

Case No.

1876

Application, Transcript,
Small Exhibits, Etc.

CASE 1076: El Paso Nat. Gas Co. application
for dual completion in Blanco Mesaverde Gas
Pool & North Los Pinos Dakota Gas Pool.

BEFORE THE
OIL CONSERVATION COMMISSION
Hobbs, New Mexico
May 23, 1956

IN THE MATTER OF:

CASE NO. 1076

TRANSCRIPT OF PROCEEDINGS

BEFORE THE
OIL CONSERVATION COMMISSION
Hobbs, New Mexico
May 23, 1956

-----)
The application of El Paso Natural Gas)
Company for an order approving a dual)
completion in the Blanco Mesaverde Gas)
Pool and North Los Pinos Dakota Gas Pool)
in compliance with Rule 112 (a) of the New)
Mexico Oil Conservation Commission)
Statewide Rules and Regulations.)
)

Applicant, in the above-styled cause, seeks)
an order granting them permission to dually)
complete by the use of a double crossover)
flow tube on their Allison Unit Well No. 10)
in the Blanco Mesaverde Gas Pool and the)
North Los Pinos Dakota Gas Pool; said well)
being located 1750 feet from the North line)
and 990 feet from the West line of Section 20,)
Township 32 North, Range 6 West, San Juan)
County, New Mexico.)
-----)

CASE NO. 1076

PROCEEDINGS

BEFORE:

Warren W. Mankin, Examiner

EXAMINER MANKIN: The next case on the docket is Case 1076, the application of El Paso Natural Gas Company for an order approving a dual completion in the Blanco Mesaverde Gas Pool in the North Los Pinos Dakota Gas Pool in compliance with Rule 112 (a) and also for the approval of a non-standard location in the Blanco Mesaverde Pool for subject well.

MR. WOODWARD: I am John Woodward representing El Paso Natural Gas Company. El Paso's first witness will be John Edward Coel. I would like him to be sworn, please.

MR. MANKIN: Do you have more than one witness?

MR. WOODWARD: We may.

MR. MANKIN: We will swear both witnesses at the same time.

JOHN EDWARD COEL

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

by Mr. Woodward:

Q. Mr. Coel, please state your full name.

A. Edward John Coel.

Q. Where do you live?

A. Farmington, New Mexico.

Q. For whom do you work and in what capacity?

A. El Paso Natural Gas Company as Senior Petroleum Engineer.

Q. Have you previously testified before this Commission as Petroleum Engineer and as an expert witness?

A. I have.

Q. Are Mr. Coel's qualifications acceptable?

MR. MANKIN: They are.

Q. Mr. Coel, are you familiar with El Paso's application in Case No. 1076?

A. I am.

Q. Will you state briefly the nature and purpose of that application?

A. The purpose of the application is to ask for a dual completion in the North Los Pinos Dakota and the Mesaverde Blanco Pool with the use of a crossover sub between the packers to allow production from the lower Dakota through the annulus and the upper Mesaverde through the tubing and also to get a non-standard location in the Mesaverde Blanco Pool.

Q. I hand you now what has been marked El Paso's Exhibit A. Are you familiar with this Exhibit?

A. I am.

Q. Was it prepared under your direction and control?

A. Yes, sir.

Q. Will you state what it shows, please?

A. It is a plat showing Sections 17, 18, 19 and 20 of Township 32 North, Range 6 West, San Juan County, New Mexico. It shows the offset acreage of this well, the offsetting wells in that acreage and it also shows the interest owners of the acreage.

Q. It shows the location of the Allison Unit Well No. 10?

A. That is correct, sir.

Q. Will you briefly outline the drilling completion history of the Allison Unit Well No. 10?

A. Yes, sir, this well was spudded on the 20th of January, 1956 as a proposed test in the Dakota formation. Drilling was completed on the 3rd. of March, 1956 and final completion effected the 21st. of March, 1956. The total

depth of 8,255 feet was reached and plugged back to 8,042 feet in the Dakota formation. The casing was originally set at 13 3/8 at 169 feet with 125 sacks of cement, 9 5/8 at 3,553 feet with 250 sacks of cement and 5 1/2 at 7,940 feet with 500 sacks of cement. An attempt was made to frac the Dakota formation at the interval of 7,940 and plug back total depth of 8,042 feet. Two attempts were made and neither was successful. At that time we felt that the Dakota formation was not commercially productive and sought to produce the Mesaverde formation. We perforated at an interval of 5,500 to 5,690, 5,730 and 5,788, both intervals being fraced and found commercial production. We then attempted to dually complete this well by setting two packers, Baker Model "D" production packers, one at 5,475 above the Mesaverde and one at 5,813 below the Mesaverde. We then ran 2 inch tubing through these packers with a Baker Model "D" crossover flow tube set in the upper packer to allow production of the Dakota formation through the annulus above the Mesaverde and Mesaverde production through the tubing.

Q. You stated the well did not discover production in the Dakota formation in commercial quantities; are you therefore proposing the Commission approve a dual completion in the Dakota and Mesaverde formation?

A. That is true.

Q. What did the Dakota formation test?

A. 368 MCF per day.

Q. Which has a monetary value of what?

A. Probably about \$12.50 a day in production.

Q. Will such production pay for the cost of drilling and operating the well?

A. No, sir.

Q. What did the Mesaverde formation test?

A. 6,551,000 MCF per day, having a commercial value of somewhere between \$125.00 and \$175.00 a day.

Q. Considering the production from both of these formations, will the well pay for its cost of drilling and operating?

A. We hope that the Mesaverde will make that cost up.

Q. I hand you what has been marked as El Paso's Exhibit B. Are you familiar with this Exhibit?

A. Yes, sir.

Q. Was it prepared under your direction or supervision?

A. It was.

Q. Will you explain what that Exhibit shows?

A. This is a schematic diagram of the dual completion of the Allison Unit No. 10, showing the casing depths, the packer setting depths, the producing intervals, the total depth and the plug back depth.

