, located in the Northeast Quarter of 18, 28, and 4. This well was completed October 26, 1952, at a total depth of 6898 feet, and the initial potential on that well was 785 MCF in the Mesaverde.

This well was connected to the system in October, 1954; because prior to that time the system did not extend that

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far east, as I mentioned before, this is very sparse development out in this area and had first delivery on October 29, 1954.

The second well on that list is the 2-17, located in the Southwest Quarter of Section 17, 28, 4. This well was likewise completed in the Mesaverde to a total depth of 6821 -- excuse me, I failed to give the completion date on the well; it was August 31, 1953. It had an initial potential of 872 MCF in the Mesaverde, and was connected and first delivered on October 29, 1954, as was the 1-18, which -- those are the first two wells in the area.

The No. 3-14, located in the Northwest Quarter of Section 14, 28, 4, was completed December 21, 1953, at a total depth of 6619, and is plugged and abandoned in the Mesaverde. The gas was too small to measure; the well was plugged back to the Pictured Cliffs and was flowed with an initial potential in the Pictured Cliffs of 114 MCF and declared non-commercial for purposes of unit production.

The Well No. 4-26 in the Southwest Quarter of 26, 28, 4, was completed March 17, 1954, at a total depth of 6535; at the time this data sheet was made out was designated as temporarily abandoned. This well was drilled by Phillips Petroleum Corporation and they encountered water in both the Mesaverde and Pictured Cliffs.

If I might digress and go over to page 2 of the exhibit and call your attention to the last well on the list, the



24-26, which is located in the Southwest Quarter of 26, 28, and 4.

Q Just a minute, is that practically a twin location?

A It is a twin well to the No. 4-26, which Mr. Birdseye testified to earlier today, he thought could and should be completed as a Mesaverde completion. That well is not complete on this data sheet because it was made out some month or more ago. That well is now plugged and abandoned. It was completed to a total depth of 8752, shot the Mesaverde at various intervals from 6,004 to 6602 and fractured the entire section, every interval that looked good on the log was heavily fractured. There were no shows whatever in that well.

Q Was that projected as a Dakota-Mesaverde test?

A Yes, sir. It has been abandoned in both the Dakota and Mesaverde.

The next well, back on page 1, is the 5-32 located in the Northeast Quarter of 32, 28, and 4. This well was completed March 17 -- excuse me, September 29, 1954, at a total depth of 6700 feet, had an initial potential of 1,335 MCF. It was connected to the Pacific Northwest system on August 10th, 1957, and first delivered on September 11, 1957.

The next well is the 6-11 in the Southeast Quarter of Section 11, 28, and 4. This well was completed April 23, 1956, to total depth of 6580; it is now officially plugged and abandoned in the Mesaverde, would not flow. The well, as Mr. Birdseye testified earlier, we repeatedly attempted to make that



well flow, and we couldn't get anything out of it. The well was tested and had a very small show of gas. I don't recall what it was. I notice I don't have it on this sheet, but that test was turned in to the Commission.

The well was connected because of the Pictured Cliffs completion; upon notice of connection the Commission assigned an allowable to that well in the Mesaverde in January -- I believe in December, 1957. The well was officially plugged and abandoned in January, 1958, and by a supplement that, we finally caught on to the fact that it was still being carried on the proration schedule, by supplement issued in January, 1959, all previous allowables of that well was cancelled and the well was officially designated as plugged and abandoned.

The next well is the 7-12 located in the Southeast Quarter of Section 12, 28, and 4. This well is a Pictured Cliffs completion and did not penetrate the Mesaverde.

The next well is the No. 8-36 in the South -- that's in the Southwest Quarter of Section 36, 28, 4. This well was completed December 21, 1955, at a total depth of 6388, absolute open flow on this well in the Mesaverde was 2,489 MCF. The well was connected December 31, 1957, and first delivered December 31, 1957.

The next well is the 9-32, located in the Southwest Quarter of Section 32; this well was completed September 18, 1956, total depth of 6231 feet, had an absolute open flow of 8,442 MCF in



the Mesaverde. The well was connected on August 27, 1957, was not delivered until December 7, 1957, and when I discuss the individual wells later, and their production, I'll explain that.

The next well is the 11-31, located in the Northeast Quarter of Section 31, 28, and 4. This well was completed in May 29, 1957, at a total depth of 6577, had an absolute open flow of 5,114 MCF in the Mesaverde. This well was connected to Pacific Northwest August 29, 1957, and was first delivered August 29, 1957.

The next well is the 12-33, located in the Southwest Quarter of Section 33. This well was completed July 25, 1957, total depth of 6629. The initial potential -- absolute open flow on that well was 3,894 MCF in the Mesaverde. This well was connected to Pacific Northwest on August 12, 1957, and first delivered September 11, 1957.

The next well is the 13-20, located in the Southwest Quarter of Section 20, 28, 4. This well was completed November 7, 1957, total depth of 6712 feet, absolute open flow was 5,640 MCF in the Mesaverde. The well was connected to El Paso May 15, 1958, and first delivered May 19, 1958.

The next well is the 14-29 in the Northeast Quarter of Section 29. This well was completed January 7, 1958, at a total depth of 6740. The absolute open flow was 4,463 MCF in the Mesaverde. It was connected to El Paso May 15, 1958, and was first delivered May 19, 1958.

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The next well is the 15-29 in the Southwest Quarter of Section 29. This well was completed July 9, 1958, total depth of 6553 for an initial potential, absolute open flow in the Mesaverde of 5,024 MCF. It was connected to Pacific Northwest on September 30, 1958, and was first delivered on October 22, 1958.

The next well is the 16-30, located in the Northeast Quarter of Section 30, 28, 4. This well was completed August 12, 1958, total depth of 6672, had an absolute open flow of 5,570 MCF in the Mesaverde; connected to El Paso on October 6, 1958, and first delivered November 18, 1958.

The next well is the 17-20 located in the Northeast Quarter of Section 20. This well was completed September 4, 1958, at a total depth of 6690, absolute open flow was 3,174 MCF in the Mesaverde; connected to El Paso October 6, 1958, first delivered November 18, 1958.

The last well that I haven't discussed is the 18-31 in the Southwest quarter of Section 18, 28, 4. This well was completed September 16, 1958, at a total --

MR. PORTER: I believe you misread the location.

A Southwest Quarter of Section 31, 28, 4.

MR. PORTER: Yes, sir.

A Excuse me. At a total depth of 6560, absolute open flow of 7,582 MCF in the Mesaverde; connected to Pacific Northwest on October 2, 1958, was first delivered October 22, 1958.



That's all the wells that have been drilled to date in 28 - 4 unit. I would like to point out at this juncture that it's pretty evident that essentially all the production in this township and range is in the western half of the township, except this one lone well down in the Southeast Quarter.

Now if I might, let's go to Exhibit 2-C, which is a completion data sheet on the wells in the 29- 4 unit.

The first well is the No. 1-30 located in the Southwest Quarter of Section 30, 29, and 4. This well was completed September 16, 1953, total depth of 6769, for an initial potential of 428 MCF. That's in the Mesaverde. The well was connected to El Paso Natural Gas on May 21, 1956, and had first delivery on May 22, 1956.

Q (By Mr. Howell) May I interrupt just a minute, Mr. Rainey?

A Yes, sir.

Q Had the Mesaverde Gathering System been extended to this area at the time of the well completion in 1953?

A No, sir. The first trunk into this system at all, based on the date that is shown for the 28 - 4 well completion data sheets show that the 1-18 and 2-17, were connected on October 29, 1954, and that was the first. I don't know exactly when the line itself was completed in there, but those were the first connections in this area. This well, due to its low productivity probably wasn't connected in for some period of time, as is



evident by its connection date, May 21, 1956.

The next well is the No. 2-35. This well penetrated the Mesaverde. It's in the Southwest Quarter of Section 35, 29, and 4; was completed at a total depth of 6449; it was shot in the Mesaverde, and was plugged back from the Mesaverde as being non-productive because of water.

Q Plugged back to what?

A Plugged back from the Mesaverde because, as being non-productive because of water. It is now a Pictured Cliff completion if my memory serves me correctly, it was the discovery well in the Pictured Cliffs area out to the east edge of the township and range; had an initial potential in the Pictured Cliffs of 6,928 MCF.

The next well is the No. 3-22, in the Southwest Quarter of Section 22, 29, and 4. This well was completed November 21, 1953, at a total depth of 6155; the well is now plugged and abandoned. It was drilled by Phillips Petroleum Corporation, and the Mesaverde was non-productive because of water; Pictured Cliffs was shot and tested, and tested 57 MCF.

The next well is the No. 4-35 located in the North-east Quarter of Section 35. This well was completed October 6, 1955, at a total depth of only 4111 feet. In other words, it did not penetrate the Mesaverde. It is now a connected Pictured Cliffs well.

The next well is the No. 5-7 in the Southwest Quarter



of Section 7, 29, 4. This well was originally drilled by Pan American Petroleum Corporation; at that time Stanolind Oil and Gas, as their Valdez No. 1-A. It was completed October 31, 1953, and they shot the Mesaverde and gas was too small to measure.

The next well is the No. 6-10 --

Q Before you leave that, what is the status of that well, has it or has it not been connected?

A At the present time that well is carried as temporarily abandoned.

Q It has not been connected?

A No, sir, it was not connected and no gas shown in the Mesaverde; and whatever gas was there was too small to measure.

No. 6-10 located in the Southwest Quarter of Section 10. That well likewise was drilled by Pan American Petroleum Corporation as their Valdez No. 2-A, was completed December 15, 1953. They shot the Mesaverde and gas was too small to measure.

Well No. 7-8, located in the Northwest Quarter of Section 8 was completed December 15, 1955, at a total depth of 6590. The initial potential on that well was 2,249 MCF. The well that I referred to a moment ago that is connected to the Pacific Northwest temporary line that used to be the line that delivered gas for drilling in that area. It was connected on July 9, 1957, and had first delivery on September 12, 1957.

I might add that that well is a Mesaverde-Pictured Cliffs dual completion, Pictured Cliffs is not connected, and for



some reason or other, we didn't put the Pictured Cliffs potential on there. It is my recollection that the well has not been potentialized in the Pictured Cliffs, but there were shows of gas in the Pictured Cliffs.

The next well is the No. 8-34, which is in the Northeast Quarter of Section 34. It was completed July 18, 1957, at a total depth of 6444. This well was heavily fractured with water and sand, Mesaverde gauged 253 MCF with a heavy spray of water. Pictured Cliffs was heavily fractured and gauged 395 MCF. The well is presently carried as temporarily abandoned in the Mesaverde and as unconnected Pictured Cliffs completion.

The next well is a No. 9-3 in the Northwest Quarter of Section 3. This well was completed December 23, 1955, at a total depth of 6850. It was temporarily abandoned, as can be seen on the data sheet. It was heavily fractured in all portions of the Mesaverde; when it went on test it died in four minutes, and further attempts to make it flow failed.

The next is 10-36 located in the Southwest Quarter of Section 36. This well was completed July 16, 1956, as a Pictured Cliffs completion at a total depth of 4210; did not penetrate the Mesaverde.

The next well is the No. 11-6 in the Southeast Quarter of Section 11. This well again did not penetrate the Mesaverde and was completed in the Pictured Cliffs; it is an unconnected well at the present time.



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MR. PORTER: Did you say Section 11?

A Yes, sir, in the Southeast Quarter of Section 11.

MR. HOWELL: Section 6.

A It's Well No. 11, Section 6.

MR. PORTER: I think he had his location mixed up with the date.

A The next well is the No. 12-18 located in the Northeast Quarter of Section 18, 29, and 4. This well was completed October 1st, 1957, had an initial potential of 1,117 MCF. This well is not connected and there is no permanent gathering system in the area. If you notice, it's just south of the 7-8, which is connected into the temporary line.

Q (By Mr. Howell) Mr. Rainey --

A Yes, sir.

Q Is that an El Paso well or a Pacific Northwest well?

A No, that's a Pacific drilled and operated well. In fact, both of these units, Pacific Northwest Pipeline is designated as the operator, only under the agency agreement we operate the units. The well is a Pacific well, it is not an El Paso.

Q As to the completion or production, that's a Pacific matter and not an El Paso matter?

A Yes, sir. The next well is the No. 13-29 in the Northeast Quarter of 29. That well was completed November 21, 1957, total depth of 6575, and was plugged and abandoned in the Mesaverde, as will be noted on the data sheet, the Cliff House and



Point Lookout, which are members of the Mesaverde formation, were heavily fractured, and the well gauged 365 MCF only.

The next well is the 14-31 in the Northeast Quarter, Section 31. This well was completed December 3rd, 1957, total depth of 6680, for initial potential in the Pictured Cliffs of 1,523 MCF.

Q Is that a--

A I beg your pardon, Mesa Verde potential.

Q Is that an initial potential or absolute open flow?

A That's an absolute open flow, excuse me. The well was connected to El Paso's system on May 13, 1958, and first delivered on May 14, 1958.

The next well is the 15-25 in the Northeast Quarter of Section 25. This well does not penetrate the Mesaverde and is plugged and abandoned as an unsuccessful Pictured Cliffs attempt.

The last well is the 16-36 in the Northeast Quarter of Section 36. This well was completed October 1st, 1958, total depth of 4,035 feet, and potentialized at 647 MCF in the Pictured Cliff.

Q Again is that a potential?

A I think that is a potential, Mr. Howell.

Q Okay. Mr. Rainey, of the wells in which El Paso is the well operator and well owner, let us say, realizing that the unit operator is the operator of the entire unit but insofar as

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the ownership and determination as to certain wells, as to those owned by El Paso, to which El Paso is entitled to the major portion of the production, have all of them been connected which are regarded as being commercial wells?

A Yes, sir.

Q Is there any well in these two townships that El Paso owns the production, or is entitled to take the production, which it regards as commercial that has not been connected?

A No, sir.

Q Now, Mr. Rainey, will you pass to your next exhibit, if you please?

A Yes, sir.

Q Is there anything further, before you do that, is there anything further you would like to testify to with reference to the series 2 exhibits?

A No, sir, I think not.

Q Apparently -- before you leave that, Mr. Rainey, referring to Exhibit 2-C, there seems to be a typographical error on that top line. Will you look at the map, on the second page --

A Second page.

Q The Well 13-29?

A It's shown as being in Section 13. It's in fact Section 29.

Q It's actually in 29?

A Yes.



Q The Exhibit should be corrected to show --

A If in reading it off, if I testified that it was in Section 13, I would like to correct myself, please.

Q Now, is there anything further that you would like to discuss in connection with Exhibits 2-A, 2-B, and 2-C?

A No, sir, I believe not, other than to reiterate the fact that the Mesaverde production is very obviously all pretty well restricted to the western half of the two townships and ranges.

Q Would you now refer to your next exhibit, No. 3-A?

(El Paso's Exhibits No. 3-A, 3-B, 3-C marked for identification.)

A Yes, sir.

Q This is El Paso's Exhibit No. 3-A, and will you state to the Commission what this exhibit reflects?

A Exhibit 3-A, and its companion exhibits, which I think have been passed out, 3-B and 3-C, all reflect the average allowable, production, deliverability, and actual producing ability of the wells in the 28, 4; 29, 4; 28, 5; and 29, 5 units.

The first Exhibit, No. 3-A, shows the wells, shows those averages for the wells in those four units which were producing in the units prior to July 1st, 1958.

Q Why do you leave out those wells which began production in the latter portion of 1958?

A Well, those wells that came on in the latter portion of 1958 might have distorted an average because wells when they



first come on the line, generally have a pretty high deliverability, and until they can stabilize and drop off, as a matter of normal production, they will distort the average.

Also we were trying to get enough time period in the averages to make some sort of a valid average, so we just arbitrarily decided that a well should be on at least half a year before we plotted in the average for 1958.

MR. CAMPBELL: May I interrupt and inquire if these are just the Mesaverde or other wells?

A These are only the Mesaverde wells in these units, the wells under discussion.

Q (By Mr. Howell) In order to clarify that a bit, have you included all of the Mesaverde wells for the same time period from both the 28-4, the 29-4 units and the 28-5 and the 29-5 units?

A Yes, sir, all those wells, all the wells in those units that were producing prior, all the Mesaverde wells that were producing prior to July 1st, 1958, are included in these averages.

Q Now, does the average which is shown here for those wells include the average of those wells for the entire year?

A Yes, sir. Or for the portion of the year that they were on. Some of the wells possibly came in, say, in April or May, 1958. They are included in the averages, and that portion of the year that they were in there, they are included in the average.



These averages, as you will note, show the total allowable for the entire year for the average well in the first block of four bars.

Q Now tell the Commission how you obtained those averages?

A We merely determined the total allowable, total current allowable assigned to wells in those units and divided by the number and subtracted the marginal allowable which had been assigned on the schedule; then we divided the remaining allowable by the total number of non-marginal wells in the pool, and then added back in the average marginal production to get the total average allowable per well.

Q Now, did you use the allowable figures as established by the Commission after production, or did you use the estimated allowables?

A We used the allowable on marginal wells which was the production, not the so-called preliminary allowable which is set in the proration schedule as a starting point, as it were. I'll discuss that in a little more detail later.

Q All right, we will go on to that in some detail later as to the individual wells.

A Yes, sir.

Q Now, as to the actual daily average producing ability, how did you determine that factor?

A That is by taking the total production for all the



wells in the units and dividing it by the total number of days that production was obtained in the unit. If I'm not exactly clear on that, we added up the total days produced for all the wells produced in the unit and the total production, and divided one figure by the other, and arrived at the average daily producing ability.

Q Now, Mr. Rainey, in determining the averages both as to such matters as line pressures, producing ability, what generally is the effect, if you give to a well that had only one day's production the arithmetic average, the same weight as you give to another well that may have produced for thirty days during the month?

A In my opinion, giving the same weight in an average, to an average based on a few days is not as valid as the same figure based on a great number of days. In other words, giving the same weight to one day's production or one day's line pressure on a well that may have been high, that you give to thirty days' production on a well or thirty days' line pressure on a well where the pressure may have been low, is not a valid average.

Q Is that a little bit, Mr. Rainey, like the fellow that advertised the rabbit sausage that was fifty percent rabbit and there was one rabbit and one horse?

A Yes, sir, that's very similar.

Q Now, your Exhibit No. 3-B --

A May I -- let me discuss 3-A just a little bit more,



Mr. Howell.

Q Yes.

A What the exhibit is intended to show is the general relationship between the four factors that we have picked out, the allowable, production, state deliverability and actual producing deliverability, if you'll note that the allowables with respect to each other varied very closely as the production with respect to each other, as does the state deliverability and the actual producing ability with respect, from one unit to another.

Q Well, now, before you leave that, Mr. Rainey, are there instances in which the deliverability, because of the low initial pressure where there may be liquids in the well, doesn't reflect the ability of the well to actually produce into the line?

A Yes, sir, in an area where you do have a liquid problem, and there's very definitely a liquid problem in this area, as I'll show later, your shut-in pressure after seven days is frequently distortedly low with respect to what the true shut-in pressure of what that well might be.

When you calculate the state deliverability at fifty percent of the measured wellhead shut-in pressure, you sometimes get abnormally high deliverabilities with respect to the actual ability of the well to produce, even though the actual shut-in pressure of the well, the true shut-in pressure of that well may be in the neighborhood of a thousand pounds, which would make its calculated state deliverability at approximately 500 pounds,



which is approximately what the line pressure is in this area, you may sometimes get deliverabilities calculated at half of 700 pounds, say, because there's fluid in the well bore and there's an abnormally low apparent shut-in pressure on that well.

Q Where you are operating pipelines in the neighborhood of 500 pounds, why, the deliverability calculated which is below the 500 pound average just doesn't exist when it's facing a 500 pound line?

A That's correct.

Q Is there anything else you would like to refer to in connection with this Exhibit 3-A?

A No, sir, I think not. Exhibit 3-B is a graph exactly similar to the previous one, showing the averages for 1959, and for comparison purposes, on Exhibit 3-B we use the averages for the same wells that were used on Exhibit 3-A. In other words, the same wells that were used in the 1958 averages. It is even more apparent that the allowable, the relationship in these units between allowable, production, state deliverability, and actual producing ability follows exactly the same pattern in each unit; in other words, the 28 and 4 has a fairly high allowable with respect to the allowable in the 29, 4.

Its production is fairly high with respect to the production in the 29-4, its state deliverability is high with respect to the deliverability in the 29-4; and its actual producing deliverability is high with respect to the deliverability



in the 29-4. That relationship, that pattern of relationship fits in all four of those categories.

Q Well, generally how do the wells in Range 5 compare with the wells in Range 4?

A In general, the wells in Range 5 are better wells than the wells in Range 4. They are nearer the center of the field. There's more deliverability throughout, in general, as you go towards the center of the field.

Q Do you have any other points you would like to discuss in connection with Exhibit 3-B?

A No, sir, I believe not.

Q Will you now refer to Exhibit 3-C, and state what that reflects. First of all, what is the period of time covered by this exhibit?

A The period of time covered both by Exhibit 3-C and 3-B is the period from January 1st, 1959 through July 31st, 1959.

Now, Exhibit 3-C is exactly the same type of exhibit as the previous two, except that it shows all the wells that are presently connected in that unit, in each of those units. The averages, because there may have been big wells or small wells connected in in the first part of '59 that were not shown in the '58 offerings, why some one of the averages may have changed slightly from the previous average figure; however, the same relationship of magnitude of all those factors between those units is the same.

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Q So that the difference between Exhibit 3-B and Exhibit 3-C is that although they cover the same period of time, Exhibit 3-C includes all Mesaverde wells in the four townships, and Exhibit 3-B includes only the wells which were completed prior to July 31st of 1958?

A Prior to July 1st, yes.

Q July 1st of 1958?

A Yes, that's correct.

Q And do you find in general the same relationship between the groups of wells, considering all the Mesaverde wells, as you did between the Mesaverde wells that were completed earlier?

A Yes, sir, the magnitude of that relationship may have shifted slightly because of the addition of new wells, but the general relationship still exists. In fact, I might say the direct relationship still exists.

Q Are there any further matters that you would like to testify about with reference to Exhibit 3-C?

A No, sir, I think not.

MR. PORTER: Mr. Howell, we will take about a ten minute recess.

(Whereupon, a short recess was taken.)

MR. PORTER: The meeting will come to order, please.

Q (By Mr. Howell) Mr. Rainey, will you direct your attention to some of the specific allegations contained in the applicants' Bill of Particulars, and I call your attention to the



allegation which is in the fifth paragraph: "That the El Paso Natural Gas Company purchases from eleven wells in which applicants have an interest." I believe you've already clarified the record on that, that there are actually ten wells because the well 6-11 was carried on the proration schedule by error and never produced?

A Yes, sir, and one other factor about that particular allegation, I might point out that it states, as I recall -- I don't have a copy of it right here, but as I recall, it states that El Paso purchases from a certain number of wells in these units and El Paso does not purchase any gas in here, this is El Paso's gas, they produce it.

Q And is the same thing true with Pacific Northwest?

A Yes, sir.

Q Now referring to the next paragraph in the Bill of Particulars, the allegation is made that El Paso purchased less gas from eleven wells than Pacific Northwest purchased from six wells, although the total deliverability of the eleven wells was in excess of those six connected wells.

A Yes, sir.

Q Without reiterating that it is produced and not purchased, will you please compare the status as to overproduction or underproduction on proration for the year 1958 between the Pacific wells and the El Paso wells?

A Yes, sir, my recollection is that Mr. Birdseye's figure as to the comparative deliverability between the two pipeline



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companies was essentially correct. However, it should be pointed out that the wells connected to Pacific's system, which he said produced more gas than the wells connected to El Paso's system as of the end of 1958, December 31, 1958, had a net underproduced status of 45,249,000 cubic feet, whereas the net status of the ten wells connected to El Paso had a net overproduction of 5,078,000 cubic feet.

By operation of the proration formula, and following the rules and regulations of the Commission, both companies were endeavoring to get their wells in balance, and it appears to me to be only natural that El Paso would have produced less gas than Pacific would have produced, even though there was a difference in the number of wells because they were endeavoring to bring them into balance.

I might also point out that except for the 9-32 Well, which is the only well in either of the units which has a deliverability in excess of 1,000 MCF, the deliverability of the wells connected to El Paso's system, the remaining nine wells connected to El Paso's system is only about two-thirds of the deliverability connected to the Pacific system. That one well with its high deliverability is the only thing that makes the deliverability connected to El Paso greater than the deliverability connected to Pacific.

That well was only on a small portion of the year 1958 and wound up the year over 15,000,000 cubic feet overproduced.



Q In spite of the fact it was shut in the major portion of the year?

A Yes, sir.

Q Now is there anything else you would like to testify with reference to the taking of gas, as compared between the Pacific taking and the El Paso's taking at this time?

A No, sir, in my opinion that just about answers that allegation because, it was because of the proration status of those wells, and it was necessary that Pacific take more gas.

Q Now, the next paragraph of the Bill of Particulars, number seven allegation, that the wells in the 29-5 Unit had comparable deliverability to the wells located in the Range 4 units under consideration, and alleges also that they produced more than the wells in the Range 4 Unit.

A To my knowledge --

Q Will you please comment as to that?

A Yes, sir, I think that the series 3 Exhibit pretty well answers that. This shows the average deliverability for both '58 and for 1959, and the relationship of the deliverability and production in those units.

I am prepared, if necessary, to go into individual wells and show that proration status where there was an actual difference in current production for the year 1958, that proration status was largely the basis for that difference in current production.

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However, in the interest of time, unless somebody wants to go into that thing on a well by well basis, I see no need at this time, but I'm prepared to do so.

Q Is the policy of the company that the prime consideration is given to the proration status of a well as to whether it's over or underproduced, in determining which wells will be produced at any given time?

A Yes, sir, insofar as practicably possible, and actually the only deviation, other than human error and a switcher turning on a well when he should have turned it off or something like that, is when wells are on test.

Of course, with the tremendous amount of wells up there, and having to test them each year, it's sometimes necessary to have overproduced wells on production, or conversely, because of the shut-in provisions of both the deliverability test order and the packer leakage test order, it's sometimes necessary to have underproduced wells shut in.

Q Will you go into a little more detail as to that matter, particularly with reference to the effect that testing one well may have on other wells in the same lateral trunk area?

A Yes, sir. In some instances -- well, let me predicate it a little back of that, even.

Q First of all --

A Excuse me.

Q First of all, let me ask one or two questions. What



is the period that a well must be produced in determining the state deliverability test?

A Twenty-one days.

Q When the time comes to test, is it necessary to test that well and produce it, even though it be greatly overproduced?

A Yes, sir, I was going to get into the point that we have to test wells by areas because of the tremendous number of wells and the relatively limited number of days in a year in which to test 3600 wells. We have to test them by areas, so in testing by areas, if some of the wells in that area are overproduced, when it becomes time for the area to be tested, they still have to be tested; otherwise, we don't have time to get back to the area and pick them up again.

Q Is there a period of time during tests in which wells are shut in?

A Yes, sir, on the state deliverability test, a well must be shut in at least seven days prior to taking the shut-in pressure, and a number of the wells in the applicants' 112 well list are dual completions, and in the San Juan Basin testing procedure for dual completions, each side of the dual completion must be shut in at least twenty-one days during a packer leakage test.

Q Now, then, when you have several wells feeding into the same gathering lateral --

A Yes, sir.



Q -- and you have a well with high deliverability that's being tested, what effect may it have on other wells attached to the same lateral with lower deliverability?

A Well, each of our laterals and trunks in the San Juan Basin area, as I understand it in talking to our pipeline design department, are designed for certain loads, certain capacity to move gas.

Those were designed, some of them, at periods when there was not as much development in given areas as there is now. When wells are on a deliverability test, they are producing at the maximum rate at which they are capable of producing, in order, of course, to get as good a deliverability as possible.

Some of the laterals and trunks, if you had a great number of wells on test, it's necessary that some of the other wells connected to the same lateral or trunk may have to be shut in, even though they were not on test themselves.

In other words, the physical facilities and the physical hookup of the gas sometimes makes it necessary, if several big wells are on test at the same time, that some other wells may not have room enough to produce.

Also, some of the big wells in the Basin, and when I'm talking about big wells, I mean wells of, oh, two to three million deliverability -- I don't mean the great big horrible examples they have at the bottom of the list here. Those wells have pretty good high pressures, and when they start producing



the big volumes of gas in high pressures in there, there are some weaker wells in the same general area, it may back them off the line so they don't get the normal type of production under the normal load conditions, when all those wells are not on at the same time.

Q Mr. Rainey, in your opinion has the production of wells from the 29-5 unit been comparable with comparable wells in the Range 4 Units?

A Yes, sir, very definitely. And as I stated before, if necessary I can go to specific examples and show it.

Q Now, the next paragraph in the Bill of Particulars refers, makes the same allegation with reference to the wells in the 28-5 Unit, contending that they are comparable deliverability and produce more gas than the wells in the Range 4 units. What comment do you have as to that?

A This analysis that I have is based on all the wells that we could find that had essentially comparable deliverabilities for the same period of time in all four of the units in question. It's my further opinion that the wells in the 28 and 5 unit have not produced any more gas proportionately than the wells in the 4 units.

Q Now the next paragraph in the Bill of Particulars, Number nine --

A Let me add something right there, Mr. Howell. In a short range look at production of individual wells, there may be



discrepancies within the framework of the proration formula and the proration rules, though wells are permitted to get in balance in the succeeding six months.

Some of these wells may be overproduced or underproduced in one period, but we can show that they have gotten back in balance in the succeeding period.

It's extremely difficult to make -- in fact, I would say practically impossible to make a statement that wells have not produced ratably in looking at a very short range picture of the thing. You have to look at it over a year or two year period to say that wells have not produced ratably because within the framework of the proration formula and the ratable take rules, you are permitted to produce underproduced or overproduced wells as the demand or occasion may arise, and you are supposed to get them back in balance.

Q Is it possible to make a valid comparison between wells without considering the status of the well as to the overproduction or underproduction at the beginning and end of the period?

A No, sir, it is not.

Q Now, the next allegation is to the effect that the wells in the entire Mesaverde Pool with comparable deliverabilities produced more than the wells in which the applicants have an interest. Let's refer--we will limit our discussion to the wells which were testified about today, and let's generally refer to

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those 112 wells.

In the time since Mr. Birdseye's testimony this morning, in which he made comparisons, have you made a brief analysis of the wells in the 112 group with reference to the deliverabilities of those wells as compared to the wells in the Range 4 Units that we're talking about? First of all, let's look at good wells, wells with a state deliverability test of a million or more.

A Yes, sir.

Q Will you --

A Mr. Birdseye drew one of his basic conclusions this morning as to what he termed his production deliverability ratio on these wells, and testified that in this 112 well area that the wells had produced 149 times their deliverability. He said that the wells had produced 10.7, I believe, M cubed, or 10.7 million cubic feet during the year 1958, and had a deliverability of 17.7 million.

Now of those 112 wells, 37 of them, or 33 percent, had deliverabilities in excess of 1,000 MCF per day; that's state deliverabilities, as being actual count from his list, and this list purports to be a list of wells with comparable deliverabilities to the wells in the four units that we are discussing.

In the 28 and 4 and 29 and 4 Unit, there was one well out of 16, or six percent, that has deliverability over 1,000 MCF,



that's a comparison of 33 percent to six percent that had deliverabilities over a thousand.

As to the marginal wells, he hit it pretty close. There are 27 marginal wells in this group, and we took as an arbitrary breaking point wells with a deliverability of less than 100 MCF as being a marginal, I don't know if they are officially classified as marginal; we took it as an arbitrary figure, wells with deliverability of less than 100 MCF. There are 27 out of 112 on his list, marginal, which is 24 percent.

There are three wells -- wait a minute -- that's actual classification is 27 marginal, actually classified marginal wells, or 24 percent, and three wells that are actually classified marginal, or 19 percent of the 16 in the 4 Unit.

Q Now, for the purpose of the record, Mr. Rainey, because I'm sure the Commission understands this, but isn't it a fact that a well may be a marginal well with a relatively high deliverability, even though it has a relatively high deliverability, if over a period of time it's unable to actually produce that deliverability?

A Yes, sir, that's quite true.

Q So that a marginal well in one area may be a well with substantially higher deliverability than a marginal well in another area?

A Yes, sir, because of various producing conditions and pipeline pressures, again depending on proximity to the plant as

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to the productivity, actual productivity into the system of that well.

Q All right, now --

A Fluids will frequently influence that thing, the state deliverability test will be abnormally high because of the fluid condition when you obtain the shut-in pressure, the well is actually incapable of producing that high calculated state deliverability.

Q All right, now, did you compare the number of wells that had a state deliverability of less than 100 MCF per day in the two groups, that is, the hundred --

A Yes, sir.

Q -- that is, the 112 wells and the Range 4 wells.

A Yes, sir, of the 112 wells, 21 of them had deliverabilities of less than 100 MCF or 19 percent of the total, in the 28-4; 29 and 4 Unit, five of the 16 wells had deliverabilities of less than 100 MCF, or 31 percent of the total.

If I might further point out that the applicant has made much of the cancelled underage and so forth on these wells, and has said that these, this other 112 wells has not been produced in accordance with the production of these 16 wells in the 28 and 4 and 29 and 4 Unit, it's not at all uncommon that a well will lose underage because of cancellation from any number of factors which I'll go into on individual wells shortly; but to show that this group of 112 that he's picked out is not particularly

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unique in that respect, 37 of 85 wells, that's taking the 112 and subtracting the 27 marginal wells from it; in other words, 85 wells which would have been subject to cancellation; of the 85, 37 actually had cancellation in 1958, or 44 percent. Only two of the wells in the 28 and 29-4 Units had cancellation, or 15 percent.

Q One other point before we leave the analysis of that group of wells and the testimony that was offered this morning, how many of those wells that were selected by Mr. Birdseye are wells that under orders of the Commission are involved in pressure build-up tests?

A There are eleven of those wells, and I mentioned before, they are the wells that are circled in red and also have a red square around them on the, on our Exhibit No. 1.

Q Well, now, again for the purposes of the record only, because I'm sure the Commission understands it, when a well is shut in over a long period of time in order to determine what is the maximum pressure build-up, which is information that I believe most people agree is desirable, what is done with the allowable for that shut-in well?

A Well, that allowable is allowed to accrue to that well as underproduction without being subject, under the orders of the Commission, without being subject to the normal over and underproduction balancing requirements of the field rules, until such time as the test is completed. At that time, the underproduction



which has accrued to the test well is permitted to be transferred to offset wells or wells on the same basic lease to that test well, and those wells -- it's our intent and purpose to have those wells overproduced sufficiently to use up, as it were, the underproduction which has accrued to the test well.

Q So that --

A Excuse me, sir. As a consequence, these wells that are on this list and under one or the other of the test orders may be greatly overproduced and underproduced, depending on whether they were test wells or transfer wells.

Q And any transfer well is permitted to produce not only its own allowable but the allowable that is given to a shut-in well?

A Yes, sir, that's the exact intent and purpose of it, that the offset wells will produce the underproduction of the other well, or allowable of the other well.

Q Now, passing from some of these specific paragraphs and going to specific wells, I'll ask you, if you will, to look at the copies which were given us of the applicants' series of Exhibit 2, and take those wells one by one and just give your comments as to the data as shown, or that has been omitted from those exhibits?

A All right, sir. What we have done is gone through the transcript of the previous portion of this hearing, and I have sheets here where I have copied Mr. Birdseye's testimony, and



I will refer briefly to it and then attempt to explain the discrepancies in his analysis of the situation.

On page 9 and 10 of the transcript, he refers to the 12-18 well in 29 and 4, and says that that well is connected, but apparently has not been produced, and it has been previously testified to that it is not connected, there is only a temporary gathering system and there is no facilities to connect it.

His Exhibit 2-A pertains to the 284-17-20 well. The first discrepancy I note in his testimony is that he says the first allowable was set for this well on January, 1959; as a matter of fact, this well was connected to the El Paso system on November 18, 1958, and a supplementary allowable was issued subsequent to that time granting it back to November 18, 1958.

Mr. Campbell then asked him "now with regard to the line that you have shown as production, what does that reflect in relation to the line pressure, generally?" "Well, it's a very interesting coincidence, but as the line pressure is increased to a maximum at this time of 7650 psi, approximately, which is the month of February, 1959, rather than 500 psi in a month when the allowable assigned to this well and this line here, the allowable was 6507 MCF."

Now there I think Mr. Birdseye is a little in error, the actual allowable assigned to that well in the month of February was 4683.

Q At that point may I interrupt, Mr. Rainey? Has

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Mr. Birdseye generally used in all these graphs the preliminary allowables, rather than the actual allowables?

A Well, in the case of this well, it's not the fact that he used preliminary rather than actual, because this one is not a marginal well, what he has done here, he has included in the redistribution which was effective February 1st, but was actually only allocated to this well as of April 1st, I believe.

The actual allowable on that well in that month was 4683; however, it is a relatively high allowable for that month. The production from this well declined to 780 MCF.

MR. BIRDSEYE: 980.

A I beg your pardon, 980 MCF. I might point out that during that month the line pressure did go high; however, the well was only on the line seven days.

Its actual average producing ability during that time was 140 MCF per day. There are pressures during the remainder of the year 1959 which he has been furnished which show that at much lower pressures the deliverability of that well is not a darn bit bigger.

For instance, in June, say, of 1959, the line pressure was 524 pounds, and the deliverability was 100 -- not the deliverability, excuse me, the actual producing ability of that well was 118 MCF, which was considerably less than the well produced during the period when the line pressure was at 658 pounds.

I don't think that any valid conclusion can be drawn



with respect to line pressure and production, without taking into account the number of days the well was on the line. Granted, the deliverability of the well is what the allowable is determined against, but you can't say that because the line pressure went up the production is going to go down, when the average per day production on the well was greater than it was at much lower line pressures.

The next exhibit is 2-B, Well No. --

Q One thing before you leave that, did you say -- I didn't quite understand your last sentence. Would you restate that again? That last sentence there, that comparing the average, the actual daily producing deliverability at lower line pressures later on in the year with the high line pressure picked out by Mr. Birdseye in February?

A Yes, sir. The well had lesser daily average producing ability in some months at line pressures as much as 125 pounds less than that 658 pounds in February than it did in February. The thing about that well, if I might add a little something else, that well had a pretty good potential originally, it had an initial potential absolute open flow of a little over three million; however, that well has a state deliverability of only 249 MCF, and that its producing ability is declining rapidly and has declined rapidly since it first went on the line.

It's down now, the 1959, at an average line pressure of 524 pounds, its average producing ability, taking into account



the days it produced during the year, is only 118 MCF per day.

The next well is the 15-29, there again I'll try not to belabor this point on the remainder of the wells, Mr. Birdseye testified that the allowable on this well was granted in February, 1959, when in fact the well was connected to Pacific Northwest system on December 9th, 1958; and the allowable was granted effective as of that date. He also makes a statement the allowable, since the Oil Commission established its allowable, the allowable is approximately, slightly in more than half the months has been greater than the actual production from this well. The net result has been the cumulative allowable is 38225 and the cumulative production is 54866.

Now I can't quite follow his reasoning there. He says in the second sentence that I read, though the production is considerably in excess of the allowable, on the other side he makes the point that the allowable was more in some months than the production was. It seems to me that's -- I just don't understand the reasoning there.

I might also point out that that well at the present time is 11.9 million overproduced and has been overproduced ever since it went on the line. That's as of the end of August, 1958, that well, if it hasn't already had an order issued to it.

Q Is that August, 1959, or '58?

A '59. If I said '58, excuse me. If that well hasn't already had an order issued to shut it in, it will have one very

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shortly. However, it has only produced 73 days during 1959.

Q Now before we leave this well, Mr. Rainey, I believe that this is one well in which the line pressure remained at practically a level status during all the period at which it was graphed?

A Yes, sir.

Q Now will you refer, have you determined what the actual producing capacity was, the average daily producing capacity during some of these periods?

A Yes, sir. Let me read one more sentence from Mr. Birdseye's testimony. In reply to a question from Mr. Campbell as to the effect of the line pressures on production, Mr. Birdseye stated, "Well, the history, the production history of this well and the fluctuation and the line pressure do not make as graphic a demonstration of the inverse relationship as production and line pressure as it does in certain other wells; however, it is clear that if one month where the line pressure exceeded 500 pounds which is March, 1959, it only went to 505 pounds, then the production came very close to reaching an all-time low at the same time the allowable reached an all time high for this particular well." In March of 1959, the beginning of March, that well was approximately 30 million cubic feet overproduced and produced only two days in the month of March.

Q Now, Mr. Birdseye did not testify to the fact that it was overproduced, this is your testimony?



A Yes, sir, it's my testimony it was overproduced, and also my testimony that the well was only on the line two days that month.

In response to your previous question as to the fluctuations in producing ability of that well with respect to generally stabilized line pressure, I think a maximum fluctuation was back in October of '58 when it dropped down to 436 pounds; in the months when the well was actually on the line for an extended period of time, which is -- we have not tried to draw any conclusions from the fact that the well might have been on only one or two days out of the month, because the build-up on the well at that time may, abnormally may give you an abnormally high apparent average producing ability because particularly in the area out here where fluid is a problem -- but take for instance November, 1958, line pressure was at 470 pounds, the average producing ability was 490 MCF per day. The line pressure went up to 491 pounds in December -- incidentally, it produced twenty-nine days in November, well produced twenty-two days in December -- the line pressure went up to 491 pounds, the producing ability dropped off to 322 MCF per day.

In January, 1959, the line pressure was 490 pounds, essentially the same pressure, only one pound difference than in December; however, the well was -- excuse me -- was on twenty-five days in January; however, the average producing ability dropped from 322 MCF per day to 297 MCF per day. That can be accounted

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for largely by the fact that the well was on the line a considerable period of time, and as I testified to, these wells are not particularly good wells, and if they stay on very long, the producing ability drops very rapidly and they have to be shut in frequently and blown to clear the fluids out, and in some instances on some of these wells, they must be shut in for some periods of time to allow them to build up enough head to produce at all.

On his Exhibit 2-C, which is Well 14-31 in 29 and 4, Mr. Birdseye testified that the well received an allowable in October, 1958, when in fact it received an allowable on August 2, 1958. He also says, well, as you can see from some distance, the line pressures have generally exceeded 500 pounds during the producing life of the well. Well, it seems to me like it's half and half, but that's purely a matter of opinion.

The monthly production shown by this lower line which is here had been held at so much higher than the allowables thereafter assigned to it by the Oil Conservation Commission, with a net result that in March, April, and May, 1959, allowables were cancelled and there was a zero allowable assigned to this well; because there was no production the allowables were cancelled.

As a matter of actual fact, the allowable was not assigned during those months in 1959 because there was a delinquent deliverability test which was not filed until, I believe, May, 1959. The field people endeavored from the time that well went on the line to test it. They never could get the well to stay on



the line twenty-one days in order to get a valid state deliverability test. The well continually logged off, it blew a spray of fluid during the entire time they were trying to test it, and during one period they were trying to test it, it blew down to 90 pounds flowing pressure. It was an exceedingly poor well, although it had an initial potential of one and a half million.

I believe that's enough about that one.

The next well is the 12-33, I believe this is Exhibit 2-D if I'm not mistaken. The Well 12-33 is in 28 and 4. Again Mr. Birdseye says the allowable was assigned in December of '57, it was assigned in October of '57. I think this is the well -- well, I don't know what point I wanted to make about this particular well. I'll state a few facts about the well.

The well has fluid and logs off continuously. An intermitter was installed in this well in May of 1958, and it blows the well to pitch twice a day for eight minutes to unload the liquids from the well. The well logs off again between intermission, it doesn't have enough producing capacity to produce the thing, to unload those fluids between the times the intermitter blows the thing clear.

In several months during 1958, and also in several months during 1959, the well was assigned allowables in excess of its actual ability to produce. This was another well that there was some difficulty in obtaining a test during the summer. This is the well connected to Pacific Northwest Pipeline, and



during the summer of 1958, Pacific had an exceedingly low demand and this well was shut in some periods of time when, in accordance with the general schedule, it should not have been shut in.

However, as I say, because of that very, very low demand, it was not possible for Pacific to produce all the under-produced wells that they should have.

Q Mr. Rainey, would you refer to the exhibit from which you have just testified here, and looking at the line pressures during 1959 and beginning about November or December of 1958, compare those line pressures with the actual average daily producing ability of this well and see what conclusions can be drawn as to the relationship of line pressure to producing ability as to this well?

A All right, sir, this particular well, in the period you mentioned from December, '58, through January of '59, the maximum fluctuation in pressure was 31 pounds -- 32 pounds, excuse me, and it in general ran around 480 pounds. The well was on the line almost consistently from December through June. There were, oh, I would say twenty days during that period of time when it didn't produce; as a matter of fact, from December through July the well produced 205 days out of a possible 212 -- I mean from January through July. So it was on the line essentially all the time, there's no fluctuation to be attributed to the shutting the well in and letting it build up. It's purely the fluctuations in this well, as I see it, are probably based solely on its ability

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at various times to unload fluids; the atmospheric temperature may have had some difference as to whether it could unload fluid or not. In December, '58, it had a 244 MCF average daily producing ability at 487 pounds.

In January of '59, it had 169 MCF per day average producing ability at 501 pounds, an increase of only 14 pounds.

In February at 489 pounds, it had an average producing ability of 209 MCF per day; in March of 1959, at 469 pounds the maximum fluctuation we have here, the average producing ability was 226 MCF per day.

In April at 476 pounds, only seven pounds more, the well dropped off to 167 MCF per day.

In May at 481 pounds, an increase of five more pounds, the well went up to 182 MCF per day.

In June when the temperature got hotter and the well was able to unload fluids a little better, at 488 pounds it produced at an average producing ability of 243 MCF per day.

Apparently, to me, there is no particular relationship between line pressure and average producing ability on that well. It has no significant effect.

I might point out further, back here in September of 1958 when the well had a producing -- had a line pressure of 592 pounds, according to Mr. Birdseye's exhibit, it had a producing ability of 490 MCF per day, and it produced twenty-two days.

Q Produced more gas per day at the highest line pressure



of any time on the schedule?

A Yes, sir. That is not -- I mean you shouldn't draw the conclusion from that that when you get high line pressures you are going to get high producing ability.

This is only one that is dropping off very rapidly, it is a poor well and it had only been on the line a short period of time and still had good producing ability.

The next well is the No. 8-36 in 28 and 4. Here again Mr. Birdseye said the allowable was granted in August, '58 and it was granted July 8, 1958. This well was actually connected to the system on December 31, 1957; however, as will be testified to later in more detail, but for the record at this point, the Winter of '57-'58 was extremely bad in the San Juan Basin; there was lots of snow and ice and rain. This area out here is in a relatively inaccessible area, there are only two roads going into the area, both of which have hills on them which are absolutely impassable in wet weather, they tell me.

During the early part of 1958 it was impossible to get in to test this well, which is down here in Section 36. It's way off at the end of a road that swings out around here and goes north from there, and there are two hills, there's a hill right here and another one down here on it, which will be shown later; and in bad weather it's impossible to get to that well.

They tried to have the thing on, it produced one day in January of 1958, and the switcher's logs, which is one

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thing that I looked at to analyze the conditions on these wells, show for the months of February, March, April, and the first half of May that this well was logged off frozen, and the roads were impassable a big portion of that time, so that the well doesn't actually get a test until July, 1958, although it was not through lack of effort because the switcher tried at least once a week during the four months to put the well on production for test.

Mr. Birdseye further says about this well, "notice on this particular well that the inverse ratio that we had been referring to is generally appearing between line pressure and production during the period of low line pressure, which is in the summer of 1958." That three-month period -- wait a minute, excuse me, that was a question from Mr. Campbell in which he asked why this well does not exhibit the conditions that they had found in other wells as to the inverse ratio between pressure and production. It says "during the period of low line pressure, the three months to which you referred, it does not appear to have increased production on this particular well?" "That's right, true." "Do you have any explanation for that or what could be the reason for this relationship not appearing in this particular well?" "Well, without being in close contact with the Production Department, with El Paso, I can't state the specific reasons which this could be attributed to." "Such as what?" "Well, the simplest one, shutting in the well."

Well, he hit it right in the head. The well was



overproduced and they shut it in during the summer of 1958, the well could have frozen off, well, it's a little unlikely that with the outside temperature in the neighborhood of '95 degrees that the well is going to freeze off, even if it's producing a lot of gas through a small orifice.

In periods of high line pressure, it's obvious that the back pressure against the well will reduce its production.

Now, there are many other factors in this period of high line pressure that could have influenced the production. Let me read a few of the deliverabilities at relatively high line pressure and some of the deliverabilities at lower ones. I'm saying deliverability, I mean actual producing ability.

In April of 1959, well had a pressure of 554 pounds; it produced at an average producing ability of 200 MCF per day. In February of 1959 the well had a pressure of 642 pounds; produced at average producing ability of 157 MCF per day.

In May of 1959 it produced at 558 pounds and produced 147 MCF per day. These are all months that I'm picking out in which the wells had a substantial number of days of production. In other words, to repeat, in February at 642 pounds line pressure it made 157 MCF; in May at 558, nearly a hundred pounds less, it made 147.

The next well is the No. 5-32 in 28 and 4. Here again Mr. Birdseye draws some conclusions as to high line pressures with respect to production. He says a maximum pressure which we



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were informed was 700 psi, you can see rather sharply and at some distance such as when the pipeline reached a peak, 700 psi this month, which is November, 1958, the production dropped to virtually nothing, which was 12 MCF. It actually did drop to nothing, it was 12 MCF. In that month, in the same month when the well had an allowable of 3722, and that may be a typographical error, it shows 3522, the same situation shows to a lesser extent at this other peak.

During the period of time that he's talking about, this well being at 701 pounds and only producing 12 MCF, the well was on the line two and a half hours that entire month. It was shut off during the portion of November and portion of December because of demand. That well is connected to Pacific's system; that seems a little incredible that it was shut in because of demand at that period; however, the well since it has first gone on production has consistently been assigned allowables in excess of its producing ability and in excess of its state deliverability.

Now I might stop here a minute and explain that fact; because there is an acreage factor in the allocation formula in the San Juan, in some instances on very low productivity wells the acreage factor, the twenty-five percent which is allocated to acreage on an equal basis across the pool will be such that the well will receive an allowable in excess of its ability to produce.

In other words, the twenty-five percent acreage factor in the case of this well may have been, or in the case of any well



in the pool, during some of these months may have been, say, a thousand MCF a month.

Its deliverability factor, then, added on top of that, will make it 2,000 MCF a month allowable -- well, the well -- I said its deliverability factor, it's 30 MCF is the State deliverability for 1958 and that factor added to the acreage factor might give it an allowable in excess of capacity of the well to produce. That's what happened to the well in one, two, three, in ten months in 1958 and every month so far in 1959.

That well is one of two wells in 1958 that had underage cancelled. The well has frequently logged off. It must be blown frequently to keep it clear of liquids, so it will produce, and it has been blown frequently.

Let's see, I believe that's all about that well right now.

The next well is the No. 2-17, I believe, in 28 -- yes, that's right, in 28 and 4. I don't recall Mr. Birdseye's testimony exactly this morning, but it's my recollection that he testified that that well was classified as marginal in September of 1957, if I'm not mistaken.

MR. CAMPBELL: If the Commission please, I believe he said he might assume that, based on the production history.

A I'm sorry, then, I may have misunderstood him, but I got that impression. In fact, that well was first produced in 1954; as you all know, the proration began in San Juan Basin in



March of 1955. That well has been marginal since proration first began in San Juan Basin Area. It had a state deliverability test with 24 MCF in 1956. Since that time it has been exempt from test by an official notice of the Commission.

That well, it's true, has fairly consistently produced at line pressures in excess of 500 pounds. Its actual average daily producing ability in 1958 was 13 MCF per day. In looking at month after month here, the well seems to have no relationship, the producing ability seems to have no relationship whatever to its line pressure. The well frequently freezes up and logs off, and it's blown very frequently to enable it to maintain its production.

As one or two specific examples, in April of 1958, when the well produced thirty days at 536 pounds, it averaged 14 MCF per day. In July of 1958 when the well produced at 496 pounds, produced for thirty-one days, it averaged 17 MCF, a tremendous increase of the MCF.