Q. Will you explain why you recommend this type of dual completion for the Allison Unit Well No. 10?

A. Yes, sir, we feel that the Dakota formation, while it will not alone produce commercial quantities of gas, will help to pay the overall high cost of this deep test and we are more interested in protecting our commercial gas zone to Mesaverde; therefore we have employed the use of dual packers and a crossover sub so that we can make every attempt to keep the Mesaverde formation clean from any of the liquid accumulations.

Q. Why is it important to keep the Mesaverde formation clean?

A. Past experiences have shown that most Mesaverde wells will produce better through tubing because they will, in future life, produce some water or distillate in quantities.

Q. What effect will this production of distillate, water or other fluids have upon the recovery of gas in the formation?

A. It will delay the recovery of gas due to----unless you are able to lift that out of the well-bore it will gather in the well-bore, and keep the constant gas flow down.

Q. Is it your testimony that you can better keep this formation clean through a tubing completion?

A. Yes, sir.

Q. The Mesaverde production then is your principal towards the production for this well?

A. That is true.

Q. In the Dakota \$12.00 a day is a salvage proposition?

A. That is true. We might go on there that in regard to this type of dual completion we feel that we are more interested definitely in our commercial gas zone, than we are in the non-commercial gas zone. It is just a matter of salvage.

Q. Has this type of dual completion been used previously in the State?

A. Not to my knowledge.

Q. Why is that?

A. The State objects or rather the Oil Conservation Commission objects to the use of this type of dual completion because it does not allow bottom hole pressure surveys to be run, especially on the lower formation. An approximate survey could be made of the Mesaverde formation but none of the Dakota.

Q. Are bottom hole pressure tests required in the Dakota formation in the Northwest at this time?

A. No, sir, they are not.

Q. There is a possibility that in some future date the Commission may wish to take such tests?

A. That is true.

Q. And with this type of dual completion you could not take a bottom hole pressure test?

A. That is also true.

Q. Could you accurately compute bottom hole pressures in the Dakota formation at the mouth of the well under the dual completion setup you are recommending?

A. We feel that we can. The Dakota formation, to our knowledge, and past experiences, has proved to be a very dry gas formation, without accumulations of liquids in it. We feel that we could calculate bottom hole pressures on it.

Q. Now you have previously testified that there is a risk of prejudice to the Mesaverde formation through a completion in the annulus, is that correct?

A. That is true.

Q. But that the type of dual completion that you are recommending whereby the Mesaverde formation is produced through the tubing would not permit a bottom hole pressure test in the Dakota?

A. That is true.

Q. What is your opinion as to the justification of protecting the Mesaverde formation from waste in the ground as compared with the desirability of conducting such pressure tests in the future?

A. We feel the economic factors of being able to produce the Mesaverde formation far outweighs the value of the bottom hole pressure survey of the Dakota formation.

Q. In this particular well?

A. In this well, yes.

Q. Have you tested this type of completion to determine whether there is any commingling between the two producing zones?

A. Yes, sir, we have.

Q. What was the result of such tests?

A. A packer leakage test was run yesterday under the supervision of a member of the Oil Conservation Commission of Aztec, New Mexico. After 47 days the casing pressure for the Dakota formation had a wellhead pressure of 2,454 pounds, the tubing pressure was 1200 pounds representing the Mesaverde formation. The tubing was opened and flowed for one hour's time through a 3/4 inch choke. The pressure was drawn down behind the choke to 404 pounds while the pressure of the casing was measured at 2,516. The tubing was then shut off and the casing was opened

to allow flow for one hour. At the end of that hour's time the tubing pressure had built up to 1,149 pounds while drawing the casing pressure down to 39 pounds. We feel that this is a valid test and shows that there is no commingling of gas due to packer leakage or a leak in the tubing.

Q. What provision do you propose, Mr. Coel, for separately measuring production in the Mesaverde and the Dakota formations?

A. We will set separate meter runs on the two types of production. One meter run will measure the gas from the tubing and the other from the casing.

Q. Directing your attention again to Exhibit A, what area shown thereon is the Allison Unit?

A. All the area, except the E/2 of Section 20 which is not committed to the unit.

Q. Are you familiar with the well location requirements of Order R-110 and the mandate covering the Mesaverde formation?

A. I am.

Q. Can you state those requirements?

A. They require that a well be located in either the NE/4 or the SW/4 of the section.

Q. And where is the Allison-----exactly where is the Allison Unit Well located?

A. 1750 feet from the North line and 990 feet from the West line of Section 20 being in the NW/4.

Q. Which is an unorthodox location for a Mesaverde well?

A. That is true.

Q. In your opinion, as an engineer, will a dual completion of the Allison Unit well in the manner that you recommended protect correlative rights for all offset owners?

A. It will.

Q. Will such completion prevent the waste of non-commercial quantities of ^{gas} Dakota in the ground, the economic waste which would result in the drilling of additional Mesaverde wells in an orthodox location?

A. Yes, sir.

MR. WOODWARD: I have no further questions of the witness under direct examination. I submit Exhibits A and B.

MR. MANKIN: I don't believe they have been so marked as yet. Do you want them marked as you have indicated, as Exhibit A and Exhibit B. Is there objection to the entering of Exhibit A and Exhibit B in this case? If not, they will be so entered. Mr. Coel, has there been any other dual completions granted in the Northwest in which the Mesaverde is produced through or rather where it would be produced through the annulus?

A. Not to my knowledge.

MR. MANKIN: In other words, you likewise are not--do not desire that in this case. You desire to produce it through the tubing and you know of none other where it has been produced through the annulus?

A. No, sir.

MR. MANKIN: Let the record show that although the docket of this particular case indicates that this is only for a dual completion of this well, in compliance with Rule 112 (a), that the readvertised case on May 10th, also

-11-

in addition to the request for dual completion likewise requested and so properly advertised for the non-standard location as exception to Rule 110 (a) as amended. Is there question of the witness in this case? Mr. Utz.

MR. UTZ: Mr. Coel, you went through the packer leakage test rather fast. I wonder if you would run through that again so that we will understand it?

A. I will be glad to.

MR. UTZ: Also state what the differential across the packer was.

A. Well, that will take a little calculations on the packer. I have not done that. I might go back here and reflect that the original potential test taken on the well after 15 days of shut-in showed a casing pressure of 2,318 and a tubing pressure of 1,154. After 47 days of shut-in pressure, the casing pressure was 2,454 pounds and the tubing 1,200 pounds. The tubing was opened, the pressure was taken every 15 minutes. At the end of an hour's time the casing pressure had built up to 2,516 while drawing the tubing pressure down to 404 pounds. This was through a 3/4 inch choke in the tubing. It was then shut-in and the 3/4 inch choke was transferred to the casing and the casing was flown for an hour's time.

MR. UTZ: How long was that shut-in?

A. About 10 minutes. At the end of an hour's time, the tubing pressure was 1,149 pounds while the casing pressure had been drawn down to 31 pounds.

MR. WOODWARD: Mr. Coel, how long will it take you to make the computation of the pressure differential across the packer?

-12-

A. About twenty minutes.

MR. WOODWARD: If the Commission desires the information on the pressure differential across the packer we will be glad to submit such calculation.

MR. UTZ: Your flowing tubing pressure on the Mesaverde was 404 pounds?

A. Yes, sir, at the end of an hour's time.

MR. UTZ: And your shut-in pressure was 2,516 on the Dakota?

A. That is true.

MR. UTZ: That would be the approximate differential across the packer?

A. Yes, that is right.

MR. MANKIN: Mr. Utz, before we proceed to go ahead with the counsels request here, it will not be necessary at this time to make that calculation. I presume, however, that the packer leakage test which is now available, will be properly submitted?

A. It will be.

MR. MANKIN: That information will, of course, be on that particular packer leakage test. Proceed please.

MR. UTZ: If you had flowed the high pressure side of the Dakota, do you think you would of gotten that much differential across the packer?

A. No, because the Dakota blew down, in an hour's time, to only 31 pounds flowing pressure and it would be almost impossible for the Mesaverde to get much higher than 1,200 pounds.

MR. UTZ: Mr. Coel, is there any better type of dual completion that you could have made here and which would have kept the liquids off of the Mesaverde?

A. Yes, sir, there is. We could not have made it here because we were in a little bit of a bind on getting this done. A dual string of tubing might have been run. It would be rather difficult to get inside a 5 1/2 inch casing, but it has been done.

MR. UTZ: If you had planned before hand you could have used a dual string?

A. If we would have had the equipment available, that is true, we could have done it.

MR. UTZ: Would you say in this case that the use of a Rector head with a bleeder string would be satisfactory or not?

A. It could be, yes. I don't say it would be exactly but I am sure that it could be worked out.

MR. MANKIN: Mr. Utz, what you had in mind was, of course, for the Mesaverde.

MR. UTZ: That is correct. The Dakota formation in this pool will be subject to the deliverability test under Order R-333, isn't that correct?

A. That is true.

MR. UTZ: Do you anticipate any complication in calculating the working pressure-----pressure loss due to friction on this type of completion?

A. No, sir, we will have two different factors to take in there, but I believe they can be easily done.

MR. UTZ: They can be calculated through the crossover?

A. I think they can.

MR. UTZ: You don't believe there will be any restrictions in the crossover?

A. No, it is nearly full opening. The restriction is negligible, it is for a very short sub actually.

MR. UTZ: In case of dual completion it will be necessary in order to make that calculation on everything, is that correct?

A. Of this type, yes.

MR. UTZ: I believe that is all I have.

MR. MANKIN: Any further questions of the witness in this case? If there is no other questions of the witness -----you don't desire to put on your other witness, do you? The witness may be excused. Before you make your statement, Mr. Woodward, let the record show that El Paso requested this application to be approved administratively; however the Commission and also this particular application was in two designated pools which likewise anomalous for the Northwest because most of the dual completions that had been granted administratively were outside of these designated pools, but the Commission felt that this being the only type of this completion that had ever been requested within the State, that it best be brought to the attention of everyone and that it best be served by a hearing and also could bring out that particular facet of it that the bottom hole pressure could not properly be taken of the lower zone. Mr. Woodward.

MR. WOODWARD: The applicant in this case would like to make clear that it is not recommending this type of dual completion as a precedent for the Northwest, but that in the exercise of his business judgement that it is faced with this particular problem; it has a very small amount of Dakota formation which he would like to salvage, rather produce than leave it in the ground, but not at the risk of prejudice to the only commercial formation in the well. The prospective risk of waste in the Mesaverde far outweighs the value of conducting a pressure test at some future date on the chance that it should be required. The deliverability of the Dakota formation is lower than might be expected in other Dakota wells and so far as Dakota production is concerned may well be classified as marginal. For this reason, we urge the Commission to make an exception in this particular case.