During 1959 the well had an average producing ability of 11 MCF and produced in any number of months in 1959 at less than 500 pounds, and the maximum producing ability in any one month was 13 MCF. In August of this year when the atmospheric temperature was high and the well could unload fluids and was capable of producing more gas, got clear up to 13 MCF in that month.

I might also, at this point, explain a little bit for

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the benefit of the record, since the Commission is well aware of it, and possibly for Mr. Birdseye's benefit, that marginal allowables are assigned to wells on the basis of the maximum production that the well had in the previous six months proration period.

In the case of this well, it's had the same allowable for over a year, I think, but frequently when the well is not even approximating the estimated allowable on it, the Commission does not see that it's necessary to change it.

Q Mr. Rainey, excuse me a minute. Are you referring there to the tentative allowable which is assigned in the schedule?

A Yes, sir, I'm fixing to explain that. The Commission assigns this so-called tentative allowable based on the maximum production it had in the previous proration period, solely for purposes of determining the total volume of marginal allowable which is assigned to the Pool to enable them to then allocate the non-marginal allowable remaining to the wells in the Pool.

Under the proration orders of the Commission that I'm familiar with, it specifically states that the allowable for the marginal well is its production. Consequently, I'm at a complete loss to understand that Mr. Birdseye has had an allowable cancelled on it, it has no allowable other than its production.

The next well is the No. 1-30 in 29 and 4. That well has been marginal since the 1st of October, 1957. It has consistently been incapable of producing its allowable since it went on the line. There again, Mr. Birdseye talked about a 3500 MCF



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per month allowable, reducing over a period of time to 334 MCF per month, which is the allowable for the entire nineteen months period we are talking about here. There again, that is the preliminary allowable which is assigned to the well only for purposes of determining the amount of non-marginal allowable remaining in the Pool.

Let's see, he mentioned the fact that the allowable was cut from an average level, from so much to so much because of inability to produce it. Well, that in a sense is true, because the well has been reduced to marginal status and its allowable is its production.

He again makes a point of the fact that this well-- exhibits some exhibits -- the fact that he's talking about the inverse relationship between line pressure and production. I might also point out that this well has also been exempt from test since 1957 and at that time the state deliverability test was 22 MCF. It has an average producing ability in 1958 of 18 MCF per day, and in 1959 of 10 MCF per day.

The well at 623 pounds in February of 1959, which is, I believe he shows 592, my records show 623, he has given me the benefit of the doubt there -- that well made 17 MCF per day and was on the line 19 days because it logged off the rest of the time.

Let's just take the next month, March, at 521 pounds, the 1-30 in 29 and 4 --

Q The 1-18?



A It seems that we have something out of order here. You must have turned two. Here is the 623, he's got it. The well, as I stated, had an average producing ability of 16 MCF, and the next month when the line pressure went down to 521 pounds, a drop of a hundred pounds, its average producing ability increased two MCF to 18 MCF.

In May when the line pressure got down to 449 pounds, its average producing ability was 14 MCF for that month. The well was on the line only fifteen days, I might add.

I believe that's all on that.

Now this is the 1-18 in 28 and 4, this well like the 2-17 has been marginal since the beginning of prorationing. This well is one that Mr. Birdseye mentioned this morning and said its state deliverability was 31 or 33, I believe the figure I have is 31.

That's the deliverability test, it was taken in October of 1956. Since that time the well has been exempt from test because it was felt that its deliverability was no factor in determining its allowable, since it was marginal, and its production is its allowable.

That well at the present time has an average producing ability of 8 MCF per day, and that's at pressures down as low as about 460 pounds.

Let's see, he also made some other statements here with regard to the allowable and production on this. Its allowable,



well, when -- well, I'm reading another one now. This is the 1-18, he mentioned something about the allowable in May, 1958, that must be a typographical error because I think the well came in in about May of '54. Correct me on that, I am not sure.

MR. CAMPBELL: 1-18?

A Yes, sir. This is not shown May, '58.

MR. CAMPBELL: October of '52, it was connected October of '54.

A Actually its first allowable was March, 1955, which is when proration began in the San Juan Basin. He says allowable assigned was an average of 2800 MCF per month. At that time the Commission had the policy of taking the deliverability of a well and during the year 19 -- for the allowables for 1955 this well had a deliverability of 93 MCF, tested in 1954. At that time the Commission took its actual state deliverability and multiplied it by the number of days in the month to get the allowable, and it does average out to approximately 28 MCF per month, but that again is a preliminary allowable, that well was marginal during that entire period of time.

Then in December of that year, the allowable --

Q (By Mr. Howell) Mr. Rainey, for the purpose of clarifying the record a little, will you be a little more careful to identify when you are quoting Mr. Birdseye's testimony and when you come to the conclusion of this testimony and give your comments?

A All right. Let me quote from his testimony here.

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"The well was assigned for the first eight months an average allowable of about 2800 MCF per month. The average production during that period was 400 MCF per month. Consequently the allowable was reduced in December, 1955, to 496 MCF, approximately 20 percent of the previous allowable. It has been reduced in steps ever since that time, due to its failure to make its assigned allowable."

Now, end of quote.

Q Is that the end of his testimony?

A That's the end of quote. That's exactly correct, the well has been marginal and as is the practice of the Commission, at least once a year they go in and assign a preliminary allowable to the well in accordance with the maximum production the well had at any one month in the previous proration period for the preliminary allowable only.

Its allowable is then actually assigned as its production; in other words, marginal wells carry no status, they don't over or underproduce, as this line here indicates that they do.

Now, to quote Mr. Birdseye again, "The net result is that, that its cumulative allowable has been increased at the present time to an 11,339 MCF, was cancelled in October, 1959, was 12785. In July, 1956, another 659 MCF were cancelled. Therefore, there is net underage in production of 28,436 MCF out of the total allowable of 40,000 MCF."

There again a marginal well doesn't have any underage



cancelled under it because it doesn't accumulate any underage, it has no status.

Q One other question, Mr. Rainey, when did proration begin in the Blanco-Mesaverde Pool?

A March 1st, 1955.

Q Was it possible under the rules to have any cancellation in October, 1955?

A No, sir.

Q Don't the rules provide that when a well is underproduced for six months, it then has an additional six months in which to make up the underproduction; failing to do that, there is cancellation?

A Yes, sir. As a matter of actual practice, the first balancing, so-called balance period in the San Juan Basin was in July, 1956, I believe.

Q So that it was utterly impossible to have any cancellation in October of 1955?

A Yes, sir.

Q As was testified to by Mr. Birdseye?

A Yes, sir.

Q The next well is the 18-31 in Town Unit 28-4.

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I quote from Mr. Birdseye's testimony again: "This well is tied into the Pacific Northwest pipeline system. As you can see, you can see extremely high fluctuation in the monthly production from this well, from probably seven million to twenty-one million to six million to eighteen million and so forth." That, this is their fluctuation here of the allowable line right here. To continue:

"It is extremely high fluctuation. The line pressure has not fluctuated that much so we must attribute these fluctuations in production to other mechanical factors such as the well having been shut in or freezing oil. The line pressure in each instance here has been slightly lower than five hundred pounds per square inch. The first allowable for this well was assigned in February, 1959."

The first allowable was assigned in December 1958, and he is exactly right on that well. It was shut-in for a considerable period of time, and it also flowed for a considerable period of time during November and December, 1958. When we were attempting to get a test on the well, the test was broken right in the middle of it, and was consequently delinquent in being filed and there was an allowable cancelled during the month of February on that particular well because of the delinquency of that test, because the well froze off in the middle of the first test, and in accordance with the practice of the Commission, they did not go back more than 60 days prior to the time the test was received in the Commission office.

I might also point out on that particular well, that the



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reason for the very low production and the wide fluctuation, is that that's one of the better wells in this area, it's got a State deliverability of over 755 M.C.F. per day, and that's another well that has been overproduced continuously since it went on the line; and if there has not already been an order issued ordering it shut-in, there will probably be one in the near future, because it did not come into balance there the first half of 1959, even though it was only on the line 74 days.

The next well is the 16-30, let's see, quoting again from Mr. Birdseye's testimony: "This well produced for two months before the first allowable was assigned which is the principal reason that the cumulative allowable to date is forty thousand, the cumulative production is slightly over forty-nine thousand, hence it has been over produced by the amount of ninety-six hundred and fifty-four m.c.f." There again, I might point out --

Q Now, is that the end of Mr. Birdseye's testimony?

A That's the end of Mr. Birdseye's testimony. Excuse me. There again, I might point out that that well will receive an allowable restricted to first deliverability, that was November 15, 1958.

The next well is the 14-29, 29, 28, and 4. This well was completed --

Q Now, you are testifying, you are reading Mr. Birdseye's --

A No, sir, I am not reading Mr. Birdseye's testimony. I'm just reading this. This well was first delivered in May of



1958, and was consistently overproduced during the year 1958. The well balanced during the proration period in 1958; at the present time, it is considerably underproduced, however, in one, two, three, four, five months of 1959, the well has received an allowable in excess of it's ability to produce, and the larger portion of that underproduction has been because of that. The well has been on the line 198 days out of a possible 212.

Q Is that in the year 1959?

A That's in the year 1959. Now, to quote from Mr. Birdseye's testimony: "The well produced twenty million feet of gas before its first allowable was assigned."

The allowable was assigned effective date of first deliverability. To quote again from Mr. Birdseye's testimony: "So far no back allowable has been cancelled because of the short duration of the producing life of this well."

I might also point out that even during the short producing life of this well, which as I said started in May 1958, this well has declined in producing ability and State deliverability by 50 percent. It went from 482 M.C.F. State deliverability at 1113-pound shut-in, I might add in June of 1958, to 573 M.C.F. per day at 627-pound shut-in; that's one of the cases that I was talking about earlier about having an apparent shut-in pressure lower than the actual shut-in of the well because of the fluids in the well bore, and many of the wells in the area will load up within seven days; if they are not produced, within seven days they will load



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up and many log off, and because of its low apparent shut-in pressure of 629-pounds, that well got a calculated deliverability considerably off from what it had four months before, whereas in effect its actual producing ability against approximately 525 pounds had declined from 466 M.C.F. average for the year 1958 to 201 M.C.F. per day average for the year 1959. It was just a poor well, that's all there is to it.

That's what happened to these wells out here in this area out here when they are produced continuously, and as I said that well was produced 198 out of 212 days, that's a decline like that.

The next well is 13-20; quoting from Mr. Birdseye: "There was a percentagewise sharp increase from about four million feet the preceding month", and I presume he is talking about, he is talking about the month of April and May 1959, "There was a percentagewise sharp increase from about four million feet the preceding month to six million feet the other month due to the decrease in line pressure at that time. By the same token, we note a decided low in monthly production during most of the time of the peak of line pressure. You can see the same thing in this instance here when line pressure decreased below five hundred pounds the monthly production, at least for that one month, increased substantially." I presume -- end of the quote -- I presume he is talking about September '58. This well is again one that the average producing ability has declined rapidly; its average producing ability in 1958 was 479 M.C.F, against 536-pounds line



pressure; and in 1959 its average producing ability has been 170 M.C.F. per day, against 513 pounds line pressure. The well was overproduced through November of 1958, it has been on the line 196 days out of 212 in the year 1959, and has been assigned an allowable for four months of 1959 in excess of its actual ability to produce. The well had allowable cancelled because it was just flat unable to make it. As I said, it was on the line 196 days out of possible 212.

The 11-31 in 31, 38 and 4, I don't think there is anything particularly significant about that well, it had some very high line pressures during the summer of 1958 --

Q Mr. Rainey ---

A -- that's one of the periods we were discussing.

Q -- is that one of the wells connected to the Pacific Northwest in which the meter chart reflects the pressure upstream from the choke?

A Yes, sir, that's one of the wells we were discussing, that the static pressure shown on the meter is actually more nearly a reflection of the well head flowing pressure of the well, particularly in periods of time when the well was on very short periods of time during the summer of 1958. As shown by this high line pressure in the shaded area on this exhibit, the well was on four days in May, no days in June, we don't start this until July, one hour in July, one hour in August, sixteen days in September, and two days in October, and three days in November; this



well again was overproduced until the end of November.

Q In your opinion, Mr. Rainey, would even if the line pressures in the gathering system had been this high, would they have affected those wells during those months when it only produced one hour during that month?

A No, sir, it would not have; at that time the wells all varied from 13 million to 5 million overproduced, and even underproduced; however, while the well has balanced in the first half of the year of 1958, it failed to balance -- no, excuse me, it balanced in the second half of the year 1958; in the year 1959, the well has been assigned allowables in three months in excess of its ability to produce, and it had some allowable cancelled in July of 1959. We are nearly to the end of it.

The next well is the 9-32, in 28 and 4; that well is one of the ones that Mr. Birdseye was using as a comparison to other wells in the Basin. This is the only well in either unit that has a deliverability in excess of 1,000 M.C.F; this well has balanced in each proration period since it came on the line, it was first produced in December of 1957, or it was first connected, excuse me. It was first connected in December of 1957. The well produced a very small volume of gas that month, due to the fact that it had been shut-in for approximately a year since its initial completion because the pipeline -- now, this is the 9-32. There is a line that comes here from way down south to pick that well up; this well lies in the back end of a box canyon, and although it looks

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like it would be relatively simple to run a line across here to tie that well in, they advise me in the field, and I think Mr. Logan can testify as to more of that, it would be practically impossible to put a line from here down to here, so that well was not connected for some period of time after its original completion till there was enough development here to warrant building a line north of there; because it was shut-in for a period of time, the well was logged off with fluid and would not produce for several months after it was actually connected. They continually worked with the well, it froze off in January, February, and April; the switcher reports instances where the road was impassable. The road on that canyon, as I understand, gets, when it gets wet, it gets muddy and it is impassable. There are a number of instances in the switcher's log indicating that he couldn't get to the well, so that well actually only had a test and allowable, it had a test in July, and the allowable was assigned effective July 8th, 1958.

The well was overproduced 15 million cubic feet at the end of 1958; it had very little production during the latter half of 1958. As a matter of fact, for the months of September, October, November, and December, the well produced only one or two hours each month, that's this period here where the production drops off to nothing. It is here where production drops off to nothing, and Mr. Birdseye figured generally, I don't think he specifically mentioned in the case of this well, but he attributed generally to high gas line pressures. In 1959 the well has balanced itself,



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It is a very good producer. As it declines, however, there is going to be problems, it's got lots of fluids in it. The only thing that keeps it from logging off right now is the good volumes of gas it is capable of making, that high volume of gas, that is enabling the well to keep unloaded; as it declines in producing ability, we are going to have a problem with that well.

The last well, the 7-8 in 29 and 4, that's the well that we have that I mentioned earlier today as being connected to the temporary line that Pacific has laid in there, and as I say, the line is only in there because it was there for purposes of delivering gas for drilling other wells in that area. And as I previously testified also, it's laid on top of the ground. That well has nothing particular about it, it is just not a very good well. I think Mr. Birdseye testified:

"Yes, this is quite a good well, and the cumulative allowables assigned to it are about one hundred sixty-four thousand mc.f., the cumulative production is one hundred thirty-seven thousand m.c.f., leaving a net underage as of the end of July of twenty-seven thousand m.c.f." End of quote.

The State deliverability test on that well is 255 M.C.F. per day, at a shut-in pressure of 611-pounds. The well has got a lot of fluid in it, and I personally don't consider it a good well when it would only make 255 M.C.F. at 50 percent of 611 pounds.

I believe that's the crop on the exhibits that have been presented by the applicant so far in this case. There are one or



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two more points, Mr. Howell --

Q Yes, I would like --

A -- for me to cover.

Q Are there any more points in connection with this exhibit here? Nothing more?

A There is some more in connection with Mr. Birdseye's testimony. There is nothing specifically in connection with those exhibits, no, sir.

Q I wanted to ask you some questions on his testimony. Now, referring to Mr. Birdseye's testimony this morning, he made comparison between --

A Excuse me just a second, Mr. Howell, I got one more point or two I would like to cover on his testimony from the last hearing, if I might.

Q All right, go right ahead.

A He testified, quote: "In rough terms these wells have had a total cumulative allowable of two hundred and forty-four thousand m.c.f., and their total production has been about a hundred and fifty-five thousand m.c.f. I have the exact figures here in just a moment." End quote.

My impression from reading the transcript, and I wish he would correct me now if I am wrong, but my impression from reading the transcript, he was quoting these figures as being the total production from these two units, was that correct?

MR. BIRDSEYE: From all the wells, Mesa Verde wells on



those two units, that's correct.

A Back to his testimony: "The total cumulative allowables, including the cancelled allowables, for this group of wells through July, 1959 is two hundred and forty-four thousand, five hundred twenty-one m.c.f. The total cumulative production has been a hundred and fifty-nine thousand, one hundred thirty-five m.c.f." End quote. That was merely correcting his estimate of the figures he quoted previously, he found the actual figures.

To resume his testimony: "Resulting in a net underage of something on the order of eighty-five million cubic feet of gas, a large portion of which has been lost due to the cancellation of back allowables."

Q Is that the end of his testimony?

A That's the end of the part of his testimony I would like to discuss right now. I think possibly, through inadvertence or something, Mr. Birdseye picked up the figures for only the 29 and 4 unit because those figures are approximately the figures that I have for the 29 and 4 unit alone, and the total for both units has been one million two hundred fifty-two thousand two hundred and thirty-nine m.c.f. allowable, and nine hundred and seventy-one thousand seven hundred and fourteen m.c.f. production.

MR. BIRDSEYE: You are correct on that, I figured that right off.

A I think that possibly was inadvertence. Now, if I might elaborate a little bit more on the figures he did use;



however, in respect to the 29 and 4 unit, he is, he mentions 85 million cubic feet having been cancelled. I think there he's picked up the figure for the total cancellation over the whole shooting match again, because the figure that I have for the total cancellation through July on through February of 1959, is 85 thousand one hundred and sixty-six m.c.f. Now, the point I want to make about that test is that he has disregarded completely the fact that during that same period of time, there was 70,951 m.c.f. of redistribution, showing a net loss of actually only 14,205 m.c.f.

MR. CAMPBELL: What was the redistribution figure?

A 70,951 m.c.f. I can't exactly duplicate his figures, but it is also my impression, in light of other testimony, and the fact that we can't exactly duplicate his figures, is he has probably again included the allowables that were assigned to those marginal wells as preliminary allowables, and has included as a portion of the cancellation the amount of gas that was not produced up to those preliminary allowables. Let us say I can't follow his calculations there, and I'm not real sure what he is getting at.

MR. CAMPBELL: Excuse me just a minute. Mr. Howell, since you have been discussing back and forth ~~what~~ these figures are, you took into consideration actual allowables, did you not, as distinguished from preliminary, in arriving at your figures?

A The 85 million calculation?

MR. CAMPBELL: Yes.



A Yes, that's right. I believe that's all, Mr. Howell. I wanted to make that point.

Q Before we go into the next phase of the testimony, one other question, Mr. Rainey. In connection with these various wells, are the reports filed with the Commission which are available as records, such that the number of days production during the month is shown on these reports?

A Yes, sir, all the information that I have on these wells was obtained basically from our records in the proration department in El Paso, and it was done in approximately three weeks after we got a list of the wells. However, all this information is available from, and either through direct information or enough information, that the figures that I have can be calculated from the information that is on file in the Commission office; for instance, days produced is filed with the Commission.

Q Along with the monthly production each month?

A Yes, sir.

Q And is available to anyone that is interested in it?

A Yes, sir.

Q Now, let's refer to Mr. Birdseye's testimony this morning with reference to his comparison of the 9-32 well in Township 28-4, with four other wells out of the list of a hundred and twelve.

A Yes, sir.

Q Will you please testify for the record as to the status



of the wells, and such other factors as to each of these wells as are pertinent, in your opinion.

A All right, sir. My recollection is that the first well he picked up at 28, 4 9-32 --

Q First, let's get to the 9-32, and let's put into the record the testimony as to the status of over or underproduction --

A All right, sir.

Q -- on that well.

A That well had first allowable in July 1958, to be specific July 8th, 1958, it, that's the well that I was discussing a moment ago that was shut-in for about a year before it got connected, and they had a bad time to start the thing producing; once it was connected, it actually had a pretty substantial production during the month of May, however, they were unable to obtain sufficient number of days of continuous production for, to satisfy the production of deliverability test. That well in 1958, 15,195 m.c.f., that overproduced; in the year 1959, it has been underproduced every month, however, the well has balanced. In other words, it has overproduced its current allowable sufficiently in individual months that it has balanced out. The status on the well as of the end of August 1959, is 22,109 m.c.f. underproduced. As I pointed out previously, that is a very good well, and I think there will be no question that the well will balance again in the last half of 1959.

Q All right. Now, let's refer to the Number 1 Dawson

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well.

A All right, sir. Comparing that to the Number 1 Dawson well, that well was first delivered in --

Q By "that well", you mean the Number 1 Dawson?

A Yes, sir, Number 1 Dawson well was first delivered in October of 1953; the well is in Section 30 of Township 31 North, Range 8 West, which although you can't see it on the map Exhibit 1, it is actually right up in the heart of the Mesa Verde field. That well has maintained a very good deliverability, and the State deliverability against which allowables were assigned in 1957, I mean, in 1958, was, the State deliverability test taken in 1957 is approximately the same as the deliverability test that was obtained on the 9-32 in 1958. That well began the year 37,106 m.c.f. overproduced. The well balanced in both proration periods in 1958 and wound up the year 11,989 m.c.f. overproduced.

MR. CAMPBELL: Was that in '58?

A Wound up '58, 11,989 m.c.f. overproduced. However, it did balance the total allowable, taking into account redistribution for that well for the year 1958 was 191,088 m.c.f.. The total production was 165,271 m.c.f. The difference there is approximately 26,000 m.c.f., the difference between the status at the beginning of the year and end of the year is approximately 26,000 m.c.f. As of the end of August 1959 the well is 1,890 m.c.f. overproduced; it has balanced in the first proration period of 1959.

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Q Just a minute, Mr. Rainey, what did you say, 1,890 m.c.f., or 1,890 cubic feet?

A Yes, m.c.f, one million cubic feet overproduced.

Q One million cubic feet overproduced?

A Yes, sir, 1,890 m.c.f. overproduced; it has balanced during that proration period, however, it has been underproduced during the first half of 1959.

Q Now, just show us the relative distance from the Blanco Cliff where that well is located, as compared to these wells out in 9 and 4.

A This well is out in Section 30 of 31 and 8; this is 8, 31, Section 30, that's the well right there, circled in red. Here is the Blanco plant right here, excuse me, I'm punching the wrong well. Now, here, it is considerably closer to the plant, and Mr. Birdseye testified I think this morning that the line pressures on the, out here in these units has been in the neighborhood of 520 or thirty pounds, as I recall; line pressure on that well has been about five hundred and, had been an average of five hundred and thirty in 1958, and 514 in 1959, but it's about twenty miles closer to the plant.

The next well, as I recall, was the Gambling Number 2, which was compared to the 9-32 in 28 and 4; before I get to the Gambling 2, I might add in respect to the Dawson 1, that it appears to me that in accordance with the Rules and Regulations of of the Commission and proration orders, that we have more than



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complied with the ratable take provisions of those rules in balancing each well each prorating period, whether it was underproduced or overproduced.

The Gambling Number 2, as was mentioned this morning by Mr. Howell, is a transferred well to a pressure buildup test, that well began the year 1958 21,757 m.c.f. underproduced; it ended the year 1958 3,922 m.c.f. overproduced. It balanced in both proration periods. The test, well, in regard to that one, I don't have the specific information right here as to when it was shut-in. However, it is on the test provisions under Order 1300, which is the basic order permitting us to test certain wells during the year 1958. It is my recollection that those wells were, that the test wells were shut-in approximately the first of August, 1958. Since that time, that well has purposely overproduced to make up the underproduction, help make up the underproduction which has accrued to the well that has been shut-in.

My recollection of the figures on the test well in that particular case is that the test well is underproduced some two hundred and five million cubic feet, and this well is overproduced only one hundred thirty-one million cubic feet, as of the end of August, so that it's not overproducing excessively in comparison to the underproduction of the well that is on test.

The next well, I believe, was the Kelly Federal 3-A. That well is a very good well; began the year 1958, 27,775 m.c.f overproduced. It ended the year 35,956 m.c.f. overproduced. However,



the well was underproduced during the year, during the first proration period. As a matter of fact, consequently it balanced. I might also point out that the well balanced during the first proration period of 1959.

The well's current status as of the end of August 1959, is 3,021 m.c.f. overproduced.

Q What was it's status at the end of July 1959?

A At the end of July 1959 it was 1,180 m.c.f. underproduced. Let us say it has balanced in every proration period; it's been overproduced, but it's also been overproduced during those proration periods.

Q Before you leave that well, Mr. Rainey --

A Yes, sir.

Q -- do you have the figure as to the average line pressure during 1958 for that well?

A Yes, sir, that well in '58 was 501-pounds, and in '59 it was 504-pounds. I might also add that although the well overproduced its current allowable during 1958, it was only on the line a hundred and eleven days, and it has only been on the line fifty-five days to date in 1959.

Q Does that fifty-five days include the State test on that well?

A That fifty-five days includes twenty-one days State test. Actually, it was on twenty-seven days; they turned it on a little bit before they actually started the test. Apparently the



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one hundred and eleven days in 1958 also included twenty-one days for State test.

The next well I believe was the 29, 7 Number 52. That well began the year 1958, 2,909 m.c.f. overproduced. It ended the year 1958, 43,764 m.c.f. underproduced. The well balanced in each proration, I beg your pardon, it did not balance in the second proration period, had allowable cancelled in February of 1959. It balanced in the first proration period, and it has balanced in the first proration period of 1959. The current status on that well is 17,690 m.c.f. overproduced, but as I stated, it balanced during the first proration period. That well was only on the line 128 days in 1958, and on the line 114 days in 1959, in an effort to make up underproduction in 1959. I don't guess there is anything more to say about that well.

Q What about the allowable assigned in '58 for that well, and the deliverability test upon which it was based?

A Oh, I knew, I was sitting here trying to think of something else to bring out about that well. Mr. Birdseye testified that this well was of comparable deliverability to the 9-32 well, and the 24, 28 and 4 unit; the State test for 1958 was 1328 m.c.f. per day, however, that is the test on which the allowables for 1959 are based. The allowables assigned to that well during the year 1958 were based on the '57 State deliverability tests, which was 2,359 m.c.f., a whole thousand m.c.f. more than the deliverability on the 9-32.