MR. MANKIN: Is there further statements to be made in this case? If not, we will take the case under advisement.

STATE OF NEW MEXICO)
COUNTY OF SANTA FE) ss

I, Joan Hadley, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Commission Examiner at Hobbs, New Mexico, is a true and correct record, to the best of my knowledge, skill and ability.

Dated at Santa Fe, New Mexico this 26th day of September, 1956.

Joan Hadley

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

June 25, 1956

C
O
P
Y

Mr. John A. Woodward
El Paso Natural Gas Company
P. O. Box 1492
El Paso, Texas

Dear Sir:

We enclose a copy of Order R-820 issued June 18, 1956, by the Oil Conservation Commission in Case 1076, which was heard on May 23rd at Hobbs.

Very truly yours,

A. L. PORTER, Jr.
Secretary - Director

ga
Encl.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF THE STATE OF NEW
MEXICO FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 1076
Order No. R-820

THE APPLICATION OF EL PASO
NATURAL GAS COMPANY FOR AN
ORDER GRANTING PERMISSION TO
DUALY COMPLETE, IN THE BLANCO-
MESAVERTHE GAS POOL AND THE NORTH
LOS PINOS-DAKOTA GAS POOL, IT'S
ALLISON UNIT NO. 10 WELL LOCATED
1750 FEET FROM THE NORTH LINE AND
990 FEET FROM THE WEST LINE OF
SECTION 20, TOWNSHIP 32 NORTH,
RANGE 6 WEST, SAN JUAN COUNTY,
NEW MEXICO, AND FOR AN ORDER
GRANTING AN UNORTHODOX LOCATION
FOR SAID WELL IN EXCEPTION TO
SECTION 1 (c) OF THE SPECIAL
RULES AND REGULATIONS FOR THE
BLANCO MESAVERTHE GAS POOL AS SET
FORTH IN ORDER R-110 AS AMENDED
BY PARAGRAPH 4 OF ORDER R-397.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 23, 1956, at Hobbs, New Mexico, before Warren W. Mankin, Examiner duly appointed by the Oil Conservation Commission of New Mexico in accordance with Rule 1214 of the Rules and Regulations of the New Mexico Oil Conservation Commission.

NOW, on this 18th day of June 1956, the Oil Conservation Commission of New Mexico hereinafter referred to as the "Commission", a quorum being present, having considered said application, the evidence adduced, the recommendations of the Examiner, Warren W. Mankin, and being fully advised in the premises,

FINDS:

(1) That due notice of the time and place of hearing and the purpose thereof having been given as required by law, the Commission has jurisdiction of this case and the subject matter thereof.

(2) That applicant is the operator of its Allison Unit Well No. 10, located 1750 feet from the North line and 990 feet from the West line of Section 20, Township 32 North, Range 6 West, NMPM, San Juan County, New Mexico.

(3) That said well was drilled as a Dakota well and is now an unorthodox location under the Special Rules and Regulations for the Blanco Mesaverde Gas Pool.

(4) That no objection has been entered as to the proposed dual completion or unorthodox location.

(5) That the granting of this application will not cause but will prevent waste and will protect correlative rights.

IT IS THEREFORE ORDERED:

1. That the applicant herein, El Paso Natural Gas Company be and is hereby authorized to dually complete its Allison Unit Well No. 10 located 1750 feet from the North line and 990 feet from the West line of Section 20, Township 32 North, Range 6 West, NMPM, San Juan County, New Mexico, in such a manner as to permit production from the Mesaverde formation of the Blanco Mesaverde Gas Pool by proper perforations of the outer tubing and the gas produced through the tubing-tubing annulus to the crossover tube thence to the surface through the tubing, and the production of gas from the Dakota formation of the North Los Pinos Dakota Gas Pool from open hole through the tubing to the Crossover tube and thence to the surface through the tubing-tubing annulus and with the installation of a suitable packer and with the installation of adequate surface equipment to maintain complete separation of the two zones of production.

PROVIDED HOWEVER, That subject well shall be completed and thereafter produced in such a manner that there will be no commingling within the well-bore, either within or outside the tubing of gas, distillate and gas, or distillate produced from either or both of the separate strata,

PROVIDED HOWEVER, That prior to the actual dual completion the operator shall make pressure tests of the casing to prove that no casing or tubing leaks have developed since the well was originally completed. In the event a casing or tubing leak is apparent the operator shall take appropriate steps to adequately repair the leak. The results of these tests shall be reported to the Commission on Form C-103.

PROVIDED FURTHER, That upon the actual dual completion of such subject well applicant shall submit to the appropriate District Office of the Commission, copies of Oil Conservation Commission Form C-103, Form C-104, Form C-110 and Form C-122 outlining the information required on those forms by existing Rules and Regulations and two copies of the electric log of the well.

PROVIDED FURTHER, That said subject well for dual completion and production shall be equipped in such a way that reservoir pressures may be determined separately for each of the two specified strata, and further, be equipped with all necessary connections required to permit recording meters to be installed and used, at any time, as may be required by the Commission or its representatives, in order that natural gas, distillate, or distillate

and gas from each separate stratum may be accurately measured and the gas-distillate ratio thereof determined, and

PROVIDED FURTHER, That the operator-applicant shall make any and all tests, including segregation tests, packer leakage tests on completion and annually during the deliverability test and submit packer setting affidavit on completion, remedial action or whenever the packer is disturbed, but not excluding other tests and/or determinations at any convenient time and in such manner as deemed necessary by the Commission; the original and all subsequent tests shall be witnessed by representatives of the Commission and by representatives of offset operators, if any there be, at their election, and the results of each test properly attested to by the applicant herein and all witnesses, and shall be filed with the Commission within ten days after completion of such test, and

PROVIDED FURTHER, That upon the actual dual completion of such subject well, applicant shall submit to the Commission a diagrammatic sketch of the mechanical installation which was actually used to complete and produce the seal between the strata, and a special report of production, gas distillate ratio and reservoir pressure determination of each producing zone or stratum immediately following completion.

IT IS FURTHER ORDERED:

That application of El Paso Natural Gas Company for an order granting approval of an unorthodox location for its Allison Unit Well No. 10 located 1750 feet from the North line and 990 feet from the West line of Section 20, Township 32 North, Range 6 West, NMPM, Blanco Mesaverde Gas Pool, San Juan County, New Mexico, be and the same is hereby granted.

That jurisdiction of this cause is hereby retained by the Commission for such further order or orders as may seem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of applicant to comply with any requirement of this order after proper notice and hearing the Commission may terminate the authority hereby granted and require applicant or its successors and assigns to limit its activities to regular single-zone production in the interests of conservation.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

John F. Simms
JOHN F. SIMMS, Chairman

E. S. Walker
E. S. WALKER, Member

A. L. Porter, Jr.
A. L. PORTER, Jr., Member & Secretary



BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION
OF EL PASO NATURAL GAS COMPANY FOR
PERMISSION TO DUALY COMPLETE ITS
ALLISON UNIT WELL #10 WELL LOCATED
1750' FROM THE NORTH LINE AND 990'
FROM THE WEST LINE OF SECTION 20,
TOWNSHIP 32 NORTH, RANGE 6 WEST,
SAN JUAN COUNTY, NEW MEXICO, AND
FOR UNORTHODOX LOCATION OF SAID WELL
IN THE MESAVERDE FORMATION AS AN
EXCEPTION TO SECTION 1(c) of ORDER
R-110

CASE NO. 1016

A P P L I C A T I O N

COMES NOW El Paso Natural Gas Company and alleges and states:

- (1) That its Allison Unit Well #10 is located 1750' from the north line and 990' from the west line of Section 20, Township 32 North, Range 6 West, San Juan County, New Mexico, as shown on Exhibit "A", attached to and made a part of this application.
- (2) That said well was drilled to a total depth 8255' and was plugged back to a depth of 8042'. 13-3/8" OD surface casing was set at 160' with 175 sacks of cement. 9-5/8" OD intermediate casing was set at 3553' with 250 sacks of cement. 5 1/2" OD production casing was set at 7940' with 500 sacks of cement. A temperature survey showed the top of the cement at 5620'. The 5 1/2" casing was thereafter perforated at 5615' and 150 sacks of cement were pumped behind the casing to a top of 5150'.
- (3) Tops of the Mesaverde and Dakota formations were encountered at the depths of 5730' and 7930', respectively, in said well. The Dakota tested 367 Mcf of gas through a 3/4" choke in three hours. Sand-water and sand-oil fracing from 7940' to 8042' was unsuccessful. The casing was perforated from 5730' to 5788' and from 5500' to 5690'. After sand-water fracing, the Mesaverde interval tested 6,551 Mcf through a 3/4" choke in three hours.
- (4) That applicant proposes to complete said well in the Mesaverde formation and in the Dakota formation, using a Baker Model "D" packer to separate production therefrom. One packer will be set below the Mesaverde perforations and a tubing string will be run through it to the Dakota producing interval. A second

packer will be set above the Mesaverde perforations and a cross-over sub will be used to produce the Mesaverde formation through the tubing and the Dakota formation through the annulus, all as shown on Exhibit "B", attached to and made a part of this application.

(5) That the Dakota formation in said well is not productive of gas in commercial quantities and that completion of said well in both the Mesaverde and Dakota formations in the manner described herein and as an exception to Section 1(c) of Order R-110 will prevent waste without prejudice to correlative rights or injury to other producing zones or fresh water stratas.

WHEREFORE, applicant prays that this matter be set down for hearing, that notice thereof be given as required by law and that, upon hearing, the Commission enter its order permitting applicant to dually complete its Allison Unit Well #10 in the manner described herein; and that the unorthodox location of said well in the Mesaverde formation be permitted as an exception to Section 1(c) of Order R-110.