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Q Now, was the State deliverability test used for the 9-32, the 1957 test?

A No, sir, it was 1958 test, that well didn't get a test until July 1958.

Q And in determining the allowables for the 9 -- what is it?

A However, this well is capable of producing the allowable under that '58 test, because it was overproduced a good, some portion of the year, and the production which was charged against that well during 1958 was production which was charged because of the allowable assigned under that 2,359 m.c.f. deliverability.

Q So that the production history of the 29-7 well, during 1958, was due to a much greater allowable than is comparable to the 9-32?

A That's right, so there is no particular validity in comparing that well for '58 against the 9-32 for '58.

Q Now, do you have anything further you would like to testify to in connection with the comparison made by Mr. Birdseye with the 9-32 well and these four wells which he selected?

A I might make just one comparison here; in going back to 9-32 well, I don't know the basis for Mr. Birdseye's comparison. He, I think, testified this morning as to a bunch of total allowables on these wells for the years '58 and '59, and of course the 9-32 well didn't get any allowable until the middle of the year. Now, I don't know whether he was drawing any inference from that,



or as to the comparison of these wells, or other wells, or not, but some of these wells that do have approximately comparative deliverabilities only have twice the production, they were only on about twice the period of time that this 9-32 was.

Q Now, this morning I believe Mr. Birdseye selected out of the 112 wells, one other well to comment about, which was the Northwest Production Number 1 Well?

A Yes, sir.

Q Will you first testify giving the relative facts about that well, as to when it was completed and how?

A Yes, sir. That well, the Northwest Production Blanco Unit 30-12 Number 1 Well was completed in April of 1957, and was connected and first delivered in May of 1957. That well, as I understand it, and I will have to confess that I'm not too familiar with the particular well, is connected to a portion of the system that was built by Pacific Northwest, and connected directly to the tail end of our Aztec gathering system. In other words, it is going into the Pictured Cliffs system.

That well is a dual completion with a Fruitland Well in the Flora Vista-Fruitland Field. There are about four or five Fruitland wells out there, and it is one dual completion. The actual producing ability of this well is only 40 m.c.f. per day. It's my recollection that Mr. Birdseye testified this morning that the State deliverability was about 30 m.c.f. per day, and he was comparing it to the 1-18 well in 28 and 4 which had a deliverability



test that was three years old, because it has been exempted from test since then. This well did get a little more production than the 1-18 partly because it's connected to that Pictured Cliffs system, and also partly because it's got an actual production rate of 40 m.c.f. and the other one has a production rate of 8 m.c.f.

Q Now, Mr. Rainey, is there any further testimony that you would like to give as to specific wells, or comment about any further portion of Mr. Birdseye's testimony at this time?

A No, sir, I think not. We have a complete study of all the wells on the so-called 112, 116 well list; the same condition exists with very few exceptions, of every one of the wells shown in that list, that is, taking into account proration status at the beginning of the year and the end of the year, and whether the well balanced or failed to balance, or whether it had cancellation on it or didn't have cancellation on it. The wells were apparently operated within the scope and intent of the proration rules, and the ratable take orders, or whatever you want to call them, and I'll admit that there are about four or five wells, and I don't know which ones specifically, I thought I was going to go through this whole list at one time -- there are about four or five wells that, unquestionably there are some wells that were overproduced and were on the line when they should have been off, and two or three that were underproduced that should have been on when they were off.

In other portions of the pool where there is liquid condition,



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or where it is generally poor wells, they logged off, or froze, or things like that. But I'd say that for 95 percent of the wells on that 112 well list, they have operated in exact accordance with both the purpose and the intent of the proration orders.

Q Mr. Rainey, will you detail to the Commission, just what the proration department of El Paso Natural Gas Company does to comply with the proration rules established by this Commission for the Blanco-Mesa Verde Gas Pool?

A Yes, sir. We furnish to the field each month a report which I call, I don't know what the field calls it, I call it a Production Forecast Report. It is a report showing every well in the Blanco-Mesa Verde -- well, in every pool in the San Juan Basin but since we are discussing the Blanco-Mesa Verde pool here, I'll confine it to that -- but it has every well in the Blanco-Mesa Verde Gas Pool included in that report. The marginal wells are put at the top. Well, let me back up just a second, that report is designed, the wells are placed on there in the order in which they should be produced in accordance with their proration status.

Q Now, let me interrupt you a minute there. What is the basis of that report?

A The basis of that report is the official proration schedule furnished to us each month by the Commission; and to enable us to get certain information of the field a little sooner, we take the status for the last month that we have a status, and apply on our own the over, apply on our own the allowable, the



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current allowables and the production that we have in our records. That is a little later information, and information the Commission has as a matter of public record.

We then take all that information and compile these wells in the order in which they should be produced, putting the marginal wells at the top of the schedule, the underproduced wells next, in the order of the magnitude of their underproduction. In other words, the most underproduced well is at the top of the list of the underproduced wells; the least underproduced at the bottom, and the balanced wells come in the category, they come in the middle; then overproduced wells come last, with the least overproduced being at the top of the overproduced category, and the most overproduced being at the bottom. In other words, there are 1600 wells lined up in the Mesa-Verde Pool, or approximately 1600 wells lined on this report in the Mesa Verde Pool in the order in which they should be produced.

Now, Mr. Logan is going to testify further as to just exactly what the field does when they get the report, but I might elaborate a little further on the purposes of the thing and the reasons that sometimes wells will be off when they ought to be on, and be on when they ought to be off. One reason is testing; as we mentioned earlier, all the wells in the pool have got to be tested during the year, so sometimes there is going to be some overproduced wells that are on, and some underproduced wells that might be off.

I might also point out that in line with our demand, in



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other words, what the customers on the West Coast want; sometimes if we got a certain number of wells on test and those wells happened by coincident, because of the area they are in, are overproduced and our demand is not sufficient to have all the underproduced and overproduced wells that are on test on, it might be there sometimes that there will be overproduced wells off to make room for the gas that must be produced to conduct these tests.

Occasionally, as I mentioned, there are about four or five wells in the list of 116, there is occasionally, apparently there is some human error; we got many wells out there that have approximately the same name, and the only thing we can figure, and the boys in the Farmington office can figure, is that sometimes the boys get confused, turn off the Case A-2, when he ought to turn off the Case B-2, because there are wells on this list, as I said, four or five of them, when they were on when they should have been off, and off when they should have been on; but within the limits of operational problems, that the entire field has, as I say, Mr. Logan will testify to later. The field office and the main dispatching office is in Farmington, producing the wells in accordance with that schedule, and that's --

Q What time of the month does that schedule get to them?

A That schedule gets to them on the 10th of the month, and on the 20th of the month, and again on the 30th of the month. The schedule that goes out on the 10th of the month has that current month's current status on it, it's got actually a two months later



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status than the Commission schedule has, one month later status than the Commission schedule has because we add in the allowable, and subtract out the production for the intervening month that the Commission does not yet have on the schedule. Then about the 20th of the month, they take the charts that have come into the El Paso office to that time, and subtract the production from the permitted production up to that time, so that they get a new permitted production, and the wells will change position on the schedule as they are produced or as they are not produced. In other words, if an overproduced well is not produced, it will begin to move up on the schedule; in other words, it gets less overproduced. Conversely, if an underproduced well is produced, it begins to move down because it gets less underproduced, and it moves down to the, toward the balanced portion of the schedule.

And every effort is made to keep that thing up to date and as near accurate as possible, and it is sent to the field in several different forms. We send them a consolidated report that has every well on the patch in them, in all the field. We send them another one that is broken down by pools; we send them another one that is broken down by each field office, and I think there are ten field offices, as I recall, in the San Juan Basin; 11, excuse me, 11 field offices in the San Juan Basin area. And that schedule is broken down into eleven different portions, depending upon which wells are under the jurisdiction of the different field offices. So that every effort is made to keep those wells in balance, and



to produce them ratably.

Q Now, Mr. Rainey, do you pay any attention whatsoever in listing the wells on the schedule, to anything other than the over or underproduced status of that well --

A No, sir --

Q -- and the marginal?

A -- other than the marginal wells that go right on the top.

Q Do you give any consideration to whose wells it is?

A No, sir, we don't ever give any consideration to which field it is in.

MR. HOWELL: That's all from this witness.

MR. PORTER: It is 5:00 o'clock; we will recess the hearing until 9:00 o'clock tomorrow morning.

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MORNING SESSION  
October 23, 1959

MR. PORTER: The meeting will come to order, please.

Anyone have a question of Mr. Rainey?

MR. CAMPBELL: Yes, I have one.

MR. PORTER: Mr. Campbell.

CROSS EXAMINATION (Continued)

BY MR. CAMPBELL:

Q Mr. Rainey, I'm confused, as usual, but at this time about something I am sure you can clarify for me. In connection with the actual operating control of the wells in these two township units, 28-4 and 29-4 --

A Yes, sir.

Q Both of those are Federal units, are they not?

A Yes.

Q Each of them?

A That's correct.

Q Who was the original operator of the units, if you know?

A Phillips Petroleum Corporation was the original operator of both units.

Q What occurred with regard to change?

A Then El Paso took over as operator, I don't know the exact dates as to sequence, but El Paso took over as operator and was operator for a relatively short period of time, as I recall, and since Pacific Northwest has been operating in the area, they have been the nominal operator of the unit.



Q Now the nominal operator of the unit, as I understand your testimony, El Paso Natural Gas Company has an agency contract or agreement with Pacific Northwest, whereby El Paso actually operates the wells to a certain extent, is that correct?

A Yes, sir. We switch the wells, as far as production, that sort of thing is concerned.

Q Do you have a copy of the agency contract here?

A No, sir, I do not.

Q To what extent does El Paso have any control over the actual physical -- suppose the wells were to be reworked, would El Paso do it, or Pacific Northwest?

A That's entirely under the control of Pacific Northwest. Our jurisdiction, as it were, over these wells ends at the wellhead.

Q What about the authority for blowing the wells, for example, is that yours?

A The switchers do that, yes, sir.

Q The switchers handle the blowing of the wells or control the intermitters that are on the wells?

A Yes, sir. Once the intermitter is on. Now the installation of intermitters is something within the province of Pacific, new equipment or something like that. Once the intermitters are on there, El Paso switchers operate them.

Q Is this true as to all the Pacific Northwest wells in the Blanco-Mesaverde Pool, or just a portion of them?

A To the best of my knowledge, it's true with respect



to every one of them.

Q So actually the Pacific Northwest in the Blanco-Mesaverde Pool does not do the switching or turn the wells on or off?

A No, sir. As I explained yesterday, or intended to, this so-called production schedule that I was referring to takes into account the Pacific wells, and we produce both systems essentially as if it were one system.

Q So far as the controlling of turning the wells on and off and balancing the wells is concerned, it's entirely under the control of El Paso, by virtue of the agency agreement you have with Pacific Northwest?

A Yes, sir, that's correct.

Q In your testimony yesterday you presented your Exhibit No. 1, which is still on the board there, which you referred to as indicating that the wells in which the applicants have an interest here are quite far removed from the plant facilities that El Paso Natural Gas Company and Pacific Northwest have, is that correct?

A Yes. Yes, sir, that's correct.

Q And you stated that it was necessary to maintain line pressures at some distance from the plants at a rate high enough to permit the gas to move into the plant, it had to be a higher rate than the plant rate, is that correct?

A Yes, sir, that's correct.

Q Is there any method by which the pipeline company can



control those rates at either the plant or in the line?

A Oh, yes, sir. Frequently in the San Juan Basin, in particular, and this area we are discussing, there are fairly violent load fluctuations for various reasons, and they can control the suction pressure on the plant by turning on engines or turning off engines, or there are areas in the field that you get a bunch of very good wells on; if there are a few poor wells, particularly up in this area, say 31 and 8 and 9, 10, up in the heart of the field there are a lot of good wells, but at the same time there are a few relatively poor wells; and turning all those good wells on at the same time may have the effect of backing some of the poor wells off. In that respect, the pressure with respect to an individual well may be controlled by production from other wells.

Q What can you do to prevent that in a field as large as this, with regard to facilities?

A I don't know of anything that can be done to prevent that, short of putting in a -- short of putting in compressor stations all over the place.

Q Do you have any compressor stations in the Blanco-Mesaverde Pool at this time?

A No, sir, not to my knowledge.

Q Neither Pacific Northwest or El Paso Natural Gas Company has any compressor facilities?

A Not at the Blanco-Mesaverde, other than at the main



plants, the Blanco Plant and the San Juan Plant.

Q Do you think that the installation of compressor facilities might make it more feasible for gas being produced some distance from the plant to find their way to the plant?

A No, sir, I don't think it's necessary under present operating conditions in the Blanco-Mesaverde Pool, as I tried to demonstrate yesterday, the line pressure has very little effect on the actual producing ability of these wells.

Q We'll get to that in a little bit. Go ahead.

A The shut-in pressure of the average well in the Blanco-Mesaverde Pool is in the nature of, oh, a thousand, eleven hundred pounds, producing at 500 pounds, I mean producing into a 500 pound system. There should be very little fluctuation of actual producing ability due to line pressure in ranges of 50 to 100 pounds, more than that.

Q Mr. Rainey, I'm not quite clear, then, why you made this illustration of the fact that the wells that we are involved in here are situated some distance from the plant. What was your reason for that, unless it had some bearing upon their accessibility of that gas to market?

A The point there was, Mr. Campbell, that Mr. Birdseye had made much of the fact that these wells are producing at pressures of around 520, 540 pounds. I was attempting to show by this exhibit that is approximately the normal pressure that would be expected that far from a plant that has suction pressures in

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the neighborhood of 450 pounds.

Q But you can control those suction pressures and you can control the line pressures by use of compressors --

A Yes, sir.

Q -- if you see fit to do so?

A Yes. Now the compressor business brings in many ramifications. We can't go out and put in compressor stations.

Q I am aware of that. You have to obtain approval from the F.P.C. and you have to write it into your rate schedule?

A Yes, sir.

Q I'm talking about the physical facilities.

A Right.

Q You also made reference, in connection with that exhibit, to the fact that these wells are situated in terrain area where it's difficult to get to the wells --

A Yes, sir.

Q -- at times?

A Yes, sir.

Q Mr. Rainey, do you feel that the fact that gas wells happen to be situated in areas that are difficult to reach for operational purposes should have any real bearing upon the amount of gas they are, over a period of time, permitted to produce?

A Within the scope of the rules and regulations and production, I agree with you that there are times, although there are times when you can't get to wells, in a general -- in general you



should be able to keep the wells on production enough to balance them proration-wise.

In this particular area, the main point I was attempting to make with regard to inability to get to the wells, was the fact that there were several of the wells that had late tests, and it was through complete inability to get to them to test them. I was not meaning to leave the impression that we didn't produce the wells sometimes because we couldn't get to them. In fact, in I believe it was February, 1958, one of the periods I testified to earlier, there was a period when we went twenty-eight days without being able to change charts, and we finally hired some helicopters out of Denver to get into the particular area to be able to change charts on the wells.

We are not falling back on the poor roads too much there, we were endeavoring --

Q Do you recall that, if there is underproduction accumulated as a result of weather conditions or terrain conditions and you are unable to make it up during the six months period, partially for that reason, that that portion of underproduction should be cancelled if it is for a physical reason other than the inability of the well itself to produce it under normal conditions?

A I think I would have to answer that yes, Mr. Campbell, for this reason, that there are times and places when sometimes physical weather conditions will prevent you getting a well in balance. If you tried to make an exception of every one

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of those, the Commission would be faced with such an endless bunch of hearings for any number of reasons.

I mean, this particular area, bad roads is one of them. There may be any number of other physical reasons rather than the inability to produce it.

Now in our case, we have made every effort to produce the wells if they have the ability to do it. These wells that have lost allowable through cancellation do not have the ability to produce it.

Q Then do you think that the correlative rights of people who happen to be unfortunate enough to have interests in wells in inaccessible areas can be protected, assuming the allowable is cancelled due to reasons beyond their control?

A I think the Commission should cancel the allowables in accordance with their rules if the well has failed to make it up. If an operator or any other person feels that their correlative rights have been violated, they can always come in and ask for relief by way of hearing. I don't think that the Commission is set up administratively to examine each well before they go ahead and cancel the allowable on it.

Q Do you think that perhaps a period of time might be permitted by which anyone can come in and ask the Examiner to investigate the circumstances surrounding the underproduction?

A Oh, I think that's permitted right now.

Q Now, Mr. Rainey, with regard to your records as to

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the status of wells in this area --

A Yes, sir.

Q -- and your Exhibit No. 2-A, do you have a copy of it there?

A I have a copy of it here, I'll be glad to put one back up on the board if you want me to.

Q It might be easier for us to refer to it. I believe, after you put on your Exhibits 2-B and 2-C and discussed each of the Mesaverde wells in these two townships --

A Yes, sir.

Q -- that you reached the conclusion that El Paso Natural Gas Company had connected or was connected to every well that was a commercial well, other than the one well in 29-4, which is south of the temporary pipeline there, is that correct?

A Yes, sir. El Paso or Pacific is connected to --

Q Yes. Now, how did you arrive at what you classify or call a commercial well?

A I didn't.

Q Who did?

A That is a matter that is decided -- well, as far as El Paso is concerned, it's as a matter of normal routine, it is generally decided in the Farmington office. If there is a question about it, it's put up to management, and by management I mean maybe the Division Operating Manager or something like that.

Q How were you able to reach that conclusion, if you



don't know what a commercial well is?

A Well, let me put it this way. All the wells completed in the Mesaverde that had shows of gas sufficient to justify any more expenditure on them are connected.

Q Are you acquainted, or do you have with you the detailed completion data on these wells other than what you presented in Exhibits 2-B and 2-C?

A No, sir, I don't have them with me. I have a little more than I have on 2-A and 2-C in these sheets.

Q Do you know what the presently accepted completion procedures are in the Mesaverde wells in this pool?

A In a general way, yes, sir.

Q How are they normally completed, the new wells?

A The new well is normally drilled, I believe they're drilled to just above the top of the Pictured Cliffs with mud, and from the top of the Pictured Cliffs down with gas. After setting casing, they perforate and ordinarily fracture the formation with oil or water and sand, and in some instances they just use water, some instances they use combinations.

Q But they do selectively perforate and frac in the Mesaverde portion of the formation, do they not?

A Yes, sir.

Q Do you know whether these wells to which you have referred as apparently being non-commercial wells were completed in that manner?



A I know as to the wells which have been fracked in these units. I don't know which ones you are referring to now.

Q Let's refer to some in 29-4, which I believe is your Exhibit 2 -- let's refer to some in 28-4, which is your 2-B, Mr. Rainey.

A All right, sir.

Q Let's refer to your 3-14 well --

A Yes, sir.

Q -- in Section 14.

A Yes, sir.

Q Apparently that well, according to the remarks on your Exhibit 2-B, was never fracked, certainly --

A No, sir, according to my information it encountered water in that well and fracking would probably have not done anything but increase water production.

Q Was it an open hole completion?

A I don't know, Mr. Campbell. I don't have the information with me.

Q It was drilled back in 1953?

A Yes, sir.

Q At that time they weren't following the same procedure generally as they are now, were they?

A I think in general they have always cased those Mesaverde completions.

Q You don't have the data on whether this one was an



open hole completion or not?

A No, sir.

Q Whether it was perforated selectively, or the water came into the hole by virtue of an open hole completion, is that correct?

A As I say, I don't have the specific information. Just a minute, maybe I do have.

Q In any event --

A I didn't know we were going to delve into the well completions on this thing. I don't believe I brought the records.

Q I'm delving into them because you did in your well completion data sheet that you introduced in evidence here.

A Yes.

Q In any event, the Well No. 3-14 has not been fracked?

A No, sir.

Q And the casing, there's no indication in your records of where it was perforated or anything like that?

A Not the records I have with me, no, sir. That well has been plugged back to the Pictured Cliffs at the present time. It was officially plugged and abandoned in the Mesaverde.

Q Now let's refer to some of the wells in your Exhibit 2-C.

A All right, sir.

Q In 29-4, take Well 5-7 in Section 5.

A All right, sir.

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Q It appears that that well was drilled by Pan American. Do you have any well completion data on that?

A Our information on that particular well is fairly sketchy. The notation I have here, and I think this is about the extent of it, actually, this well was drilled by Pan American and completed in October, '53; was shot in the Mesaverde and gas was too small to measure.

Q You do not know whether that well apparently has not been fracked, either?

A It has not been fracked, I do know that.

Q It is carried as temporarily abandoned, so apparently it has not been plugged?

A I think the reason for that is the possibility of Pictured Cliffs production. As I testified yesterday, 7-8 in Section 8 of 29-4 is a Pictured Cliffs-Mesaverde dual completion. I think it is carried as temporarily abandoned, as possible plug-back to the Pictured Cliffs some day.

Q Do you have an opinion as to, if that well were fracked as is the practice presently being followed in the Mesaverde Pool up there --

MR. VERITY: Just a minute, please. My understanding of the Commission's ruling was that this hearing was to be confined to ratable take, and it seems to me when we start delving into the method of completion of these wells that we're getting outside the scope that the Commission laid down as to the rules



that this hearing would be confined to.

I therefore object to this question, and actually move that these recent questions, these last three questions and the answers be stricken.

MR. CAMPBELL: Let me explain my basis for asking these questions. In the first place, this witness quite obviously, it seems to me, attempted to leave the impression that these wells with which we are concerned about the amount of gas that's been taken with relation to their deliverability, are situated in a poor area of the field; and the principal reason they haven't taken more gas is because the wells don't have the ability or capacity to produce it.

That seems to me-- to me, it throws into evidence directly in cross examination the method of determining whether or not these are in fact poor wells or whether they are poorly completed wells; but more important than that, the question has been permitted here by the Commission as to whether or not there are unconnected wells, and this witness has testified in some detail and has offered evidence to show what they did with all these wells, and has reached the conclusion that the wells that aren't connected, with one exception, are all non-commercial wells.

The only way we can determine as to whether that is correct and whether they are entitled to a connection is to determine what a commercial well is and whether, if these wells had been completed properly or were reworked, they would be



commercial wells and entitled to connections.

MR. HOWELL: If the Commission please, El Paso Natural Gas Company joins in Mr. Verity's motion, and I think the last sentence of Mr. Campbell's is good ground for granting our motion and striking any further testimony along this line, because it certainly is not the function of this Commission to determine what an operator should do in the drilling of a well.

The testimony that has been introduced has been introduced with reference to wells that were not connected, is the status at which those wells exist.

The Commission has already ruled that it's not going into the determination of whether the individual operator should spend his money to frack a well, or whether he should shoot it, or what techniques he should use in recompletion or reworking.

We believe the motion is well taken, and wish to join in it.

MR. VERITY: Yes, if the Commission please, we think that the cross examination as to whether or not the present status of these wells is commercial or non-commercial would be proper, but to go back and question about how they arrived at their present status, we think is improper, and that's where these questions are directed.

MR. PORTER: The Commission will rule that questions based on this exhibit or the series of exhibits which refer to the present status of a well, or to the history of a well, are



in order as long as we don't try to conjecture as to what should have been done or what would have happened if such and such had been done.

MR. VERITY: Then if I understand the Commission, then this last question is improper.

MR. PORTER: What was the last question?

MR. CAMPBELL: I will withdraw the question.

Q (By Mr. Campbell) Mr. Rainey, referring to your Exhibits 2-B and 2-C, have any of the wells which were drilled to the Mesaverde formation listed on those two exhibits --

A Yes, sir.

Q -- which are not presently connected --

A Yes, sir.

Q -- been fracked?

A Yes, sir.

Q Which ones?

A In 29 and 4, Well No. 8-34 in the Northeast Quarter of Section 34, 29, and 4. That well in both the Mesaverde and the Pictured Cliffs were heavily fracked; the Mesaverde made only 253 MCF on gauge and blew a heavy spray of water the entire time I was trying to test it, in trying to test it.

Just a minute, I'll have to go through this and see what I can -- Well No. 9-3 in the Northwest Quarter of Section 3, 29, and 4, was fracked in the Mesaverde, heavily fracked in the Mesaverde in 1956. The well died in four minutes and all attempts



to make the thing produce failed.

Well No. 13-29 in the Northeast Quarter of Section 29, 29, and 4, was heavily fracked in all intervals of the Mesaverde and gauged only 365 MCF with a heavy spray of water, and that well is officially plugged and abandoned.

In 29 and 4 --

Q Well 24-26, is that the only one? It's the only one that appears on here.

A That's my recollection, that's the only one that has been fracked; that was fracked in every interval, at every interval on the log.

I might at this point say that El Paso has returned 24 and 25 to General American from whom they obtained the original farm out and Pacific Northwest has dropped 14-15, 22-23, 26-27, 34-35, in Township 28 North, Range 4 West, and returned those to Phillips Petroleum Company.

The area is completely non-productive in the opinion of both companies. We have released the acreage.

Q With the exception of the wells that you referred to then, your answer would be that the wells otherwise mentioned in the Mesaverde but not connected have not been fracked, is that correct?

A Yes, sir.

Q You do not have information with you with regard -- That's all on that point. Now, I notice in your Exhibits 2-B and



2-C, Mr. Rainey, that several of the wells were connected periods ranging from two to three years after their completion?

A Yes, sir.

Q As I understood you, the first actual connection into this area was in October, 1954?

A That's correct.

Q I notice that the well 8-36, for example, was completed in December of 1955?

A Yes, sir.

Q And was not connected until December, 1957?

A Yes, sir.

Q Do you know the reason for that?

A Generally, I don't know the specific decision that was made. You will notice the 8-36 is in the Southeast corner of Unit 28 and 4. It's my recollection that until about 1956 or '57 there was no line that went out that far. It would have been a matter of extending the lines five or six miles to pick up a well of relatively low deliverability, and until the lines were extended for other production in the area, it was not economically feasible to put a line down to pick the well up.

Q What is the situation, if you know, with regard to Well 5-32 in 32, 28, 4, which was completed in September, 1954, and connected in August, 1957?

A That well is connected to Pacific's system, and I believe August, 1957, is when the Pacific system went into that

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area. Let me check something just a minute. I don't find a first delivery on any wells connected to Pacific's system prior to August of 1957, so I presume, and I'm sure, Mr. Campbell, you can confirm it if necessary, that that is when Pacific's system went in there.