Respectfully submitted,

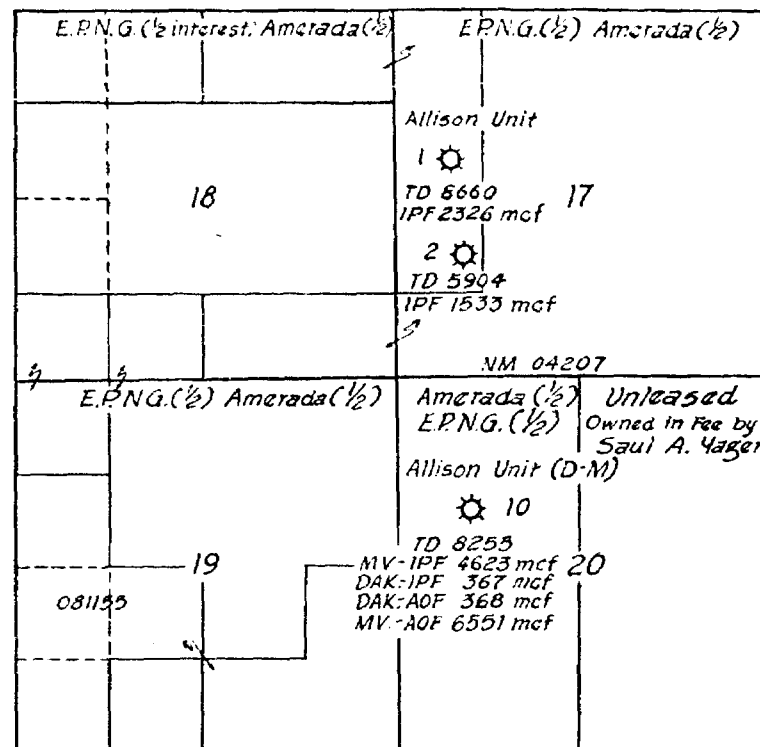
EL PASO NATURAL GAS COMPANY

By

John A. Woodward
Attorney

Exhibit A

R 6 W



El Paso Natural Gas Company

Scale: 2" = 1 Mile

WORKING INTEREST

AS TO MESA VERDE:

El Paso Natural Gas Company;	52.3231810% of 87.5%	.45782783
Amerada Petroleum Corporation;	44.6322555% of 87.5%	.39053224
Stanolind Oil & Gas Company;	.3424875% of 87.5%	.00299677
Phillips Drilling Company;	.2903975% of 87.5%	.00254098
Three States Natural Gas Company;	.5303200% of 87.5%	.00464030
Squire Production Company;	.07259900% of 87.5%	.00063524
Western Natural Gas Company;	1.2058395% of 87.5%	.01055109
San Jacinto Petroleum Corp.;	.6029200% of 87.5%	.00527555

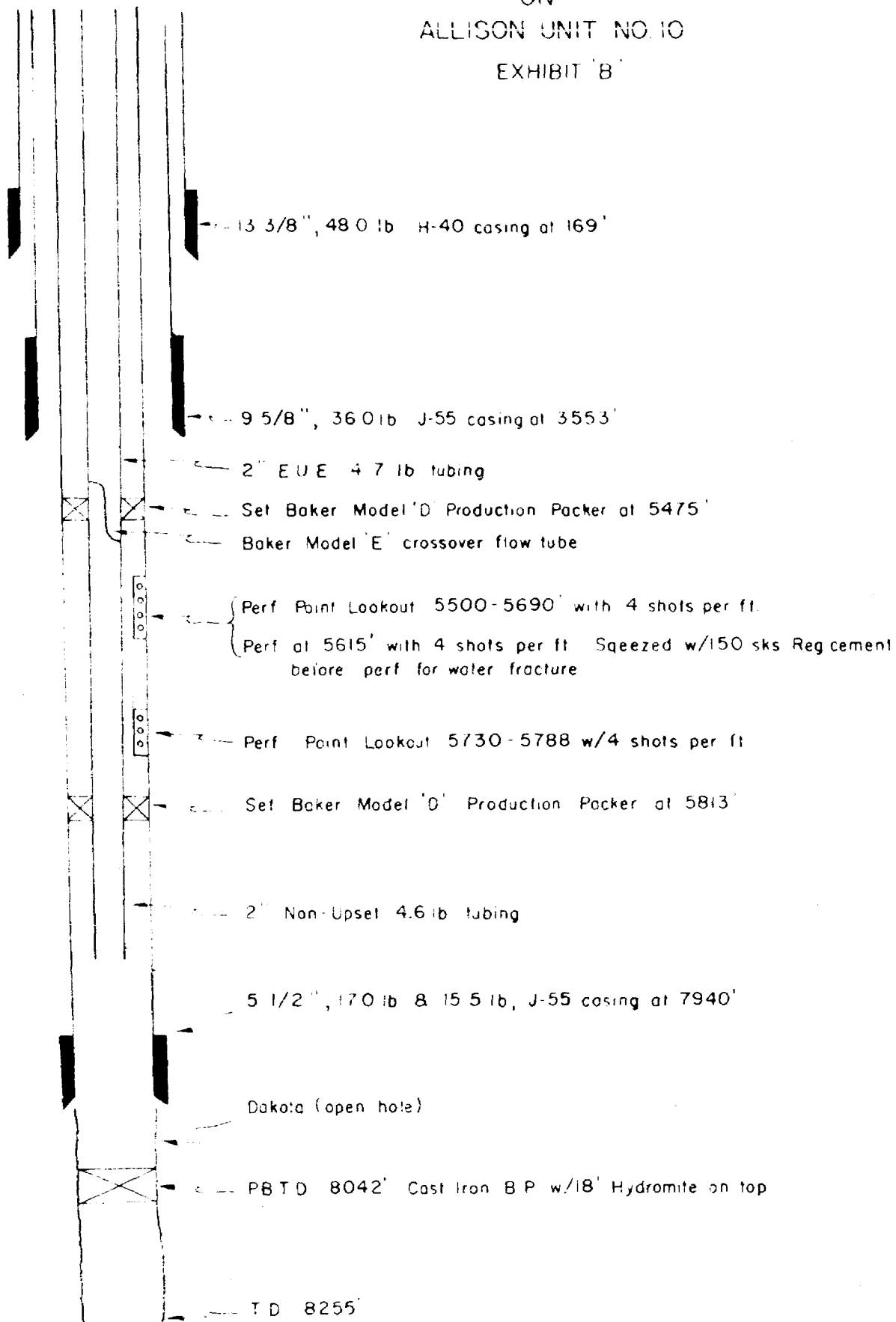
AS TO DAKOTA FORMATION:

El Paso Natural Gas Company;	47.6768190% of 87.5%	.41717217
Amerada Petroleum Corporation;	44.6322555% of 87.5%	.39053224
Stanolind Oil & Gas Company;	.3424875% of 87.5%	.00299677
Phillips Drilling Company;	.2903975% of 87.5%	.00254098
Three States Natural Gas Co.	.5303200% of 87.5%	.00464030
J. Glenn Turner	4.6463620% of 87.5%	.04065566
Squire Production Company	.07259900% of 87.5%	.00063524
Western Natural Gas Company	1.2058395% of 87.5%	.01055109
San Jacinto Petroleum Corp.	.6029200% of 87.5%	.00527555

Plat Accompanying Application
for Unorthodox Location

Allison Unit No. 10 Well

SCHEMATIC DIAGRAM OF DUAL COMPLETION
ON
ALLISON UNIT NO. 10
EXHIBIT 'B'



64 b

DC-475

El Paso Natural Gas Company

El Paso, Texas
Feb 19, 1956

DIRECT REPLY TO:
P.O. BOX 987
FARMINGTON, NEW MEXICO

Mr. W. R. Macey, Secretary and Director
Oil Conservation Commission
Box 871
Santa Fe, New Mexico

Dear Sir:

This is to request administrative approval for a well that will be dually completed in the Mesa Verde and the Dakota formations.

The El Paso Natural Gas Company Allison Unit #10 is located 1750 feet from the North line and 990 feet from the West line of Section 20, Township 32N, Range 6W, N.M.P.M., San Juan County, New Mexico. Completion will be done in the following manner.

1. 13 3/8" OD surface casing has been set at 169' with 175 sacks of cement.
2. 9 5/8", OD intermediate casing was set at 3553' with 250 sacks of cement.
3. 5 1/2" OD production casing was set at 7940' with 500 sacks of cement. At this time the well depth was 8255' and had been plugged back to 8042'. Temperature survey showed the top of cement at 5620' (above the Point Lookout formation). The 5 1/2" casing was perforated at 5615' and 150 sacks of cement was pumped to a top of 5150', behind the 5 1/2". This cement adequately covers the Mesa Verde and protects all the formations necessary.
4. The Dakota formation was sand-water fractured from 7940' to 8042' and then a sand-oil frac procedure was tried. Neither stimulate increased production.
5. The lower Mesa Verde was perforated from 5730' - 5768' at intervals and this set of perforations stimulated with sand-water fracture procedure.
6. The upper Mesa Verde was perforated at intervals from 5500' to 5690' and these perforations were likewise stimulated with sand-water fracing process.

Blanco Riv.
Dakota

7. All bridging plugs will be drilled and the formations thoroughly cleaned out.
8. Baker Model "D" production packers will be used to separate the producing formation. One packer will be set below the Mesa Verde perforations and a tubing stinger will be run through it for Dakota production. A second packer will be set above the Mesa Verde perforations and a cross-over sub will be employed to produce the Mesa Verde through the tubing and the Dakota through the annulus of tubing - casing above the upper packer.

Administrative approval is asked for this well so that production from the Mesa Verde can be used to help defray the costs of drilling the Dakota formation which apparently will not produce paying quantities of natural gas. Dual completion procedure is necessary due to the wide differences of shut-in pressures from the Dakota vs the Mesa Verde, a difference of nearly 2000 psi. As shown above all precautions are being observed to protect all the producing formations.

This well is located in the Allison Unit operated by El Paso Natural Gas Company. However, please note that the use of the Northwest location for a Mesa Verde is unorthodox. Mr. R. L. Hamblin of El Paso's lease department will file the application for unorthodox location and spacing. It is intended to dedicate the Northwest one quarter of Section 20 to the Dakota formation and the west one-half of Section 20 to the Mesa Verde formation.

The use of a cross-over sub in conjunction with production packers will not allow bottom-hole pressure surveys to be taken as have been specified on previously approved dually completed wells.

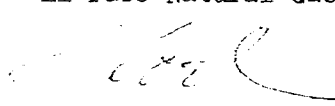
Inclosed are two copies of a schematic sketch showing the methods to be used for dual completion. Location plats and a map of the off-set acreage will be filed by the lease department when requesting unorthodox spacing approval.

Completion logs will be filed with the local Oil Conservation Commission in Aztec, New Mexico when the well is completed and production tests can be run.

If you need any further information please call on me.

Yours very truly,

El Paso Natural Gas Company


E. J. Coel
Senior Petroleum Engineer

EJC:ajh
Enc.