At that time the situation was such that the El Paso did not feel it feasible to extend the lines in that area to pick up some of the wells.

Q I refer to Well 1-30, which was completed in September, 1953, and connected in May of 1956. Do you know the situation with regard to that well connected to El Paso Natural Gas Company system?

A Yes, sir, I am reasonably sure of that well. The well had an initial potential of only 428 MCF. As you notice, it will take a line running from the North Half of Section 18, 28, and 4, of approximately two miles or two and a half miles to pick up that well, until the No. 14-31 was drilled with a little bit higher initial potential, it was not felt justified to go two and a half miles with a line to pick up a well that had a potential of only 428 MCF.

That well at the present time, as I recall, is only delivering approximately, only delivering 10 MCF into the line.

Q You have made frequent references, Mr. Rainey, to the apparently poor producing capacities of at least some of the wells in this area?



A Yes, sir.

Q Have you made any study of the Blanco-Mesaverde Pool in general to determine what the ranges of deliverability may be in that Pool?

A Not recently. I know of my own knowledge as to the individual wells, it ranges from in the order of wells like these out here to upwards of, some of the ones you had on your lists yesterday of 15 to 20 million deliverability.

Q Would you say that the majority of the wells in the Pool have a deliverability of 500 MCF or less?

A No, sir, my recollection of the last average I have seen is that the average is about 500.

Q I wasn't referring to the average. I was referring to individual wells, and the number of the wells that might be within a deliverability range.

A I don't know as to that, Mr. Campbell. As I say, my personal knowledge of the range of deliverabilities in the whole field is about two or three years old, as to averages on the thing, I don't know.

Q In this particular area, you have ranges from almost zero up to, I believe the highest one's in the neighborhood of 1680 MCF, isn't that correct?

A Yes, sir.

Q That is not particularly unusual in the Blanco-Mesaverde Pool to have those wide ranges of deliverability in a



general area?

A No, sir, not a bit.

Q It doesn't necessarily mean that this is a poor area compared to other areas in the Pool, does it?

A That in itself doesn't, no, sir. The rapid decline of the deliverabilities in general in this area indicates to me it's a very poor area. Wells in this area, all the wells in this area have declined very rapidly, as Mr. Birdseye pointed out. Most of them have only been on the line a very short period of time.

Q Yesterday you referred to the El Paso 29-7 San Juan Unit Well 52-H?

A Yes.

Q That we had used for comparative purposes?

A Yes, sir.

Q I believe you testified that between the 1957 deliverability test and the 1958 deliverability test, there had been a decline from 2359 MCF to 1358 MCF?

A Yes, sir.

Q That well is not situated in this area, is it?

A Not in the immediate area, no, sir.

Q So that condition is not necessarily confined to any particular area in the Pool, is it?

A No, sir. However, you can find other areas where -- if you start picking out specific areas, you will find other areas where the deliverability declines in the order of five to ten



percent in a year.

Q That is correct, but the fact that there has been a deliverability decline in wells in this area does not necessarily mean that this is an area of poorer quality than other areas of the Pool, and therefore shouldn't produce as much?

A Yes, I consider the 29-7-52 Well a poor well if it has declined fifty percent in the year.

Q As I say, there are other wells in the Pool that are declining in the same fashion?

A Yes, sir. If you pick individual wells, I am sure you can find any set of conditions that you want to find.

Q You have made reference to your -- in your testimony I believe you called it from the actual ability to produce?

A From the state deliverability test. Actually it is deliverability on a day-to-day basis.

Q Yes, into the line?

A Yes.

Q So it is deliverability depending on the nature of the well?

A That is correct.

Q I believe in this situation you have referred to the large amount of liquids that are apparently present in some of these wells?

A Yes, that is true.

Q And the requirements necessary for the disposing of



the liquids in order to improve the well's producing capacity?

A I don't know what you mean by "disposing". You mean unload them out of the well?

Q Spray them up, whatever you called it.

A Right.

Q Putting intermitters on, various methods of permitting the well to produce the gas that's there.

A Yes, sir.

Q Who controls that, that method of producing the well?

A The blowing of the well, you mean?

Q Yes.

A In this instance El Paso Natural Gas does.

Q And the amount of liquid in the well and its capacity to produce again depends, doesn't it, upon the method of completion of the well, to some extent?

A To some extent, yes, sir. There are liquids in some of the best wells in the Basin. There's just a liquid condition in the Basin in some areas.

The completion of the well is not controlling, I agree with you to some extent. It has something to do with it, with the liquids.

Q What I'm getting at, Mr. Rainey, is this. As you are aware, our analysis of what we consider to be discrimination against some of the wells in this area is based upon a comparison of deliverabilities to actual production over a period of some



eighteen months, '58 and the first six months of 1959.

A Yes, sir.

Q You have apparently refused to consider that deliverability is the proper factor to use, you wish to use this ability to produce?

A No.

Q Is that what you prefer to make your comparisons on?

A No, excuse me. No, deliverability is not a comparison. The only thing I have quarreled with in your analysis of the situation is your complete, or your witness's complete and utter disregard of the proration status of that well, and you have compared deliverability to solely the current production.

Q All right. Let's compare it on the basis of some of the ones that you have discussed, if I understand you correctly.

A Yes, sir.

Q Taking the list that we have offered in evidence here, and referring to your testimony in connection with it, I call your attention again to Well 9-32.

A Yes, sir.

Q Which is the well that was referred to in Mr. Birdseye's testimony.

A Yes.

Q Referring you particularly to a comparison between that well and the Dawson well.

A Yes, sir.

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Q Now, I believe as I understood you, you testified that at the beginning of 1958 both of those wells came on the schedule with an overproduced status?

A No, sir.

Q Well --

A The 9-32 Well did not come on until July, 1958. Well, excuse me, it had an allowable in July, 1958, it had some smattering of production in December, '57, again in March, '58. Its first substantial production was in May, 1958. The Dawson well was on the line essentially five months longer than the 9-32.

Q You showed a figure of 15,195 MCF overproduced. Was that at the end of '58?

A That was at the end of '58.

Q What was the status of the Dawson?

A 11,989 MCF overproduced.

Q So they came into that period essentially in the same condition?

A Yes, sir.

Q They have essentially the same deliverability, do they not?

A Yes, sir.

Q Well, you show a production, we show a production from the Dawson well through July, 1959, of 109,206 MCF.

A That's correct.

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Q And a production from 9-32 Well for the same period of time of 58,186 MCF? How do you account for that?

A Very simply, Mr. Campbell. The Dawson is currently overproduced 1.9 million cubic feet; however, it has balanced, it was underproduced during the proration period, which is in line with the permitted production, in line with the allowables.

The 9-32 Well, it's true the well is 22 million underproduced as of the end of August. That well has likewise been in balance during the proration period, and the well as of the end of July, after the redistribution to it, was 31 million underproduced.

It's some nine million less underproduced in one month than it was a month ago. To my way of thinking, very probably and almost certainly that well will get in balance in the proration period, unless it blows up or something.

Q Do you intend to get that well in balance during this proration period?

A We make every effort to get every well in balance in every proration period. I don't say we accomplish that fact, but we make every effort.

Q The proof of the pudding is in the production over a period of time sufficient to permit balances, is it not?

A That's correct. If you will notice, Mr. Campbell, the 9-32 Well has had an allowable of 118,951 MCF. The Dawson had an allowable of 119,305 MCF, which is almost identical. The



difference in their production is almost exactly the difference in their current status.

Q I didn't understand what your situation was with regard to the Kelly Well. Now will you proceed to that one?

A Yes, sir.

Q It came in in the end of 1958 with an overproduced status, didn't it?

A Yes, sir. That well was 27,775 MCF overproduced at the beginning of '58.

Q The same situation as the 9-32 Well?

A Well, at the end of '58 --

Q Yes, sir.

A -- it was 35,956 overproduced, yes, sir. At the present time the Dawson well is 3,021 MCF overproduced. At the end of July the well was underproduced.

MR. SETH: That's the Kelly.

A I beg your pardon, the Kelly Federal 3-A.

Q I see, underproduced.

A It was underproduced as of the end of July. It is now 9,000 overproduced.

Q 1959?

A Yes.

Q At the end of July, it had produced 124,126 MCF, at the end of July it had produced?

A In '59?



Q Yes.

A No, sir, I have it 84,207 MCF.

Q That is a discrepancy of figures of some sort.

A I have the individual months' production and why the well was off, it has only produced fifty-five days this year, and twenty-one days was for test.

Q That is a clear case of difference in figures. We obtained the figures from the records of the Commission.

A That's where these came from.

Q If it were underproduced at the end of July and had produced that amount of gas, as compared with the 9-32 Well's production of 58,156 MCF, there would have been a discrepancy there between the two wells?

A Yes, sir, very definitely. This is the reason I think my figures are correct and must be correct, Mr. Campbell, that well has been assigned 117,000 MCF allowable for the year 1959. It went into the year 35,000 MCF overproduced and it's now, as of the end of August, 3,000 MCF overproduced.

The difference between 117,000 MCF allowable and 84,000 production is approximately 32,000 MCF, which is the amount of gas that it has reduced its production by.

Q The Commission, I'm sure, can determine what the correct figure is there --

A Yes.

Q -- and make that determination based on the exhibit



or the correct figure that you have given, if it is the correct one.

A - Yes, sir.

Q Now, as I understood your testimony about the actual producing ability of these wells --

A Yes, sir.

Q -- you apparently feel that the wells are producing in accordance with the schedules at their maximum, other than --

A In accordance with their allowables, not at their maximum.

Q There are only three marginal wells?

A You mean in this area?

Q Yes.

A Excuse me, yes, sir.

Q There are three marginal wells out of the group, are there not?

A Yes, sir, and there's a number of wells in the group that are, well, I'll say a number, there are three or four of the wells in the group that are substantially overproduced. Those wells are not producing at the maximum.

Q How have you been able to take more gas this year than you did last year in the same period from these wells if they're such poor wells?

A I don't know that I would accept that as a general statement, Mr. Campbell. There may be some wells that we have taken more gas out of this year.

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Q The checks are bigger.

A Well, that's obvious, then, we have been taking more gas.

Q That's our measure of the takes, Mr. Rainey.

A In some instances, I'll put it this way, some of these wells that are capable of producing any substantial volumes of gas, a lot of them were overproduced in 1958, and the production was curtailed. Those wells were brought into balance as of the end of 1958 and are possibly underproduced now, and we may be taking more gas from them at the present time than we did during the periods in 1958 in an effort to make up the underproduction.

Q Do you have the current status of the wells at this time?

A Yes, sir.

Q Would you please give that to me?

A Every one of them?

Q Of the ones other than the marginal wells, yes.

A Well, the marginal wells have no status.

Q I said, other than the marginal wells.

A I can't give you anything on that. The 7-8 in 29-4 as of the end of August was 8.9 million underproduced. Incidentally, all this information is readily available in the October proration schedule.

The 14-31 in 29-4 is 5.4 million underproduced. Is that sufficient, or do you want the exact figure?



Q Yes.

A The 5-32, which is the well I referred to yesterday as needing to be marginal, is 25 million, 25.3 million underproduced. That's in Unit 28-4.

The 8-36 in 28-4 is 14.3 million underproduced. The 9-32 in 28-4 is 22.1 million underproduced. The 11-31 in 28-4 is 17.5 million underproduced. The 12-33 in 28-4 is 8.2 million underproduced. The 13-24 is 14.3 million underproduced.

The 14-29 in 28-4 is 19.6 million underproduced. The 15-29 in 28-4 is 11.9 million overproduced. The 16-30 in 28-4 is 5.9 million overproduced. The 17-20 in 28-4 is 13.3 million underproduced. The 18-31 in 28-4 is 17.7 overproduced, 17.7 million overproduced.

Q It's quite apparent that there is considerably more underproduction than overproduction?

A Yes, and that's obviously why we have been taking more production, because the wells are underproduced and we are attempting to get them in balance.

Q This underproduction was accumulated at the end of this period?

A Well, that underproduction has maybe accrued during all of this year, or portions of 1958. I don't know without going back and going through them again.

Q You will have to make up the underproduction during the last six months of the proration period?

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A Yes, sir.

Q Which ends February 1st of '60, will you not?

A Yes, sir. And we will make every effort to do so, I assure you.

Q Do you have any records on how much underproduction has previously been cancelled on these two township units?

A I think I have got some summaries on that, Mr. Campbell. I have the records on the individual well sheets, but I'm not positive that I have got a summary of it.

Wait a minute, yesterday I read the figures, yes, sir. The total cancellation through the end of July, 1959, which does not include the July cancellation period --

Q Yes.

A -- according to the figures I have is 85,166 MCF, with a redistribution of 70,961 MCF, for a net loss to these wells of 14,205 MCF. I might point out that of that 85 million that was cancelled, 33 million of it was on the 5-32, which I have indicated should have been made marginal some time ago.

Q Is it the only well that you consider should be properly classified as marginal?

A Let me look at the 7-8 here. I think that's probably the only one that we could without any hesitation say should be marginal.

Some of the others have been assigned in some months allowables that they could not produce, but not consistently as

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is the case in 5-32.

Q So all the rest of the underproduction, other than 5, has been due to some other reason than the inability of the well to produce it?

A No, sir, I didn't say that.

Q What is it?

A It is probably the inability of the well to produce it. Before a well can be classified as marginal, it has to be incapable of making either the average allowable for six months' proration period, which is, as I understand it, the general policy that the Commission is following right now; or the policy that was followed previously is it had to be unable to make its allowable each and every month of a proration period before it was classified marginal.

In other words, if it can make its allowable in any one month, it cannot be classified as marginal.

Consequently, in some months of very low demand, very near any well in the field is capable of producing that month's allowable; consequently, the well is not classified as marginal.

Many of these wells are not capable of making all the allowable that is always assigned to them, and in some months they can make it and overproduce it; in some months they are incapable of making the allowable in that particular month. I think the large portion of the allowable that was cancelled is because of that fact.

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Q A lot of overproduction that has accumulated, you think is also due to that fact?

A Yes. I might point out that there are only three wells that had cancelled during the year, the 5-32 I have mentioned; the 12-33 in 28-4, and the 7-8 in 29 and 4. There are only three wells making up the total of the 85,000 MCF that was cancelled.

Q Then you believe that some of these wells are in fact marginal wells?

A I think in some months this should be produced as marginal well, I mean should be classed as marginal wells because of the operation of the rule and don't misunderstand me, I'm not quarreling with the rule, I think it's a good one, but because of the operation of the rule some wells are incapable of making their allowable in some months, but they are not classified as marginal.

Q If the wells are unable to make it, how can you make up the underproduction?

A In some months the allowable is low enough that they are capable of overproducing. Let's take the 7-8, for instance. In the month of January, 1959, that well was assigned 8,438 MCF allowable. It's just flat not capable of producing that kind of allowables, so it underproduced that month by about 4,000 MCF.

In the month of February it was assigned an allowable of 4,730 MCF. It was capable of producing that and overproducing

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it some. The point I'm making is that on a well in which there are months in which it is capable of producing its allowable, it will not be classified as marginal because a well is not classified marginal one month and non-marginal the next.

Once it's classified marginal, it stays that way until conditions change to warrant changing it back to non-marginal. That in some months the wells cannot make their allowable, and that is the point I am making, in some months they can make it and overproduce it.

MR. CAMPBELL: I believe that's all I have.

MR. PORTER: Does anyone have a question? Mr. Verity.

MR. VERITY: I have a few questions, your Honor.

BY MR. VERITY:

Q Mr. Rainey, Southern Union Gas has Mesaverde wells in this area, do they not?

A I do not know as to this particular area. They have quite a few wells in the Blanco-Mesaverde Pool.

Q In this Pool that we're talking about?

A Yes.

Q They have a gathering system on these wells and then produce this gas into your trunk line, isn't that correct?

A Some portions of it, yes, sir.

Q In those instances is there any effort made, as between El Paso and Southern Union, to balance out the underages and overages with regard to these wells and your wells over the



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entire Pool without regard to ownership?

A Yes, sir, there is in existence, and I don't have a copy of it with me, but I know in general as to its terms -- there is in existence a so-called proration agreement between El Paso and Southern Union, in which we have entered into this agreement to enable us to attempt to keep the field as a whole in as near balance as possible; and since the market demand factor, the load factor for our system sometimes differs from the load factor on the Southern Union system, the allowable mechanism results in sometimes Southern Union being assigned too much allowable and in the other instances too little allowable to meet their demand; and because the total demand is allocated over the whole field, why, in months in which they got an allowable too much to meet their demand, why we sometimes get an allowable a little too little to meet our demand.

Consequently, we buy certain portions of gas from Southern Union to help keep the field in as near balance as possible. Also we have a number of wells which are contracted to Southern Union, which are connected to our system, and Southern Union has a number of wells which are contracted to us or owned by us which are connected to their system.

We furnish each other a monthly report of the condition of those wells as to their proration status, and we have meetings with Southern Union about every, oh, I would say couple or three months, to discuss field operational problems up here,



and to see if there is any way in which we are not properly cooperating with each other, but to the best of our endeavor, we try to keep the whole field in as close balance as possible.

Q And Southern Union works with you in this regard to obtain the same end?

A Yes.

Q Without regard to ownership of wells?

A Yes, sir. We furnish each other information in that regard.

MR. VERITY: That's all.

MR. PORTER: Anyone else have a question of Mr. Rainey?

MR. PAYNE: Yes, sir.

MR. PORTER: Mr. Payne.

BY MR. PAYNE:

Q Mr. Rainey, what you call the daily average producing ability of the well --

A Yes, sir.

Q -- is that not just the ability of the well to produce, well, just take a twenty-four hour period?

A Yes, sir.

Q Isn't that just the ability of the well to produce during that twenty-four hour period against the line pressure that was present during that twenty-four hour period?

A Yes, sir. The only reason that I have used the daily average producing ability so frequently in this thing is that there



has been considerable testimony as to the relationship between the productivity of the wells and the line pressures against which they are producing. In my opinion there is no way in which you can relate line pressure to productivity without determining the daily average producing ability of that well.

Q Well, now, Mr. Rainey, isn't it possible that you could have taken another twenty-four hour period where the line pressure was a thousand pounds, hypothetical --

A Yes, sir.

Q -- so that the well was actually capable under your daily producing ability figure, the well would be capable of producing zero?

A Yes, sir.

Q And yet the deliverability of the well might be 600 MCF per day?

A That's absolutely correct.

MR. PAYNE: That's all. Thank you.

MR. PORTER: Does anyone else have a question of Mr. Rainey? Mr. Utz.

BY MR. UTZ:

Q Going into this actual daily average producing ability a little bit more, referring to Exhibit 3-A --

A Just a second, please. Yes, sir.

Q It's my understanding that in arriving at your actual daily average producing ability, let's say for the 28-4 Unit --



A Yes, sir.

Q -- that you have divided the number of days on which the well was actually producing into the line by the total production of the unit for that period?

A Yes, sir. I'm pretty sure that's correct. Let me check to be positive. Yes, sir, Mr. Mason did the actual computations on the thing. That's what was done.

Q Did you, in days produced into the line, did that mean the number of days the valve was open, or did you disregard the days the well was frozen off?

A I may have misunderstood you, Mr. Utz. That was days of actual measurable production. It was not the days it was produced into the line. This is the actual producing ability of the well, when it was producing.

Q So if the well was frozen off --

A That day wasn't added in.

Q That's right. Then actually the caption of that line could properly be, more properly, "Daily Average Producing Ability at Actual Line Pressure", was it not?

A Yes, that's what it was intended to mean.

MR. CAMPBELL: What was the statement?

Q (By Mr. Utz) I said, the caption of the column that he has captioned "Actual Daily Average Producing Ability" could more properly be "Daily Average Producing Ability at Actual Line Pressures."

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A I don't know how else you are going to determine daily actual producing ability unless you take the pressure of the line at that time. You can calculate it, of course, to any pressure you want to, but this is as you say at existing line pressure.

Q In regard to some one of Mr. Campbell's questions, I believe you said that there were only two compressor stations for Blanco-Mesaverde Pool?

A No, sir. To my knowledge the only place that Blanco-Mesaverde gas goes is to our Blanco Plant, which is a gasoline plant and compressor station, and to the San Juan River Plant, which is --

MR. PORTER: Mr. Rainey, I believe someone wants to correct your statement.

A Well, they are going to have me add in the Pacific Northwest Ignatio Plant, which is the other place gas goes.

Q (By Mr. Utz) What is the Gobernador Plant?

A That's merely a field station.

Q No compressor station?

A No.

Q The Lindreth Plant?

A It is a plant. It is a compressor station.

Q For Pictured Cliffs gas?

A Yes.

Q There are no field compressor stations in the field?



A Not in the Blanco-Mesaverde, no, sir.

Q They are all in the Pictured Cliff?

A Yes, sir.

MR. UTZ: That's all.

MR. PORTER: Any further questions? Mr. Payne.

BY MR. PAYNE:

Q Mr. Rainey, would it be -- .

A Yes.

Q First, I don't know enough about the line pressures to make myself clear. Would it be possible to produce all the low deliverability wells on the same day thereby lowering your pipeline pressures?

A Physically it would be possible, yes, sir, but --

Q Chiefly it would be very difficult?

A Not from the administrative standpoint. Our low deliverability wells have <sup>not</sup> enough capacity to meet our market demand. That would be the main objection to try to do that.

Q That's when you feel that it -- when the demand is high, you have to produce the high deliverability wells at that time?

A Yes, the low deliverability wells are not capable of producing enough gas to make it.

Q If you had to throw some high deliverability wells, then you are right back where you are?

A Yes.



Q The line pressure would be higher again?

A Yes, sir.

MR. PORTER: Mr. Nutter.

BY MR. NUTTER:

Q Does this inclement weather that you mentioned in your testimony occur very often up there, which prevents the switchers from getting out into the field?

A All of my knowledge of that, Mr. Nutter, is from discussions with the field people, and from a pretty detailed examination of the switchers' logs.

As to what you mean, does it occur frequently in the winter months, I would say yes, sometimes, and particularly in this area that we're discussing here, these hills are impassable in wet weather as well as snow. If you get a rainy season up there in the summertime you can't get up to the wells.

They tell a story in the Farmington office that is true, it is true but they laugh about it. One of the fields they call Valdez here, which is about here, Mr. Logan will testify to it later, that during the hunting season in 1957, I believe it was, they actually had to take a caterpillar out there and pull cars down that hill.

Q Does El Paso Natural Gas Company have any helicopters in its air force?

A Not in our air force, no, sir. We have rented them a couple of times.

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Q You mentioned them, that you had rented them. I wondered if you had rented them in February, 1958, that you mentioned.

A I say about February. It was in that winter. My recollection, it was in February. To my knowledge, no, sir, Mr. Logan did.

Q And that was to go out and change the charts?

A Well, to switch the wells, when it was impossible to get into the area unless by air. They had tried horseback, and the horses couldn't get in.

Q That's the only occasion that you know of?

A That I know of offhand.

MR. PORTER: Does anyone else have a question?

MR. HOWELL: We would like to introduce El Paso's Exhibits that Mr. Rainey testified to, I believe that's Exhibits 1, 2-A, 2-B, 2-C, 3-A, 3-B, and 3-C. I think that's all, is it not?

A Yes.

MR. PORTER: Without objection these exhibits will be admitted. The witness will be excused.

(Witness excused.)

MR. PORTER: We'll take a short break.

(Whereupon a short recess was taken.)

MR. PORTER: The hearing will come to order.

MR. HOWELL: Mr. Logan, will you take the stand, please?



(El Paso's Exhibits 4-A, 4-B, 4-C, 4-D, 4-E, and 5 marked for identification.)

H. P. LOGAN

called as a witness, having been first duly sworn on oath, testified as follows:

DIRECT EXAMINATION

BY MR. HOWELL:

Q Will you state your name for the record?

A H. P. Logan.

Q Where do you live, Mr. Logan?

A Farmington, New Mexico.

Q What is your position with El Paso Natural Gas Company?

A I am Assistant Division Superintendent, San Juan Division.

Q Now, are you the man who has charge and supervision of the operation of the gathering system and the switching of wells in the Blanco-Mesaverde Pool?

A Yes, sir, supervisory, naturally.

Q Just outline to the Commission what the organization is which El Paso has to accomplish the physical work of switching wells off and on in the San Juan Basin.

A All right, sir. We have our field broken up into eleven different geographical areas so that the wells in each area, which include forty-five, about forty-five, forty to forty-five Mesaverde wells and ninety, ninety-five Pictured Cliffs wells and around seventy wells a mixture of the two, are operated



diligently.

The Mesaverde wells are visited every day, providing we can with all efforts get to them. The Pictured Cliffs wells we attempt to visit every other day.

The San Juan Dispatching Department is composed of a Chief Dispatcher, the dispatching people under him. There is enough so you have a twenty-four hour operation; and a Proration Department composed of five people to keep records, plus three men, so that you have somebody who can watch the wells all the time, depending on the well status report as sent out by the Proration Department in El Paso.

Q Now that group that you are testifying about is in the company's office at Farmington?

A That's in the company's office at Farmington, yes, sir. The Dispatching Department, of course, receives their orders on load, and by load I mean the quantity of gas that is required to satisfy requirements of the customers, fluctuates back and forth as you probably all know, depending on the weather in remote areas where our purchasers consume the gas.

The El Paso staff dispatching, or main dispatching office is in direct contact with the purchasers of gas, our sales, in other words. They determine, depending on weather and various other conditions, how much gas is needed from our particular area. They in turn give orders whenever it is necessary, it may be hourly, it may be daily, or it may be every two days, but whenever



there is a change in load, they give an order to our field dispatching office or the San Juan Dispatching Office, of how much gas is required from that field.

The normal order in which the wells are switched, depending on this load I have defined, is governed by the -- I don't know what Mr. Rainey called the report, but we call it a well status report, it's all the same thing.

These wells, as he indicated before, are listed as marginal, underproduced, balanced, and overproduced. When we get a change in load, it may be to turn gas off, we turn -- say we had an order to turn gas on, we would go from the marginal well to the underproduced well to the balanced well to the overproduced well, and if we had an order to cut down on the gas load, we would reverse the procedure and turn off the overproduced well first, the balanced well next, the underproduced well, and the marginal well.

Q Now what records of status of wells do you have there in the Farmington office? What's your method of keeping yourself informed as to the condition of any well at a particular time, that is, whether it's on the line or off?

A We have a board that has every well connected to our system or the system we operate, which gives the status of whether the well is off or on, being drilled, or whatever condition the well may be, before it's turned on. Whenever the well is turned on, we have a board there, it's a board with a well name, the pool



it's in. It has --

Q Did you take some pictures of that?

A Yes, sir, I have some pictures here.

MR. HOWELL: We have marked as El Paso's Exhibit No. 4-A a picture, and I'll ask you to tell us what that is.

A That is the board of the Blanco-Mesaverde Pool. It's not the complete board, we have one column on this Exhibit 4-B, we have one column of the Mesaverde on that.

This shows all the Mesaverde wells tied into the El Paso system and delivering gas into El Paso's system. The tabs that you see there on the left of each column show whether the well is off or on.

Q Now, what does the picture marked El Paso's Exhibit 4-B represent?

A The exhibit marked 4-B is a Pictured Cliff system with one column of Mesaverde gas wells shown on the extreme left here. The two columns on the left show the Mesaverde portion.

Q Is the same information contained on that board with reference to each well?

A Yes, sir. All these exhibits show the status of the well, whether it's off or on, or the condition the well may be in.

Q What does 4-C show?

A 4-C is the board of the same nature which shows the same thing of Pacific Northwest Gathering System.



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Q And what does 4-D show?

A 4-D shows the Pictured Cliff and undesignated wells.

Q Now what does El Paso Exhibit 4-E show?

A It shows, this is mislabelled here. That's Blanco-Mesaverde. This is a Pictured Cliff, of the Pictured Cliff Pools in the area showing the same status of wells tied into El Paso's system.

Q Is that group of boards maintained in current status at all times?

A Yes, sir. As soon as we receive this well status report from the Proration Department of El Paso, it is changed to bring the current status up to date on the board.

Immediately -- I would like to add a little to that -- immediately when we receive these well status reports from El Paso, they are sent to the field. By the field, I mean the eleven switching areas, geographic areas, these eleven switching areas have the same type board, except it covers a much smaller area. It covers the number of runs in the geographical area that I'm talking about, the switching area.

Q Now how many people do you have in these area offices?

A Well, we have 359 people, excluding supervisory which is in the main office, directly connected to switching wells and blowing line drips and, of course, they change the meters, they change the charts on the meters every eight days.

Q Do these people, these 359, have anything at all



required of them to do, other than to change charts and switch wells on and off and take a look at any tanks, gathering tanks for liquids?

A Other than blowing liquids out of the lines, blowing the drips, the line drips; and by that, it's a reservoir to collect the liquids as they condensate out in the line, and any location freeze or anything on there, they are required to get that out.

Q You mentioned a run, what do you mean by run?

A A run, to define it, which I indicated before, a run is the number of men in an area which has forty-five wells or ninety wells, depending on whether it's Pictured Cliffs or Mesaverde wells.

Q Could you call it something like a paper boy's route?

A Yes, it's the same thing as a paper boy's route.

Q It's a group of wells that one man is supposed to cover?

A Yes, sir.

MR. PORTER: He doesn't have to collect --

A That one man is supposed to cover.

MR. PORTER: He doesn't have to collect, does he?

A He collects every other Friday.

Q (By Mr. Howell) Let's take one of the field offices up there out in the eastern end of the field, any one of them or several of them, and tell us just how many people there are connected with the field office and what they do when they get the reports from El Paso's main office as to the status of wells, as to over



or underproduction?

A Well, the procedure goes like this. As soon as we receive the well status reports, the clerk in each field office is called and told that the reports have been received. They have a material man that goes out daily from Farmington -- they have more than one material man, but a material man goes to every area daily, taking materials out that are required, auto parts and other things.

As soon as he receives notice, the clerk in the area receives notice, the material man is notified by telephone to pick up this chart and bring it to the field office. There is one area that they come after it, because it's close in. It's called the Kutz area, the clerk himself comes in daily to pick up the mail and he takes the well status report out with him as he goes back to his office.

When this report is received, they immediately check their board to see which well has changed status. It may have been underproduced and now it's overproduced; as Mr. Rainey said, it may have balanced, and depending on the load, they'll change the status on the board and then call the switcher which is on the paper route or the run, and the switcher will in turn turn on or off the well which he's been called about.

He will call the clerk back in this office which gave him the order in the first place. The clerk will in turn notify the main office to check their board again, and then the switcher

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makes a daily switching record of everything he does during the day.

This daily switching report is turned in to the clerk. He checks this against this board again, and it's sent in to the Main Office and checked against these boards. They audit the boards and then file the switching log or switching report.

Q What do you do when you find that there has been an error somewhere in which a well that should have been turned on hasn't been turned on?

A Well, that happens occasionally. As Dave mentioned, we have several wells of the same name, and you may have a new man on a run and he got it on and off, but as soon as it's discovered in the Main Office, there, it's corrected.

We have mobile radio units in all the vehicles. By vehicles, I mean a car or pickup. They can send word out by radio or by telephone, and they call back out and indicate to the clerk in the area; he in turn notifies the switcher and they make the correction.

There may be times that this is not noticed until the run is made the next day. If the foreman has not got time to go by there, it may not be noticed for several days, but every day the foreman tries to make at least a portion of his run and keep the men under his supervision going in the right direction.

Q I believe you have already testified that a switcher attempts to go by every Mesaverde well every day?

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A Yes, sir.

Q Is that seven days in the week?

A Yes, sir.

Q Now, how many runs do you have in the San Juan Basin?

A We have 72, of the total field, we have 72 runs. We have 3,707 wells; 1,220 drip tanks; 1,111 drips -- that's line drips that I defined prior to this time. We have 72 runs and we have 359 personnel; 152 vehicles and they drive a total of 6,954 miles on the average per day.

To break it down a little further, in the Gobernador area, which is in question here, we have 416 wells, 224 drip tanks, 96 drips, ten runs, 29 total men, 17 vehicles; and they average 836 miles per day to make that run, just to make each well.

Q Is there anything else about the general organization you would like to mention before we go over and have a look at the map?

A Well, I would like to follow this information through from the time we receive orders from the Dispatching Department and make the well changes according to the well status report. The information goes to the field through the switching report, and through communications, either telephone or mobile radio. The well boards are changed to conform to the latest well data information. The individual switcher, of course, gets this information, makes the changes, it goes back to the Farmington Dispatching Office, where it's audited, and then every eight days

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the measurement department collects the charts which each switcher on his run pulls, they're collected and checked and sent to El Paso that night via air.

They go to the Measurement Department; the Measurement Department integrates the charts, calculates the volumes, and sends the information to the Accounting Section and also back to the Proration Section, which they in turn make any changes of volumes that are out of status and then the report comes back to us, these three reports that Mr. Rainey has mentioned in his earlier testimony.

Q So that you get three reports a month of the status of each well, with reference to whether it's marginal, underproduced, balanced, or overproduced?

A Yes, sir.

Q And I believe you've already testified that, based upon those reports, that you attempt -- well, let me ask it this way, what wells do you give priority to on production?

A What wells?

Q Yes, what class of wells.

A Marginal.

Q Then what comes next?

A Underproduced.

Q And then?

A Balanced.

Q And then overproduced? I believe you've already testified to the sequence in which you shut the wells off?



A Yes, sir, reverse the procedure when you are turning gas off.

Q Is that same thing done on every one of those 72 runs, to the best of your ability to do it?

A Yes, sir. There are things that interfere, Mr. Rainey mentioned two, I would like to bring out one more that does interfere with our ability to do that; and he mentioned the state deliverability reports and the contract settlement reports, which is a compression or charcoal test, and there's one more we, up to this time have attempted to produce regardless of the status, each well once a month because of lease expiration. Some leases are predicated on the fact that you have to have production out of them every month.

Q And you've attempted to protect the operator, whether it be us or somebody else, against any possible lease cancellation, by attempting to give each well some production each month?

A Yes, sir.

Q Do you have any difficulty with weather conditions that prevent you from carrying out that schedule exactly as you would like to carry it out?

A Yes, sir, we certainly do.

Q Will you go to the board and refer to a plat there which is marked El Paso's Exhibit 5 and tell us what that is?

A That's a map of the roads in this area, which includes the sections in question in the case here, showing the roads and



the accessibility to this area.

Q Incidentally, do you know how many different runs are involved in switching in this area here?

A This is a four run.

Q These wells in the four townships that the map covers, then, are parts of four different runs?

A Yes, sir.

Q Why was it determined to have these in these different runs?

A Well, because of geographic locations; for instance, I might point out that this well here --

Q By this well here, you mean --

A -- 9-32 in 28 and 4. That well is in a box canyon. There is no relief shown here, but it is in a box canyon and to get from one of these wells over here, you have to come back to this one, it's forty miles, you can see, across from the 9-32 to the 5-32. It's 40 miles you have to drive to get to that well. It's not a mile apart there. This switcher run down on this side is separated from the others because they have some more wells down in this area.

Q So this probably is the only well in these four townships that is on this switcher's run that handles wells to the south there?

A Yes, sir.

Q And again, when we get to the north, that's probably

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on another run up in there?

A Yes, sir. We have runs one, three, five and ten. Number one run has one well on it; number two run has seven; number five run has seven; and number ten run has one well on it.

Q You have marked these roads with red and green colors. Will you please tell the Commission just what those colors mean and describe the conditions that exist there that you have marked?

A Yes, sir. These areas here where it shows a bad hill there to the north is the Valdez Hill.

Q Is that the hill that's located about on the line between the corner of the four townships?

A Yes, sir. Where they come to almost a common point there, that's the Valdez Hill there. Now in the spring, the early spring of 1958, Dave Rainey mentioned earlier in his testimony this Valdez Hill slipped off, it sloughed off and closed in the road, and it was twenty-eight days that it was impassable to get into the area. You couldn't get in at all. This road gets impassable, too. As a matter of fact, this road was washed out the day I left the office. I don't know if they have it fixed or not.

Q Let's go back to the Valdez Hill again. Do I understand you to mean that when it slid, the entire road just slid down into the canyon?

A Yes, sir.

Q There wasn't any road that anyone could pass over there for twenty-eight days?

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A Yes, sir. That's the time we sent the helicopter, one time we sent the helicopters in to get the charts. There are three areas, this being one of them, that we have done this on two or three different occasions, three, I believe.

There was one to the north called the Ignacio Area, the Gobernador, and the Jojita Area down in the Apache Indian Area. We couldn't get busses, trucks, or anything to run, so they had to send the helicopters down there to pull the charts, they were in there so long.

Q Now, Mr. Logan, you a minute ago testified and referred to another road that had washed out. Is that the road that is over to the eastern portion of the area, most of which lies in Township 29, 3?

A Yes, that's what we term the Ranger Station road. It comes in on the back side of a steep, or a hogback that goes down through there. It goes back on the east side of that.

Q I see you have another road marked with a bad hill down at the lower part of the plat there.

A Yes.

Q Right at the southeastern corner of the portion of 28,5 shown on this map?

A Yes, that's called the Arnold Ranch road. I guess it's local terminology, but it's called Arnold Ranch Road. It's impassable. As a matter of fact, in dry weather there's points on both hills that if you ever stop your car and pickup, you have



to back up and go down again with enough momentum to carry you over.

By bad weather, I mean wet weather, whether it be the wintertime, summer, or spring, depending on whether it's wet. That makes them impassable. All the areas outlined in red are the same way. The ones in green are very bad areas. They're passable except when there is ice on the road, usually caused during the snowy season. This road here, you have to go through this road --

Q By this road here, you mean the road down in 28-5?

A Yes, sir. The one that shows the bad hill in the southeast corner of 28 and 5, you have to come down this road to get to these wells over here, because there's another canyon that isolates this thing over here, you have to come this way to get into these wells.

Q During the time that this road is impassable, the only way that one could get to those wells is by air?

A By air or foot or horseback, if you can go. Sometimes you can't go that way.

Q When is the period, normally, of greatest demand for gas?

A In the wintertime.

Q When is the period when you have the most difficulty with ice and snow on the road?

A In the wintertime.

Q A little unfortunate from the operating standpoint,

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those two periods coincide, isn't it?

A Yes, sir, it certainly is.

MR. HOWELL: I think that's all the questions I have. I would like, before I pass, I would like to offer in evidence El Paso's Exhibits 4-A, B, C, 4-D, 4-E, and Exhibit 5.

MR. CAMPBELL: Some don't refer to the Blanco-Mesaverde Pool, but since you have gone to the trouble, since you have taken all these pictures, we won't object.

MR. PORTER: The exhibits will be admitted. Any questions? Mr. Campbell.

CROSS EXAMINATION

BY MR. CAMPBELL:

Q Mr. Logan, you heard Mr. Rainey testify about how sorry some of our wells, or some of the wells in which we have an interest, are?

A Yes, sir.

Q They have all got a button on the board?

A Yes, sir.

Q They aren't that bad. You have checked that to be sure they are all on there?

A Yes, sir, they're on there.

Q How much actual difficulty have you experienced in the past eighteen months, say, with getting in to turn these wells on and off, and to handle, take care of the intermitters and blow the liquids and so forth? Have you actually experienced a lot of



difficulty in that regard?

A Yes, sir. Well, I can say any winter and not be wrong. There was one winter in '56 or '55 when we didn't have too much moisture in the field. Other than that, we have had moisture every winter, usually from the beginning onset of winter, and depending on the year whether it was late spring.

Q You heard the testimony that Mr. Rainey gave with regard to the present status of these wells?

A Yes, sir.

Q Which indicates that a considerable number of them are underproduced?

A Yes.

Q And that the overall status of the wells would be an underproduced condition as to all the wells, you heard that, did you not?

A What did you say in the last part now?

Q Well, a few that are overproduced, but the majority of the wells are underproduced, and the net underproduction is fairly sizeable, at this time?

A Yes, I heard that part of the testimony.

Q Do you attribute that to some extent to this physical difficulty you are talking about, of getting in and out to the wells, or not?

A I don't consider this particular part of it right now that -- no. Like I say, when we have our most problem getting in



there is in the wintertimes and periods of heavy rainfall.

Q What you are saying is this may have accumulated during that time, but you don't anticipate difficulty in meeting the problem, say, in the next proration period, assuming the wells--

A I think if it's within our power to do so, we will get the things in balance.

Q You have heard the testimony and know where the wells are, and your paper boys know where they are, I assume?

A Yes, sir, they know where they are.

Q How long has this system that you have referred to here and explained to the Commission been in effect, this overall program?

A Which part of the system?

Q Well, this system of control between the Farmington Division Office and the field and your eleven divisions, all of this general procedure of rapid control of the wells.

A Well, it changes; as we can make improvements, we do. The present system has been in effect prior to '58.

Q You mean sometime in '57 this overall program --

A Yes, sir, sometime in '57, prior to '58. I don't recall the month.

Q Of course, you feel by virtue of the installation of the program you have better control of the wells and the switching of the wells than you previously had?

A Yes, sir.

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Q Mr. Logan, I wasn't quite sure, from Mr. Rainey's testimony, is it correct that there are no compressor facilities in the Blanco-Mesaverde Pool at this time, other than the plants themselves?

A No, sir.

Q There are none?

A There could only be one reason for it, if they had a Pictured Cliff well somewhere and tied a compressor into the Mesaverde system.

Q None has been installed for the Mesaverde system?

A No, sir.

MR. CAMPBELL: I believe that's all.

MR. PORTER: Mr. Nutter? Mr. Payne.

BY MR. PAYNE:

Q Mr. Logan, I believe you testified when you received an order to cut production, you cut the overproduced wells first and then the balanced wells and then the underproduced wells and then the marginal wells?

A Yes, sir.

Q I take it from that, then, that you did find it necessary on occasion to shut off the marginal well?

A Yes, sir. Let me say this, if the load, sometimes we get a 250 million swing in a short notice, two or three hours.

Q So that perhaps it is not correct to say that the allowable for a marginal well is the ability, is its ability to



produce?

A Well, the whole thing is dependent on the load we have, of course.

Q Yes. Now if you found it necessary to cut a marginal well when pipeline pressures happen to be low, that marginal well would be hurt worse than if you cut the production of it when the pipeline pressures happen to be high?

A Would you state that again, sir?

Q Assuming you find it necessary to cut a marginal well to shut it off --

A Yes, sir.

Q -- it would be worse, would it not, if the pipeline pressures happened to be low in that area that day than it would be hurt if the pipeline pressures happened to be high in that area that day?

A Well, it possibly would.

Q I mean a marginal well can produce more against a low pipeline pressure than it can against a high pipeline pressure, can't it?

A Well, you would assume that.

Q Now, Mr. Logan, it's my understanding that in some of these automatic custody transfer systems for oil, there's a central station where the wells can be turned on and off, is that your understanding?

A Automatic custody transfer?

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Q Yes, of oil, where it's not manual; it's electrical, we'll say.

A I'm sure that some of the people in the oil business have that, we have none.

Q Would it be feasible to have such a system installed in gas transportation facilities?

A Not economically.

Q You don't feel it would be economically feasible to have a button for each well and shut it --

A I think you are talking about the money that would probably pay off the national debt.

MR. PORTER: Mr. Logan, pursuing that trend a little further, of course, it has no bearing on this particular case, but do you know of any research in that direction or any developments where in the foreseeable future there might be some device or system of devices perfected to where you could have a central control room for turning gas wells on and off?

A Well, maybe if you had a system where you could let it flow, you had the line pressures designed where you could let it flow and shut it off, and build up whatever it could and take off what you wanted. I don't think you could find an ideal situation like that. I think it has been looked into by some companies, but I don't know anybody that has done it, so it must not be perfected.



BY MR. NUTTER:

Q On your Exhibit 4-D, which shows the Pacific Northwest, I find the 28-4 Unit and the 29-4. What do these actual numbers signify on these boards that you have? That's the pictures of your boards. What do the numbers signify? The picture of the Pacific Northwest gathering system there, I believe it's 4-D, down in the lower part of the left-hand column on that board, the 28-4 Unit is depicted there. Evidently there's five wells.

A Lower left hand.

Q Yes.

A All right.

Q What does the board actually show in your office?

A You see the little tab over there to the left?

Q Yes.

A That well is on when that's pushed to the extreme left, and the well is off when it's pushed to the right.

Q I see.

Q You see some of them up there, well, the Northwest Production, there's about four or five wells on up that column; they are off and the others are on.

Q I notice two of the wells have a little dot. What does that represent?

A Well, the only thing that I can see, that it is as a border for the tabs to go no further over.

Q Well, all the wells don't have that. I wondered if



that had some special significance.

A You can see them up and down the line, we try to keep it attractive and try to line them up where the little dots line up.

Q Now this first row of numbers there for the 28-4 wells starts out with 40 and 327 and 2-85. What does that figure represent?

A I think that's there, what they ordinarily produce when they're on the line.

Q Would that be deliverability, possibly?

A No, sir, I just think it's what they measured in volumes.

Q And then the next row of numbers is the well's number, I assume?

A Yes, sir, that's the code number.

Q I just wondered, now, if the dispatchers in determining which wells should be turned on or not take into consideration the deliverability of the well?

A Yes, sir, they switch these wells enough that they have it on other records besides what volume those things ordinarily produce, and when they get an order to cut a well or bring a well on, they go first by the well status report, and go down enough to get enough volume that they'll have flowing in the wells.

Q They don't actually determine whether the wells are going to be turned on or off by the board?



A No, they go by the records that come from El Paso. That is so they can walk in there and see which one is on and off. It's for this information, because there is a man on all the time that works for the Proration Department that follows this schedule, that checks this board, and that is for his information, because you have to dig through, oh, numerous sheets of paper to find it, whereas if you show it on the board and the status report comes in with the change, you can see it right away from the board.

Q When the dispatcher determines whether a well should be turned on or off, has he the status of the well?

A Yes.

Q That is what he takes into consideration?

A Yes, he goes by that.

Q And the deliverability of the well, or producing ability?

A They do it enough so that when a well has been put on often enough, they know what that well will put into the line.

MR. PORTER: Does anyone else have a question? The witness may be excused.

(Witness excused.)

MR. HOWELL: That completes El Paso's testimony. Could we recess for a few minutes?

MR. PORTER: Yes.

(Whereupon, a short recess was taken.)

MR. PORTER: The hearing will come to order, please.



If there is no further testimony to be offered in the case, the Commission at this time will hear any closing arguments; and the Commission would like for the applicant in his closing argument to give us, to advise us what relief he is seeking, and in his opinion how the Commission could grant such relief if in our opinion the record would justify it.

MR. CAMPBELL: If the Commission please, I think under those circumstances, it's certainly appropriate that I should make this presentation first.

It is our position, and we think that our exhibits, particularly with regard to relationship between production and pipeline pressures, which we still have not found satisfactorily explained to us, the obvious relationship that is shown on those exhibits, we feel that that indicates that the line pressures in this area do have a bearing on the ability of these wells to produce their allowable into the line, and that as a result of the absence of facilities for regulating pipeline pressures, we are being deprived of some of our share of the gas market.

With regard to what we are requesting the Commission to do here, based on the evidence that we have offered, we feel first that the Commission should under its authority grant an allowable to Well Number -- I believe it's 12-18 in 29-4, which is closely adjacent to the temporary pipeline which is now taking gas from a well immediately to the north of it. We see no reason why, so long as that temporary line is there, certainly it should



not take gas from the well immediately south of the line.

If the Commission grants that allowable, it should be continued on the allowable schedule and not cancelled but accumulated to the credit of that well.

Secondly, we think that the Commission should request the pipeline operators in this pool to furnish to the Commission monthly reports of pipeline pressures in the pool on an average daily basis, so that the Commission may from time to time determine when it may be necessary to call hearings to see what relationship there is between pipeline pressures and the ability of these wells, these low deliverability wells in the Blanco-Mesaverde Pool to deliver gas into the line, to sell gas that can be transported through the line to the plant, and thus receive their fair share of the market demand for gas.

Those reports should be on a comparable basis between pipeline companies. It's apparent there may be different methods of measuring the pipeline pressures, but there certainly should be some basis on which those can be furnished to the Commission as a public record for a basis of comparison.

Third, we think that it is improper to cancel underproduction under circumstances where the underproduction is due to inability to get in to the well or to high pipeline pressures or to other factors that are not directly related to the capacity or ability of the well to produce its allowable.

The extent of that, of course, is problematical,

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questionable as to how much accumulated underproduction may be due to these factors and how much is due to the actual inability of the well to produce, but certainly if there is a situation such as exists here and in apparently two other areas of the pool where the physical conditions render it virtually impossible during certain times of the year to get in to the wells to remove the chart, much less manage the operation of the wells, then we feel that the opportunity should be given to owners of interest in those wells to at least come before the Commission within a prescribed period, after the underproduction accumulates and has not been made up, in which to point those things out and request that underproduction not be cancelled, because once it's cancelled, of course, it's obviously gone to the owners of the interest in the particular area.

Finally, we think that the Commission should by order require the pipeline companies, transmission companies, and the purchasers, to take ratably between wells of comparable deliverability in these pools.

We feel that since deliverability is a major factor in the proration formula in this particular area, that it should be given full consideration on the question of whether or not ratable taking of gas is occurring, and that an order should be in effect requiring that, so that if any parties feel aggrieved by the situation, where they find a well with a comparable deliverability that they think is not being permitted over the period of



time where balancing can take place, to produce its fair share to another well with comparable deliverability, then they should be able to come in to the Commission and obtain an order requiring such taking; and I think we feel that it should be a general order in the pool to compensate or to be in addition to the actual proration schedules.

In view of the fact that the Commission has not seen fit to go along with our position that, deliverability being a factor, that the status of the completion of the wells is proper evidence to relate to non-ratable taking and abuse of correlative rights, there's not a great deal of relief we can obtain from the Commission, other than what I have outlined, or a portion of it.

We do believe that some changes could be made which would make it easier for the wells in this area to receive their fair share of the production from the Blanco-Mesaverde Pool. I think that the wells at the end of the pipeline, or the wells in the inaccessible areas, are entitled to their share just as much as wells that happen to be adjacent to the plant.

That's the principle and purpose of gas prorationing and we feel that the rules should be such that it will work in that fashion.

MR. HOWELL: If it please the Commission, El Paso Natural Gas Company believes that this hearing has demonstrated rather conclusively that gas is being taken in a ratable manner throughout the Blanco-Mesaverde Field.



Now if there is anybody in the world that's interested in getting as much gas as possible out of the wells located in Township 28, 4 and 29, 4, those two units, it's El Paso Natural Gas Company and Pacific Northwest, because our money is in every one of those wells, either drilled by us or purchased by us from the people who did drill them.

I think that the record has completely failed to show that any well has been unreasonably discriminated against. It has failed to show that anyone wants to hinder production from the well to any place on the pipeline.

I don't think that the statute grants the Commission the authority to order any extension of pipeline facilities. I think that the granting of a non-cancellable allowable is not within the framework of the law, the framework of proration, and that nothing would be achieved by granting such an order.

If the people who own the well, and the testimony shows that Pacific Northwest owns that well, if those people don't find it in their good honest business judgment desirable to spend additional money to make connection of that well, I don't think it's any business of anyone else.

Now, the Commission has ruled and has disclaimed any jurisdiction over the matter of well completions, wisely leaving that to the operator. As to pipeline pressures, I think a comparable situation exists, as admitted by Mr. Campbell.

Natural gas companies are subject to regulation by



Federal Power Commission, and the expenditure of money in the installation of plants and compressor plants is a matter requiring certain indications, and certainly this Commission does not desire to get into the field of inter-state pipeline regulation and when one begins to issue orders having to do with pipeline pressures, then that field has been invaded.

We think that there is nothing that a general order can accomplish. After all, the law which requires ratable taking imposes upon a pipeline purchaser the obligation to take ratably, and we certainly understand the law to mean that if we take in accordance with the proration rules as established by this Commission, that we have taken ratably and have complied with the law.

I think the record demonstrates beyond a shadow of doubt that every possible effort within reason is being made by our company to operate the production from this field so that the letter and the spirit of the law is complied with.

The regulations and rules adopted by the Commission contemplate that wells will be overproduced or underproduced from one time to another, and that it is a constant effort to balance production by producing more from underproduced wells and less from overproduced wells.

I think the testimony and the record in this case is completely blank as to any failure on the part of our company to use its best efforts to carry out the spirit and the purpose of



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the law to take ratably; and that it has done so, and we certainly believe that nothing that has been brought out in this hearing justifies the entry of any order by the Commission.

In so far as adopting a new rule which would prevent cancellation of underproduction, I don't think we feel really strongly on that, but we do want to point out that that then is going to impose a burden upon the Commission of constant hearings from one operator after another as to individual wells, as to reasons why underproduction should not be cancelled on that particular well.

If the Commission wants to assume that burden, of course, that's your business and not mine. We think that the rules are reasonable, that the underproduction which is cancelled extends throughout the field.

The testimony shows that of the 112 wells which were picked for comparison, that there were 33 that had had some underproduction cancelled. It seems to be a general matter that wells which are poor wells, have poor deliverability, are simply not going to produce as much as wells that have greater deliverability.

Now in so far as any matter of the correlative rights in these two units, I would like to point out that within the participating area of the units, that production is allocated back over the entire participating area. There can be actually no violation of correlative rights within the unit as to production



from one well versus another well, or takes by one pipeline versus another pipeline, because the very purpose of the Federal Unit is to throw all the production in the participating area into one pot and redistribute it, and certainly where that is accomplished there can be no impairment of any correlative rights as between individuals within the Unit, or owners within the Unit.

We earnestly ask the Commission to dismiss the application on the grounds of insufficient evidence, and continue the proration rules as they exist in the Blanco-Mesaverde Pool.

MR. PORTER: Mr. Verity.

MR. VERITY: We're actually in this hearing more in the nature of an amicus curiae than any other way. The application was not directed against Southern Union, and I point this out at this time because of the fact that I think that any change of the general rules for this pool would be improper in the scope of this hearing.

If general rules are to be enacted by this Commission or passed by this Commission, I think that it needs to be after notice of hearing that the general rules for the field operation may be promulgated, and not on a specific charge against a specific company.

Southern Union still feels that the motion which they made to dismiss the application of the applicants at the close of their evidence was good, and we reiterate it at this time.



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We think that they wholly failed to make the burden of proof that is incumbent on them to show that they are entitled to relief.

In addition to that, we think that El Paso has in great detail shown with particularity and generality that they and the other takers of gas in the pool are doing so on a ratable basis, and that they are making every humanly possible effort to see that all wells are impartially produced and that all underages are made up.

We feel that this itself is evidence of the fact that the present rules for production are adequate and are complete, and that aside from it being out of the scope of this hearing, nothing should be done to change the present method that is bringing about a just and equitable result.

For this reason, Southern Union again moves that this application be dismissed for want of evidence which would justify any order or relief being granted, and in the alternative, that any relief be denied.

MR. PORTER: Mr. Errebo, did you desire to comment on the motion for dismissal?

MR. ERREBO: Did I desire to comment on that? Yes, sir, we will support it.

MR. PORTER: I mean is this in the nature of a closing statement or some different nature, or did you intend to speak for or against the motion which is now before the Commission?

MR. ERREBO: Mr. Verity, was that a formal motion?



MR. VERITY: Yes, it is.

MR. PORTER: Mr. Howell had moved at the close of his argument for dismissal. Before we accept any other closing statements, I feel we should dispose of that motion.

MR. HOWELL: Mr. Porter, I think that to avoid a question of any technicality or ruling, I will withdraw the motion. The matter is before the Commission, the hearing is closed, and let's just avoid any technicality on that point and go ahead and finish the statements. Won't you concur in that?

MR. VERITY: Yes, I will withdraw my motion to dismiss.

MR. ERREBO: Pacific Northwest Pipeline Corporation also feels that the applicants have failed totally to prove the allegations in their complaint and in their Bill of Particulars.

The evidence which they have presented at this hearing has shown, has been shown particularly on cross examination to be based on an incomplete study of the evidence which was available to them.

As a result, the conclusions we feel were erroneous and they were certainly subject to further explanation, and this was done, we feel, quite well by Mr. Rainey on his direct testimony on behalf of El Paso.

When he did take all of the factors into consideration, certainly an opposite conclusion would inevitably result.

Now we have also heard testimony that gas is being taken ratably from the Blanco-Mesaverde Pool at this time, and in

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full compliance with the applicable rules and regulations of this Commission. Pipeline pressures have not been shown to be excessive but rather what could be expected in a pipeline gathering system of this magnitude and complexity.

Unreasonable discrimination due to gas connections has not been shown. There has been some mention of certain wells not being connected, and some complaint, but there has been no unreasonable discrimination shown, when the producing ability, the initial potential of these wells are considered and compared with the producing history of comparable wells in the same area.

Certainly Pacific Northwest and El Paso are no more pleased at the situation they find themselves in in the 28-4 and 29-4 Units than are the applicants, Romero and Critchfield, but we're in the same boat on the thing, except, of course, that we have to row on it and we don't object to that because that's a matter of contract; but certainly the position we're in, we think does give us some right and some justification for being particularly careful, since it is our money we're spending in having to connect these wells.

Certainly we believe that the statutes that are now in effect in this state are being fully complied with by the two pipeline companies.

Therefore, we ask that the application be denied in its entirety.

MR. PORTER: Anyone else have a statement to make?



We'll take the case under advisement, and the hearing is adjourned.

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STATE OF NEW MEXICO     )  
                                  ) ss  
COUNTY OF BERNALILLO    )

We, ADA DEARNLEY and JOSEPH A. TRUJILLO, Court Reporters, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of our knowledge, skill and ability.

IN WITNESS WHEREOF We have affixed our hands and notarial seals this 15th day of November, 1959.

\_\_\_\_\_  
NOTARY PUBLIC - COURT REPORTER

My Commission Expires:

June 19, 1963.

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NEW MEXICO OIL CONSERVATION COMMISSION

SPECIAL COMMISSION HEARING

SANTA FE, NEW MEXICO

REGISTER

HEARING DATE OCTOBER 22, 1959 TIME: 9 a.m.

NAME:	REPRESENTING:	LOCATION:
Ben R. Howell	EPNG	El Paso
Jack M Campbell	Campbell & Russell	Roswell NM
Jason Kellahin	Kellahin & Fox	Santa Fe, N.M.
Edmund P. Anderson	Continental Oil Co.	Roswell NM
Burns H. Erbe	Pacific NW Ph Corp.	Albuquerque NM
W. J. Lutter	" " " "	Salt Lake City, Utah
G. H. Peppin	" " " "	" " " "
B. L. TRIBBLE	PERMIAN BASIN PIPELINE	OMAHA, NEB
E. T. COTHAM	ATLANTIC REF. CO.	MIDLAND, TEXAS
H. E. BARRETT	PERMIAN BASIN PIPELINE	OMAHA, NEBR.
Henry S. Birdseye	Critchfield & Romero	Albany
Geo S. [unclear]	Southern Union	Farmington
R. R. Purrier	Self	Santa Fe
John Mason	EPNG	El Paso
C. S. Greiner	Southern Union	Salt Lake
A. W. Wadsworth	" " " "	" " " "



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occurred in this case to date. The case was filed originally back in February of 1959 and has been continued from time to time until this date. The original application referred both to the Blanco Mesaverde Gas Pool and the Choza Mesa-Pictured Cliffs Pool, but the applicant intends to offer no evidence with regard to the Choza Mesa-Pictured Cliffs Pool inasmuch as that is not a prorated pool and no testimony will be offered regarding it in this hearing. The El Paso Natural Gas Company and Pacific Northwest filed a motion to strike certain portions of the application and Bill of Particulars which was filed subsequently to the filing of the original application. The Commission heard argument on that and issued its order granting the motion in certain respects and denying it in certain respects, and the applicant today is prepared to offer some testimony in evidence on the basis of the Commission Order issued last month relative to the evidence and testimony which would be received. We have one witness I would like to have sworn.

MR. PORTER: Mr. Campbell, before we have the witness sworn, I would like to have the other appearances in the case.

MR. SETH: Ben Howell and Oliver Seth for El Paso Natural Gas Company.

MR. ERREBO: Burns Errebo of Modrall, Seymour, Sperling, Róehl and Harris of Albuquerque appearing on behalf of the Pacific Northwest Pipeline Corporation.

MR. VERITY: A. S. Grenier of Dallas and George L.



Verity appearing for Southern Union.

MR. PORTER: Does this complete the appearances in this case? Mr. Kellahin, do you desire to make an appearance in this case?

MR. KELLAHIN: Yes, I would. Jason Kellahin of Kellahin and Fox, Santa Fe, appearing on behalf of the Continental Oil Company.

MR. PORTER: Mr. Campbell, have the witness stand and be sworn please.

(Witness sworn.)

HENRY S. BIRDSEYE

called as a witness, having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. CAMPBELL:

Q Will you state your name please?

A Henry S. Birdseye.

Q Where do you live, Mr. Birdseye?

A Albuquerque, New Mexico.

Q And what is your profession?

A Consulting geologist.

Q Have you previously testified before the New Mexico Oil Conversation Commission or its Examiners?

A Yes, I have.

Q Would you very briefly give to the Commission a



summary of your educational and professional background?

A I was graduated from Harvard College majoring in geological sciences, I was employed for a year thereafter by Kermac Oil Industry and Stanoline Oil and Gas Company for three years, subsequent to that, by Lowery Oil Company, and since September, 1954 I have been a consulting geologist.

Q Are the witness' qualifications acceptable to the Commission?

MR. PORTER: Yes, they are.

Q Mr. Birdseye, are you acquainted with the application of M. A. Romero and Robert Critchfield in Case No. 1600?

A Yes.

Q Have you been employed by them to make a study of the situation with regard to the matters covered by the application?

A Yes, sir.

Q Are the interests that are set out in the Bill of Particulars filed by the applicants and the Amendatory Letter thereto to the best of your knowledge correct as to the interests owned by the applicants?

A To the best of my knowledge.

Q With regard to Sections 31, 32 and 33 in Township 28 South, Range 4 West, which I believe are not covered by the Bill of Particulars or the Amendatory Letter, do you know wheter either of the applicants own any interest in those sections?

A The applicant, M. A. Romero, owns an overriding

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royalty interest in those sections.

Q Of what amount?

A Two and a half percent, I believe.

Q Other than that, the interest shown in the Bill of Particulars and the Amendatory Letter are to the best of your knowledge correct?

A They are.

Q Mr. Birdseye, I refer you to what has been identified as Applicants' Exhibit Number 1 and ask you to state what that is.

(Thereupon, the document above referred to was marked as Exhibit 1 for identification.)

A This is a well location map to the scale of one inch equals two miles showing a portion of the eastern part of the San Juan Basin which includes the two Townships 28 and 29 North, Range 4 West, in which the applicants have working interest or overriding royalty interests. It also shows the adjoining Townships to the north, east, south and west, with well locations spotted up to date, at least as of a couple of months ago.

Q Are the only wells shown in the two Townships involved in this application Mesaverde wells?

A No. The wells in the southeast portion of 29 North, 4 West, and the northeast portion of 28 North, 4 West, are in the Choza Mesa-Pictured Cliffs field.

Q And what are the lines shown on the two Townships and on the Exhibit Number 1 generally?

A ~~Those irregular lines represent the pipeline gathering~~



systems of El Paso Natural Gas and Pacific Northwest Pipeline Company.

Q And what do the blue circles and red circles surrounding certain wells indicate?

A Those colored circles are drawn around Mesaverde wells in these two subject Townships. The red circles represent wells from which El Paso is gathering gas and the blue circles represent wells which are tied into the Pacific Northwest gathering system.

Q What data is shown on applicants' Exhibit Number 1 other than what I have pointed out?

A For each Township, there is shown on the map the average deliverability of all Mesaverde wells in that Township as well as the average production per well for the first nine months, first five months of 1959, and the average production per well in m.c.f.s for the year 1958.

Q It is apparent from applicants' Exhibit Number 1 that there are certain wells shown which do not show pipeline connections, is that correct?

A That is correct.

Q I'll ask you to refer to that Exhibit and point out the wells, Mesaverde wells, which do not have pipeline connection, and give the location of the well, the identification of the well, the date of completion of the well?

A In Township 29 North, Range 4 West, in Section 7,

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the Stanoline number 1 Valdez well in Section 10, the Stanoline number 2 Valdez. Stanoline number 1 Valdez was completed November 23rd, 1953, number two Valdez in Section 10 was completed in January, 1954. In Section 18 of 29, 4, the Pacific number 12-18 well was completed November 14, 1957. In 28 North, 4 West, in Section 11, the Pacific number 6-11 well was completed in November, 1955. There is another well which is unconnected and uncompleted in Section 26 of Township 28 North, Range 4 West, this is the El Paso number 4-26 well.

Q Do you know of any reason why those wells do not have pipeline connections?

A Well there is a variety of circumstances involved, two of the wells were considered at the time they were drilled to be non-commercial due to the nature of sand development at those locations.

Q Which wells were those, please?

A They are the Stanoline number 1 Valdez in Section 7 of 29, 4; the Stanoline number 2 Valdez in Section 10 of 29, 4. Both of these wells were drilled into or through the Mesaverde. The Mesaverde guide section was in both sections, shot with nitroglycerin which was the prevailing completion technique at that time. Following that time, they did not produce commercial quantities of gas.

Q Have those wells been plugged and abandoned? Or are they still --

A To the best of my knowledge they are carried



temporarily abandoned.

Q What is the situation with regard to the Pacific number 6-11 well in Section 11, 28, 4, if you know?

A This well was drilled through the Mesaverde, it was sand water fractured in the Mesaverde, subsequently plugged back to the Pictured Cliffs formation. According to my file, the well showed a potential of 631 m.c.f. per day in the Mesaverde at the sand water fracture. There is, to the best of my knowledge, a line, no pipeline to this well although it is, so far as I know, completing from the Pictured Cliffs and Choza field.

Q Is it actually completed in the Mesaverde?

A Well, my records don't accurately reflect that, except that it is not presently producing from the Mesaverde. It apparently is capable of production from the Mesaverde and the last word I had is that they were planning to work over the Mesaverde.

Q What is the situation, if you know, with regard to well number 12-18?

A Number 12-18 in Township 29 North, Range 4 West, is a well which, to the best of my knowledge, was successfully completed in the Mesaverde section. It had an initial potential of a million sixty-nine thousand m.c. cubic feet per day on three-quarter inch choke. This well, I'm quite certain is, has produced no gas to date although the pipeline gathering system maps show that it is tied into a gathering system.



Q So according to your information, there are five wells in the two Townships which have been completed in the Mesaverde formation which do not have pipeline connections, and well 12-18 which has a connection apparently but has not produced any gas, is that correct?

A To the best of my knowledge.

Q Now, Mr. Birdseye, have you obtained pipeline pressures or data concerning pressures in the two Townships involved here?

A Yes, from appropriate transmission companies, El Paso Natural Gas and Pacific Northwest Pipeline Company.

Q Has it been explained to you this morning by engineers for El Paso Natural Gas Company and Pacific Northwest Company, a difference in the method of determining the pressures which will reflect some differences in the two systems?

A Yes.

Q Is it your understanding that once the wells are stabilized that the pipeline pressures as reflected by that data will be generally upon the same basis?

A Yes, the discussion that we had prior to the Hearing this morning does not materially alter the pressured data which was furnished to us previously.

Q It relates primarily to excessively, apparently high pipeline pressures where wells are, for a brief period of time, opened?



A For a very brief period of time.

Q With reference to these pipeline pressures that were obtained from the transmission companies, have you prepared graphs of the pipeline pressures on each of the Mesaverde wells involved in this application?

A Yes, I have.

Q This is a series of Exhibits, all of the same nature. If it is agreeable with the Commission, I will have the first one identified as Exhibit 2-A and the others by subsequent letters under Exhibit 2. If you will identify these, please.

(Thereupon, the documents above referred to were marked as Exhibits 2-A through 2-P for identification.)

Q Mr. Birdseye, I will refer you to what has been identified as applicants' Exhibit number 2-A and ask you to state what that is, please?

A This is a graphic depiction of line pressures for the well 17-20. It shows actual line pressures as furnished to us by the appropriate gas transmission company. There is a red horizontal straight line drawn at the five hundred pound mark which represents the customary line pressure for Mesaverde wells. There are two additional lines drawn on this graph, one of them showing actual monthly production in m.c.f., and the final lines actual monthly allowables as assigned the wells by the Oil Conservation Commission.

Q Will you, commencing with Exhibit 2-A and referring



and identifying the well involved, will you briefly explain to the Commission from the Exhibits what the situation appears to be with regard to each of the wells involved in the Townships in this Hearing?

A Yes. Exhibit 2-A, as I mentioned before, contains the data on well number 17-20 in 28 North, 4 West. This well is, as you can see from Exhibit number 1, is connected to the El Paso Natural Gas pipeline system where, in any given month, the pipeline pressure has exceeded five hundred pounds as we have been informed by letters from El Paso or Pacific Northwest, the excess pressure is shown on the graph by this stipled area. This well first production was in November of 1958, the first allowable was set for this well on January of 1959. In the ensuing period through July of 1959, the well has had assigned to it total monthly allowables by the Oil Commission of thirty-eight thousand, seven hundred and fifty m.c.f. The cumulative production in that period through July, 1959 has been twenty-five thousand, eight hundred and forty-one m.c.f., leaving a net underage of twelve thousand, nine hundred and nine m.c.f.

Q Has some of that been cancelled by prior Orders of the Commission?

A Not in the instance of this well. As you can see from Exhibit 2-A, in every month except the month of March, 1959, the line pressure has been in excess of five hundred pounds per square inch.



Q Now with regard to the line that you have shown as production, what does that reflect in relation to the line pressure generally?

A Well, it's a very interesting coincidence that as the line pressure has increased to a maximum at this point of six hundred and fifty-five pounds approximately, six hundred and fifty-eight pounds per square inch rather than five hundred pounds per square inch, and in a month when the allowable assigned to this well was six million five hundred and seven thousand cubic feet, the production from that well declined to nine hundred and eighty m.c.f. The allowable was six thousand five hundred and seven m.c.f.

Q Is there anything else you would like to point out in connection with Exhibit 2-A?

A No, I would like to proceed.

Q Will you proceed to 2-B and point out what that reflects?

A Exhibit 2-B is a similar chart prepared for well number 15-29 in Township 28 North, Range 4 West.

Q Whose pipeline system is that well connected to?

A This well is connected to Pacific Northwest.

Q What does that one reflect?

A This well reflects among other things that the actual line pressure as furnished us by Pacific Northwest Pipeline Company exceeded five hundred pounds only in one month. The



production of this well commenced in October, 1958, the first allowable was established in February, 1959. The allowable since the Oil Commission established its allowable, the allowable in approximately slightly more than half of the months has been greater than the actual production from this well. The net result has been that the cumulative allowable for this well is thirty-eight thousand, two hundred twenty-five m.c.f.; cumulative production is fifty-four thousand, eight hundred eighty-six m.c.f. It has, therefore, through July, 1959, been over produced to the amount of sixteen thousand six hundred sixty-one m.c.f.

Q With regard to this particular well, where the line pressures have remained generally below the five hundred pound line, there, is there a better relationship shown between allowables and production than in the well reflected on Exhibit 2-A?

A Well, the history, the production history of this well and the fluctuations and the line pressure do not make as graphic a demonstration of the inverse relationship between production and line pressures as it does in certain other wells; however, it is clear that in the one month where line pressure exceeded five hundred pounds, the production came very close to reaching an all time low at the same time the allowable reached an all time high for this particular well.

Q Now, will you refer to the next well unless you have something further on that one?

A No, that's all.



Q The next well is number 14-31 in Township 29 North, Range 4 West, Section 31. This well is connected to the El Paso Natural Gas gathering system. What does that Exhibit reflect?

A Well, as you can see, from some distance the line pressures have generally exceeded five hundred pounds during the producing life of this well. The first allowable for this well was assigned in October, 1958, by February -- by March, 1959. The monthly production shown by this lower line had been held, had been so much lower than the allowables thereafter assigned to it by the Oil Commission that the net result was that in March, April and May of 1959 allowables were cancelled and there was a zero allowable assigned to this well. The result has been this: since September, 1958, the well has been given an, assigned a cumulative allowable of nineteen thousand, two hundred seventy-five m.c.f., the production since the well first produced in May, 1958, has been six thousand, five hundred seventy-eight m.c.f., resulting in a net under production of twelve thousand, six hundred ninety-seven m.c.f. In other words, this well has produced almost exactly one-third the amount of allowable which was assigned to it, which is further, the differential is further increased by the fact that three months' allowables were cancelled in March, April and May of this year. The production on this well has fluctuated substantially as this lower line, production line, shows. It is, therefore, not possible to draw a third calculation between line pressures and production because the



well was under producing so consistently during the entire period.

Q Does appear, however, does it not, that there is some relationship, particularly during the month of real high line pressure there, and then when it leveled off, the production, at least for a period of time, increased, does it not?

A That's quite true following the peak and line pressure during which period of five months the production decreased practically to zero. It was on the order of a hundred thousand feet per month, eighteen feet per month, forty feet per month, virtually nothing while the line pressures were approximately six hundred and forty pounds per square inch. Then when the line pressure was reduced to the vicinity of five hundred pounds, the production took a sharp increase.

Q Will you proceed now with the next well?

A Yes. The next well is number 12-33 in Section 33, Township 28 North, Range 4 West. This well is connected to the Pacific Northwest pipeline system. The graph, like the previous ones, shows the actual line pressure in relation to a five hundred pound line shown in red, it shows allowables and actual production. This well has been on production since September of 1957. The first allowable assigned this well was in December, 1957. The cumulative allowables which were assigned to this well through July, 1959 are a hundred and forty-one thousand, seven hundred fifty-nine m.c.f. The cumulative production from this well through July, 1959 is a hundred twelve thousand, two hundred

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eighty-five m.c.f. or a net under production of twenty-nine thousand, four hundred seventy-four m.c.f., plus whatever cancelled allowable from February, 1959 would have been added to the allowable figures had the well not been so far underage at that point.

Q Except for those two periods indicated on the Exhibit, has the pipeline pressure been maintained at a relative uniform level?

A Yes, as this graph depicts, since approximately last November, the pipeline pressures have been in the vicinity of five hundred pounds per square inch.

Q And have the allowables and the production during the period of that line pressure in the vicinity of five hundred pounds been in fairly good relationship according to that graph?

A Yes, it has. This well has the production in that period, has approximately equalled the allowable; however, in February, 1959 there was cancelled back allowable in the amount of twenty-one thousand five hundred and four m.c.f.

Q Which had accumulated in prior periods?

A That's correct.

Q Will you proceed to the next well, please?

A Yes. The next well is number 8-36, Township 28, North, Range 4 West, connected to the El Paso Natural Gas pipeline system. As you can see, from the line pressures depicted on this chart, with the exception of three months, the line pressures



have always been in excess of five hundred pounds per square inch. The maximum reached was six hundred forty-two pounds per square inch. The total allowable assigned to this well between the initial month of August, 1958 and the month of July, 1959, the cumulative allowables are forty-five thousand one hundred and seventy-eight m.c.f. The cumulative production since the well was first put on the line in May, 1958 has been thirty-one thousand, three hundred eight m.c.f., resulting in a net under production of thirteen thousand, eight hundred seventy m.c.f.

Q Has some of that been cancelled?

A None of that has been cancelled in the instance of this well.

Q Notice on this particular well that the inverse ratio that we have been referring to is generally appearing between line pressures and production. During the period of low line pressure, that three month period of which you referred, it does not appear to have increased production on this particular well, is that correct?

A That is true.

Q Do you have any explanation for that, or what could be the reason for this relationship not appearing in this particular well?

A Well, without being in very close contact with the Production Department with El Paso Natural Gas Company, I can't state the specific reasons. There are several reasons to which



this could be attributed.

Q Such as what?

A Well, the simplest one is shutting the well in. The well could have frozen off. These are simple factors which would result in lower production even in periods of low line pressure. In periods of high line pressure, it is obvious that the back pressure against the well will reduce its production.

Q In your opinion, does that particular situation change your view that there is a general relationship in inverse ratio between the pipeline pressures and the production of the wells that are involved in this application?

A No, I should not say so.

Q Will you proceed with the next well, please?

A The next well is number 5-32, in Section 32, Township 28 North, Range 4 West. This well is connected to the Pacific Northwest pipeline system. As you can see in the pipeline pressures furnished us, cover the period from July, 1958 through June, 1959, and only five of those months where the pipeline pressure is below five hundred pounds. The maximum pressure which we were informed of was seven hundred pounds per square inch. You can see rather sharply and in some instances here such as when the pipeline pressure reached a peak of seven hundred pounds per square inch in this month, the production dropped to virtually nothing. It actually dropped to nothing - it was twelve m.c.f. in that month. In the same month when this well



had an allowable of three thousand seven hundred twenty-two m.c.f., the same situation shows to a lesser extent in this peak here six hundred eighty pounds pipeline pressure, the production in that particular month was five hundred sixteen m.c.f. The allowable in that month was two thousand, six hundred fifty-three m.c.f. or five times as much.

Q What has been the accumulative situation with regard to that well?

A At the time, or as of July, 1959 this well had a cumulative allowable of forty-seven thousand, two hundred seventy-seven m.c.f. In addition, there was cancelled in August of 1958 thirteen thousand, three hundred ninety-five m.c.f., and there was cancelled in February, 1959 twelve thousand eight hundred seventy-eight m.c.f., making a total of seventy-three thousand, five hundred fifty m.c.f. cumulative allowable for this well. The cumulative production for this well has been twenty-four thousand, one hundred twenty-nine m.c.f., slightly less than one-third of the cumulative allowable. The net underage as of July, the end of July, 1959 was forty-nine thousand, four hundred twenty-one m.c.f. of which approximately twenty-six thousand has been cancelled due to the lack of production.

Q Refer to the next well, please. What Exhibit number is that, please?

A This is number 2-G. Well number 2-17, Section 17, Township 28 North, Range 4 West. This well is connected to El



Paso Natural Gas pipeline system. The, this well covers the period from January, 1958 through July of 1959, a period of nineteen months. In this nineteen month period, the line pressure was below five hundred pounds per square inch for four months out of nineteen months. The allowable, unfortunately these, this particular graph does not go back over the entire producing life of the well which commenced in April, 1955. In the first year that this well was producing, it had an average monthly allowable of approximately one thousand m.c.f., but in that period of time the average production was on the order of five hundred m.c.f. with the result that this well was reclassified from November, 1956 through September, 1957, the allowable was a flat five hundred twenty-seven m.c.f. per month, when in this period the well failed to make its allowable, it was again reclassified and the allowable since December, 1957 has been ninety-four m.c.f. per month, approximately one-tenth of the original allowable established for this well.

Q I notice on this particular graph and on the ones that preceded it that there has been a leveling off of line pressures commencing a few months ago. Is that the case in the wells that you have depicted here thus far?

A In the wells which we have seen graphically portrayed so far and which we'll see in the balance of these graphs, nearly every instance, the line pressures have decreased substantially since about February of this year. Approximately two to five



hundred pounds average level whereas previous to that, they were generally in excess, well in excess of five hundred pounds.

Q Has production from the wells during that same period of time shown an increase?

A To some extent. There has been a production increase to some extent in that period.

Q Will you proceed with the next well, please?

A Yes. The next well is number 1-30, Section 30, Township 29 North, Range 4 West, this well is connected to El Paso Natural Gas Company. The first production from this well was in June of 1956. The first allowable for this well was assigned in November of 1956 of approximately five and a half million feet. We don't have record of line pressure at that time; however, the well failed to make its allowable, and consequently, after a period of some months, the allowable was cut from an average level of three and a half million feet per month to three hundred, thirty-four thousand feet per month which is the allowable for the entire nineteen month period shown on this graph. The line pressures, as you can see, have fluctuated fairly widely in four out of the nineteen, and five out of the nineteen months the line pressure has been below five hundred pounds per square inch. In fourteen months it has exceeded five hundred pounds per square inch. Here again --

Q With regard to the highest line pressures as related to the lowest production, does this generally reflect the situa-

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tion as to the inverse ratio between those two?

A Fairly well, here for example, where the line pressure in this month decreased to four hundred fifty pounds, there was a slight increase in production, where the line pressure reached an all time peak of six hundred and twenty-five pounds in this month, the production reached a low of virtually zero. The relationship is not as clear here as it is in certain other wells; however, we see it to a lesser extent in this peak here when production declined, in this period of lower line pressure the production generally increased but because of the low allowable assigned to this well, it is not as clear in this instance as it is in certain other instances.

Q There is no cumulative under production in this well?

A Indeed there is. There is cumulative under production of fifty-two thousand, four hundred ninety-one m.c.f. out of a total allowable of sixty-one thousand, seven hundred seventy-four. In other words, this well has produced nine thousand, two hundred eighty-three m.c.f. out of an allowable of sixty-one thousand, seven hundred seventy-four.

Q Proceed with the next well, please.

A The next well is number 1-18, Section 18, Township 28 North, Range 4 West. This is Exhibit 2-I. This well is connected to the El Paso Natural Gas gathering system. The well, when its allowable was first assigned in May, 1958, the well was assigned for the first eight months an average allowable of about twenty-



eight hundred m.c.f. per month. The average production during that period was about four hundred m.c.f. per month. Consequently, the allowable was reduced in December, 1955 to four hundred ninety-six m.c.f., approximately twenty percent of the previous allowable. It has been reduced in steps ever since then due to its failure to make its assigned allowable, and since October, 1957, this well has had a continuous monthly allowable of two hundred fifty-nine m.c.f. The net result is that its cumulative allowable has been increased at the present time to eleven thousand, three hundred thirty-nine m.c.f., plus cancelled in October, 1955 was twenty-two thousand, seven hundred eighty-five m.c.f., in July, 1956 another six thousand five hundred ninety-four m.c.f. were cancelled. So that the cumulative allowable including those amounts cancelled is forty thousand, seven hundred eighteen m.c.f. The cumulative production is twelve thousand, two hundred eighty-two m.c.f. Therefore, there is net underage in production of twenty-eight thousand, four hundred thirty-six m.c.f. out of the total allowable of forty thousand.

Q Does this graph again exhibit the relationship between the line pressures and the production?

A It does, even though as in the previous instance the production has been such a minor amount that the distinction in the inverse relationship is not clear, we can still see that in the period of lower line pressure, production has risen, and period of higher line pressure, production has decreased.



Q Does this again show that since the first part of 1959 there had been consistently lower line pressures than prior to that time?

A It does show that as you will see in nearly all of these individual well graphs.

Q Proceed with the next graph, please.

A This is Exhibit 2-J pertaining to well number 18-31 in Section 31, Township 28 North, Range 4 West. This well is tied into the Pacific Northwest pipeline system. As you can see, you can see extremely high fluctuation in the month production from this well, from probably seven million to twenty-one million to six million to eighteen million and so forth. It is extremely high fluctuation. The line pressure has not fluctuated that much so we must attribute these fluctuations in production to other mechanical factors such as the well having been shut in or freezing oil. The line pressure in each instance here has been slightly lower than five hundred pounds per square inch. The first allowable for this well was assigned in February, 1959. Since that period, there is no consistent relationship between the allowable and the production for reasons which we have insufficient data to evaluate.

Q Proceed with the next well, please.

A The next Exhibit is Number 2-K pertaining to well number 16-30 in Section 30, Township 28 North, Range 4 West. This well is tied into the El Paso system. The period on which



we have pipeline pressures shows that in each individual month pressures were in excess of five hundred pounds reaching a peak of six hundred sixty-six pounds in January of 1959. This is a fairly recently completed well which is the reason that its production history does not go back further. You can note some relationship between the pipeline pressure increase and the decrease in production. You'll also notice a conspicuous decrease in pipeline pressure in the first five months of this year.

Q Has there been an accumulated under production in that well?

A This well produced for two months before the first allowable was assigned which is the principal reason that the cumulative allowable to date is forty thousand, the cumulative production is slightly over forty-nine thousand, hence it has been over produced by the amount of ninety-six hundred and fifty-four m.c.f. At the present rate of production, well it just fluctuates too much, we can't say whether future production will be in line with future allowables.

Q Proceed with the next Exhibit.

A The next well is number 14-29 in Section 29 of Township 28 North, Range 4 West. This well is tied into the El Paso system. In four out of the fifteen months, the line pressure has been less than five hundred pounds and in the remaining months, the line pressure has been in excess of five hundred pounds reaching a maximum of six hundred thirty-eight



pounds. This well first produced in May, 1958. We can see that generally speaking, the allowables have exceeded the production from this well. The well produced twenty million feet of gas before its first allowable was assigned, the cumulative allowable assigned to this well was eighty-seven thousand, five hundred sixty-four m.c.f. Cumulative production has been sixty-nine thousand, seven hundred, eighty-eight, hence a net under production of seventeen thousand, seven hundred seventy-six m.c.f. So far no back allowable has been cancelled because of the short duration of the producing life of this well.

Q Has the line pressure situation improved on this well during the first part of 1959?

A Yes, it has decreased sharply since February it has decreased to the amount of one hundred twenty-five pounds on the average.

Q And has there been some reasonable relationship between allowables and production during that corresponding period of time?

A Yes, it has. Since February, 1959 the two have jockeyed for position here pretty closely.

Q Proceed with the next well.

A This graph pertains to well number 13-20 in Section 20, Township 28 North, Range 4 West, tied into El Paso system. As you can see, the pipeline pressures in the period of which we have knowledge have fluctuated widely between the minimum of



four hundred twenty-six pounds per square inch and maximum of six hundred fifty-four pounds per square inch. The average, however, has been five hundred twelve pounds. In the period of fourteen months, there are three months in which the line pressure was on the average less than five hundred pounds per square inch.

Q Referring to May of 1959 where the line pressures were decreased to slightly over four hundred pounds, was there an increase in production during that month?

A There was a percentagewise sharp increase from about four million feet the preceding month to six million feet the other month due to the decrease in line pressure at that time. By the same token, we note a decided low in monthly production during most of the time of the peak of line pressure. You can see the same thing in this instance here when line pressure decreased below five hundred pounds the monthly production, at least for that one month, increased substantially.

Q Had that well accumulated under production?

A There is cumulative thirteen thousand, nine hundred twenty-five m.c.f. under production since June, 1958.

Q Has any of it been cancelled to date?

A Not as yet.

Q Proceed with the next one.

A This graph pertains to well number 11-31 in Section 31, Township 28 North, Range 4 West. The line pressure, as you can see here, exhibits some rather spectacular variations; however,



we were notified before the meeting commenced this morning that this figure of nine hundred twenty pounds per square inch is not a representative figure and resulted from certain exceptional and easily explained mechanical difficulties.

Q Insofar as Pacific Northwest connections are concerned, is it correct that this appears to be the only well that shows such large line pressures and such wide fluctuation on their connections?

A This is the only well tied into Pacific Northwest, most of the Pacific Northwest wells have maintained a line pressure of between four hundred eighty and five hundred ten pounds on the average.

Q So that this Exhibit, what number is it, please?

A This is number 2-N.

Q This Exhibit number 2-N, in view of the method of calculating line pressures, as to this well is not a proper graphic representation of perhaps what would occur under stabilized line pressures?

A Would say that is true although the period here for several months appeared to be a period of excessive pressure from January, '59. To date line pressures have been, excuse me, in the order of four hundred ninety pounds per square inch. You'll note here again the decided decrease in line pressure since the first of this year.

Q And has there been a corresponding better relationship



between allowables and production during that period of time according to your graph there?

A Actually in that period of time the production and allowables are fairly close together, I would say that it would be within ten or fifteen percent of each other; however, back in early 1958 we see a three month period when production was essentially zero at a time that this well had a monthly allowable of six million feet.

Q What is the cumulative situation on this well?

A This well has had a cumulative allowable through July, 1959 of one hundred sixty-five million feet; cumulative production of one hundred forty-eight million feet, leaving a net underage of approximately seventeen million feet plus three months cancelled allowable from March, April and May, 1958, in an unknown amount which we must presume to be perhaps two or three million feet per month anyway.

Q Proceed to the next well.

A This graph pertains to well number 9-32 in Section 32, Township 28 North, Range 4 West. This well is tied into the El Paso Natural Gas system. As you can see, the line pressure in every single month has been in excess of five hundred pounds. It reached a peak of six hundred and forty-four pounds in February of this year. The production has varied in the period shown on this graph, production has varied from a low of zero to a maximum of twenty-nine million feet per month. The relationship



between production and pressure here is fairly consistent. We note, for example, in this three month period of peak line pressure here the production was essentially zero, then when the line pressure decreased in this area, the production briefly increased to a substantial figure, and as the line pressure was increased again, the production decreased virtually to zero. However, since approximately March of this year there has been an average decrease of line pressure even though it is still running on the order of five hundred pounds per square inch.

Q What is the situation with regard to history of production of this well and allowable?

A This well has had assigned to it through July, 1959 cumulative allowables of one hundred fifty-seven thousand m.c.f. Its cumulative production is one hundred twenty-nine thousand m.c.f., leaving a net underage of approximately twenty-eight thousand m.c.f.

Q Has any of that been cancelled?

A Not as yet.

Q Refer to the last Exhibit, well, please.

A This is well number 7-8, Section 8, Township 29 North, Range 4 West, the well which is connected to the Pacific Northwest pipeline system. As we have generally seen, the line pressures are near or slightly less than five hundred pounds. The production has varied widely. There is a rather sharp fluctuation you can see on this graph which probably cannot be



satisfactorily explained purely on the basis of line pressures because of the consistency of the line pressure.

Q But the relationship between allowables and production has been fairly good, has it not, on that well?

A Yes, this is quite a good well, and the cumulative allowables assigned to it are about one hundred sixty-four thousand m.c.f., the cumulative production is one hundred thirty-seven thousand m.c.f., leaving a net underage as of the end of July of twenty-seven thousand m.c.f.

Q Now, take your seat there, Mr. Birdseye. Now a few general questions about this particular phase of the matter relating to line pressures. Based upon your study of these wells as portrayed by the Exhibits numbered 2, what is the general situation on a comparative basis between line pressures of wells to which Pacific Northwest is connected and El Paso Natural Gas Company is connected?

A Well, generally speaking, as these graphs have shown rather clearly, the line pressures in the Pacific Northwest system have been substantially lower than those maintained by El Paso.

Q Do you have any information on a comparative basis with regard to production?

A Yes, I have.

Q Between the two?

A Yes, sir. These are figures on production related

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to deliverabilities. The average well which is connected to Pacific Northwest pipeline has the cumulative deliverabilities, rather total twenty-six hundred m.c.f. per day. The total deliverabilities of the wells connected to El Paso total thirty-three hundred and seventy-five, thirty-three hundred and seventy-five compared to twenty-six eighty-one. However, El Paso, with its cumulative deliverability of thirty-three hundred and seventy-five m.c.f. has produced in 1958 a hundred and ninety-five million feet of gas, and Pacific Northwest with total deliverabilities of approximately twenty-five percent less has produced two hundred and forty-two million feet of gas or approximately twenty-five percent more than El Paso.

Q Do you believe that the differences in the line pressure may have some bearing upon that result?

A I think that is a basic factor.

Q Now with regard to the general relationship as indicated, what is your opinion as to the relationship between the line pressures and the production from the wells?

A Well, certainly especially in the instances of the older wells which were not completed by what we consider modern completion techniques, higher line pressures have an extremely restrictive effect on the amount of the production, and as we've seen on these graphs, when the line pressures are reduced, in the vast majority of instances there has been an increase in production.



Q Now, as you have gone through each of these individual wells, you have given information as to the cumulative production history of each well as related to allowables and cancelled under production. Do you have a summary of that with regard to all the wells that are involved, the Mesaverde wells in these two Townships?

A Yes.

Q Would you please give that?

A If I can find it. In rough terms, these wells have had a total cumulative allowable of two hundred and forty-four thousand m.c.f., and their total production has been about a hundred and fifty-five thousand m.c.f. I have the exact figures here in just a moment. The total cumulative allowables, including the cancelled allowables, for this group of wells through July, 1959 is two hundred and forty-four thousand, five hundred twenty-one m.c.f. The total cumulative production has been a hundred and fifty-nine thousand, one hundred thirty-five m.c.f., resulting in a net underage of something on the order of eighty-five million cubic feet of gas, a large portion of which has been lost due to the cancellation of back allowables.

Q Do you have the figure on how much uncanceled underage there is?

A Yes, sir, at the present time the uncanceled underage is one hundred fifty-nine, approximately fifteen hundred fifty-nine thousand m.c.f.

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Q Is it your opinion, Mr. Birdseye, that some of that underage both that has been cancelled and uncanceled underage has been accumulated by reason of the line pressure situation?

A Unquestionably.

Q Now, Mr. Birdseye, have you made a study of the total deliverability of the wells connected to, I believe you have given those figures. Will you refer back to Exhibit number 1, now in connection with the figures shown on there of average deliverability and average production for the year 1958, and point out to the Commission any considerable variations between the various Township units involved in the vicinity of the two Townships in this application.

MR. HOWELL: Mr. Commissioner, we object to testimony offered by this witness relating to any Townships other than the Townships specified in the Bill of Particulars, namely, Townships 28, 4 and 5; 29, 4 and 5 before the Hearing to obtain such information as would permit us to be prepared. We are prepared and we have obtained data covering all of the areas specified in the Bill of Particulars. We are not prepared either for cross-examination or to put on testimony of our own for Townships that were not included in the Bill of Particulars, and we object to testimony covering other Townships and move that the testimony be limited to the areas covered by the Bill of Particulars.

MR. CAMPBELL: Just a moment, please. If the

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Commission please, let me make this observation. The Bill of Particulars in truth does relate to some variations in connection with those particular Townships; however, this Hearing takes in the entire Blanco Mesaverde Pool, and I can't see that anyone could be taken by surprise if we were to depart considerably from the area that's involved here. I don't believe that by the Bill of Particulars we are limited to testimony to which we have referred there. As a matter of fact, there have been a number of things take place since that time that were put in evidence here which hasn't been objected to. I think this Hearing is on the rateable taking in the Blanco Mesaverde Pool and the fact that we pointed out instances that we are going to offer testimony on as to particular Townships, I certainly don't believe it limits us, and I believe as a matter of fact, that our Bill of Particulars so stated it fairly correctly.

MR. PAYNE: Mr. Campbell, do you intend to use this evidence for comparative purposes?

MR. CAMPBELL: Yes, the Bill of Particulars state that the applicants do not limit the issue of the matter or extent of the proof upon the Hearing of this application.

MR. PORTER: Mr. Campbell, is there more than one pool involved here? Do the other Townships relate to the Mesaverde too?

MR. CAMPBELL: No, all our testimony relates to the Blanco Mesaverde Pool.



MR. ERREBO: If it please the Commission, the applicants' Bill of Particulars, Paragraph 2 shows that there are in excess of sixteen hundred wells in this pool. Now, it's an almost impossible job to prepare detailed testimony as to each and every one of those wells and as to each and every part of the pipeline system serving those wells. The applicant here, if he knew for sure what his complaints were at the time he filed it, we assumed then that he knew, where he spoke about -- what he was speaking and about what he complained of at that time. He was offered an opportunity to advise us of that so we might prepare for it. Now we have prepared and we are ready to offer testimony as to those portions of the pool that he has specifically complained of, and we urge that the Commission limit any testimony by the applicant to these areas that he has specifically complained of, otherwise, how can we be in a position to cross-examine this witness on areas which he testifies as to which are outside the immediate area here?

MR. CAMPBELL: If the Commission please, if this is the situation which takes these people by surprise, we would have no objection to a continuation of the case until next month in order for them to prepare testimony, if it appears they don't have data prepared on wells or areas referred to here.

MR. PORTER: Mr. Howell, the Commission will overrule your objection, the Commission would like to hear anything that

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has to do with rateable taking or gas prorating in the Mesaverde Pool.

MR. HOWELL: If the Commission please, under the circumstances we request a continuation of the right to cross-examine as to all areas which may be covered by this witness' testimony until we've had an opportunity to prepare cross-examination and to prepare evidence to submit in other areas, and in light of that situation, I would suggest that if the Commission wishes to hear as to the areas which have been covered by the Bill of Particulars at this time, and then hear the remainder at another time, that might be preferable.

MR. CAMPBELL: If the Commission please, I don't see how the pipeline companies under those circumstances are going to know what to prepare for. I would think that if you actually want to prepare testimony to rebut anything that we may put on at this time that you would want to know what we are going to put on, otherwise, I think it would go on ad infinitum it seems to me. I would like to make this observation, of course the Commission has ruled on the matter. We certainly have no objection at all to permitting the El Paso Natural Gas Company or Pacific Northwest to rebut anything that we put on or to explain, if they can, what the situation is or why these things occur. We want to have a full and complete hearing in this matter, and anything that will lead to that we certainly are perfectly agreeable to. May I request a ten minute recess?

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MR. PORTER: Have a ten minute recess.

(recess.)

MR. PORTER: The meeting will come to order, please. Mr. Howell, you had a motion, I believe, before the Commission. The Commission has ruled that we are willing to go ahead and hear the case through to conclusion today on the matter raised in the order confined to the Mesaverde Pool or we will continue the entire proceeding until October the 22nd which is a date which Mr. Morgan has agreed upon that we could be here, or if that date isn't suitable to the interested parties, we'll try to work out one.

MR. HOWELL: May I consult with Mr. Errebo?

MR. GRENIER: Mr. Porter, for my understanding, are you suggesting that we not go forward from this point, don't even find out what the applicants are wanting to testify about with regard to these other areas?

MR. PORTER: I believe my ruling was that we were willing to go ahead and hear the entire case, but we are not willing to continue to hear a portion of it and then continue it. We will either hear it all now or we will continue the entire proceedings to October 22nd or some date that we can agree on.

MR. CAMPBELL: Let me make a point here that might affect the decision that these people have. I want to assure the Commission that so far as we are concerned, we have no desire

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to make it appear that something is wrong that can be explained and we are willing to cooperate with the pipeline companies and advise them essentially what our complaints are, we are not going to try to keep a secret, and no matter when the Hearing is held, we are prepared to go ahead. Now, if they want to wait until October 22nd, we are not going to jump up with any new surprises at that time.

MR. GRENIER: Mr. Campbell, would it be possible for you at this time to outline in a statement of counsel the general areas that you do plan to cover in the remainder of your direct case, and the problems that you propose to raise, and the general character of the data and the areas to which that data relates so that we could be more fully informed than we are now as to just what we should prepare for?

MR. CAMPBELL: No, I don't believe that would be the best way, but I would be glad to furnish immediately some additional information by way of Bill of Particulars, and so that I would be sure that I'm giving you all the information so that you would have time between now and whenever the case is going to be heard again to analyze the situation.

MR. HOWELL: May we ask this, do you intend to put on testimony concerning individual wells located out of this area?

MR. CAMPBELL: Yes.

MR. HOWELL: That is the meat in the coconut because



with over eighteen hundred wells up there, it is rather impossible to be prepared as to any individual well and have the history of it to the point that we can bring the facts out.

MR. CAMPBELL: I think that's reasonable. I'll give you the horrible examples if you want them. I'm willing to do that, may be kind of a long list, but I'll be glad to do it.

MR. HOWELL: Would you recess long enough for us to look and see what we will be faced with because obviously you can't come prepared with one hundred sixty-one wells on each phase of the wells?

MR. CAMPBELL: I might find some more.

MR. HOWELL: May it please the Commission, my feeling is this: we have been informed by counsel that he intends to put on testimony concerning individual wells, and with some eighteen hundred wells in the Mesaverde field, we didn't bring a truck with our records that have to do with the production history of the well. I think I can point out our situation pretty clearly in stating that the witness' testimony up to the present time has no relationship whatsoever to the time element. He hasn't considered the number of days production at any time in drawing his conclusions and it is impossible without an attempt to look at the actual history of individual wells to meet some of the inferences which the witness seeks to draw from taking the testimony during the month that a well may have been shut in because it was over produced and comparing the production

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that month with line pressure. Now, as to the wells that have been put on, at the present time we are prepared to meet it and we have testimony to meet it and we can meet his testimony, but I'm now informed that they intend to take individual wells located at outside points in the Mesaverde Pool and put on some testimony. We cannot be prepared to meet that on an individual well basis without practically transferring the production records of the entire Mesaverde Pool up here. So for that reason, we ask that as to the individual wells which are to be introduced in testimony by the applicant, we be furnished a list in order that we can be reasonably prepared, and we shall be pleased to go forward then with the Hearing meeting that on the individual well basis. We are prepared as to every well located in the Townships which were mentioned in the Bill of Particulars.

MR. PAYNE: Do you have any objection to furnishing such a list, Mr. Campbell?

MR. CAMPBELL: No, I'm the one who suggested it. I am perfectly willing to furnish such a list.

MR. MORGAN: In other words, your counsel is going to stipulate the field of inquiry and examination, is that it?

MR. PAYNE: As to particular wells.

MR. CAMPBELL: We are going to agree that we are going to furnish testimony on these wells with regard to our application and they won't have to bring the big truck up.



MR. MORGAN: You'll stipulate as to the field of inquiry?

MR. PORTER: Will your testimony be limited to that list of wells?

MR. CAMPBELL: I guess that's what we have to do unless we keep continuing all the time because if we both keep getting surprised every time we meet, we will be like in the Jalmat case, fifteen hearings, I don't want to do that, I want to get this thing on the table and resolved.

MR. HOWELL: That's exactly why we asked for particulars so that we could get it on the table.

MR. PAYNE: The case concerns gas prorationing in the Blanco Mesaverde Pool and was advertised as such.

MR. HOWELL: That's right and so long as testimony, if the Commission please, so long as testimony is based upon the general basis of testimony prorationing in the Blanco Mesaverde Pool, we are prepared. If we are going to take individual wells and compare well number 14-B located five miles away with wells in this area and use that to prove that there has not been rateable taking, then I want an opportunity to go and see if this 14-B well was frozen in at that time, if weather conditions resulted in being unable to get out there for two months or facts of that character. Now if that character of testimony as to individual wells is going to be admitted, then out of eighteen hundred wells I think we are entitled to be advised as to which



one the testimony is coming into.

MR. CAMPBELL: I assume that I can understand that you will have available all of the information, your well record information about these wells?

MR. HOWELL: That's right.

MR. ERREBO: The wells you designate?

MR. HOWELL: If we were in our offices, we could pull them out one by one, and we don't have the office file here.

MR. CAMPBELL: You will then if I furnish you with a list?

MR. GRENIER: May I inquire as to whether you are going to be getting into any of the wells connected into our system?

MR. CAMPBELL: I might.

MR. PORTER: That will be indicated on the list to be furnished.

MR. GRENIER: You will furnish us a list?

MR. CAMPBELL: Oh yes, if I refer to any of your wells. I might also state to the Commission that I may want to obtain from El Paso Natural and Pacific Northwest and perhaps Southern Union some additional data relating to average monthly line pressures, I don't know that I will, but if I am, I assume that that will be available to us.

MR. HOWELL: That's correct. We are glad to furnish the information just as we did before.

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MR. ERREBO: Made available at the advance of the Hearing so that you will have time to look it over.

MR. PORTER: The Commission rules that this case will be continued to nine o'clock, October 18th--October 22nd, which is on Thursday, I believe. We might have to run over into the next day so Mr. Morgan is making those two days available. Mr. Campbell, you will furnish the list of wells on which your testimony will revolve.

MR. GRENIER: Will the Hearing be here?

MR. PORTER: Be here at Mabry Hall so far as I know. We will have to talk to the Capital Custodian, but if it is any different location, you will be advised.

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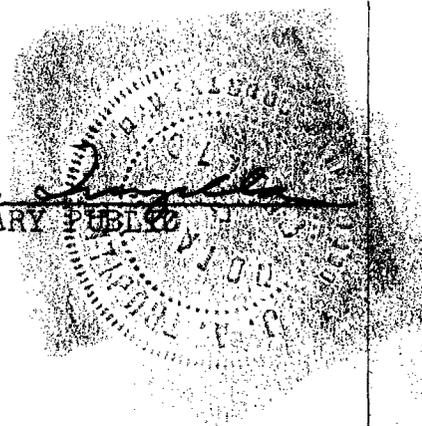
C E R T I F I C A T E

STATE OF NEW MEXICO    )  
                                  :        SS  
COUNTY OF BERNALILLO    )

I, J. A. TRUJILLO, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in stenotype and reduced to typewritten transcript by me and/or under my personal supervision, and that the same as a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal, this, the 29<sup>th</sup> day of September, 1959, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

*Joseph A. Trujillo*  
NOTARY PUBLIC



My Commission Expires:  
October 5, 1960.

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