cc: P. T. McGrath
Emery Arnold
R. L. Hamblin

SCHEMATIC DIAGRAM OF WELL COMPLETION
ON
ALLISON UNIT NO. 10

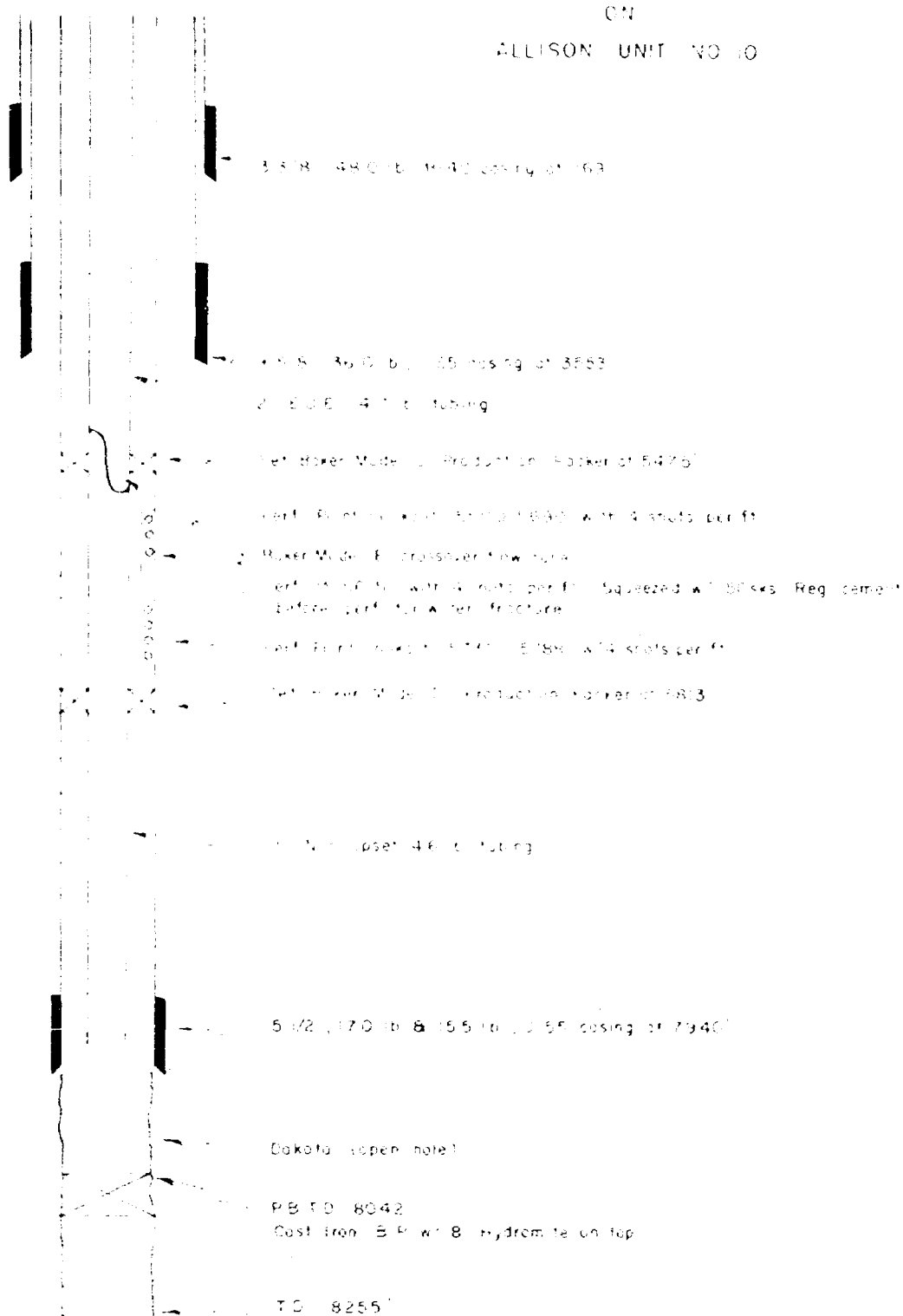
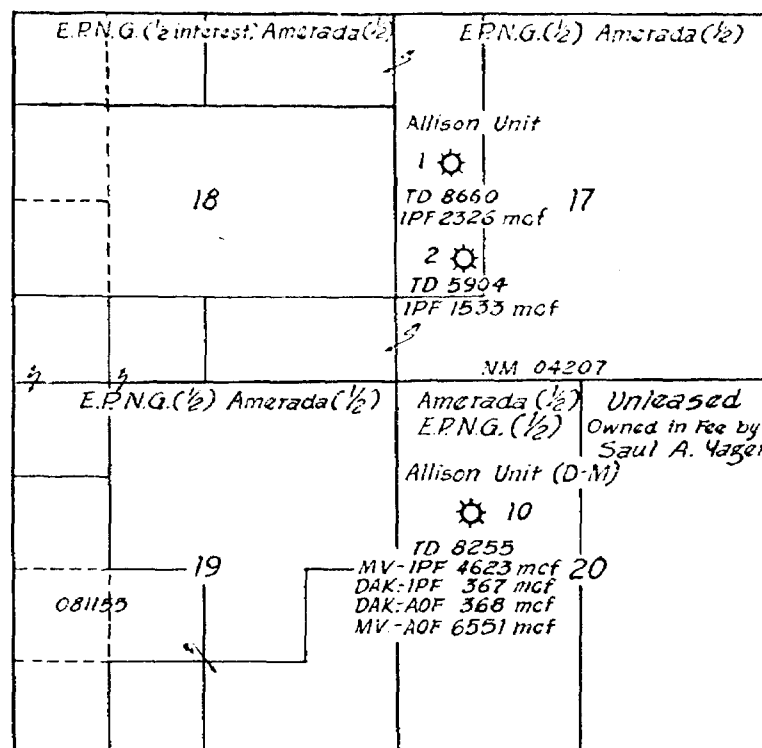


Exhibit A

R 6 W



El Paso Natural Gas Company

Scale: 2" = 1 Mile

WORKING INTEREST

AS TO MESA VERDE:

El Paso Natural Gas Company;	52.3231810% of 87.5%	.45782783
Amerada Petroleum Corporation;	44.6322555% of 87.5%	.39053224
Stanolind Oil & Gas Company;	.3424875% of 87.5%	.00299677
Phillips Drilling Company;	.2903975% of 87.5%	.00254098
Three States Natural Gas Company;	.5303200% of 87.5%	.00464030
Squire Production Company;	.07259900% of 87.5%	.00063524
Western Natural Gas Company;	1.2058395% of 87.5%	.01055109
San Jacinto Petroleum Corp.;	.6029200% of 87.5%	.00527555

AS TO DAKOTA FORMATION:

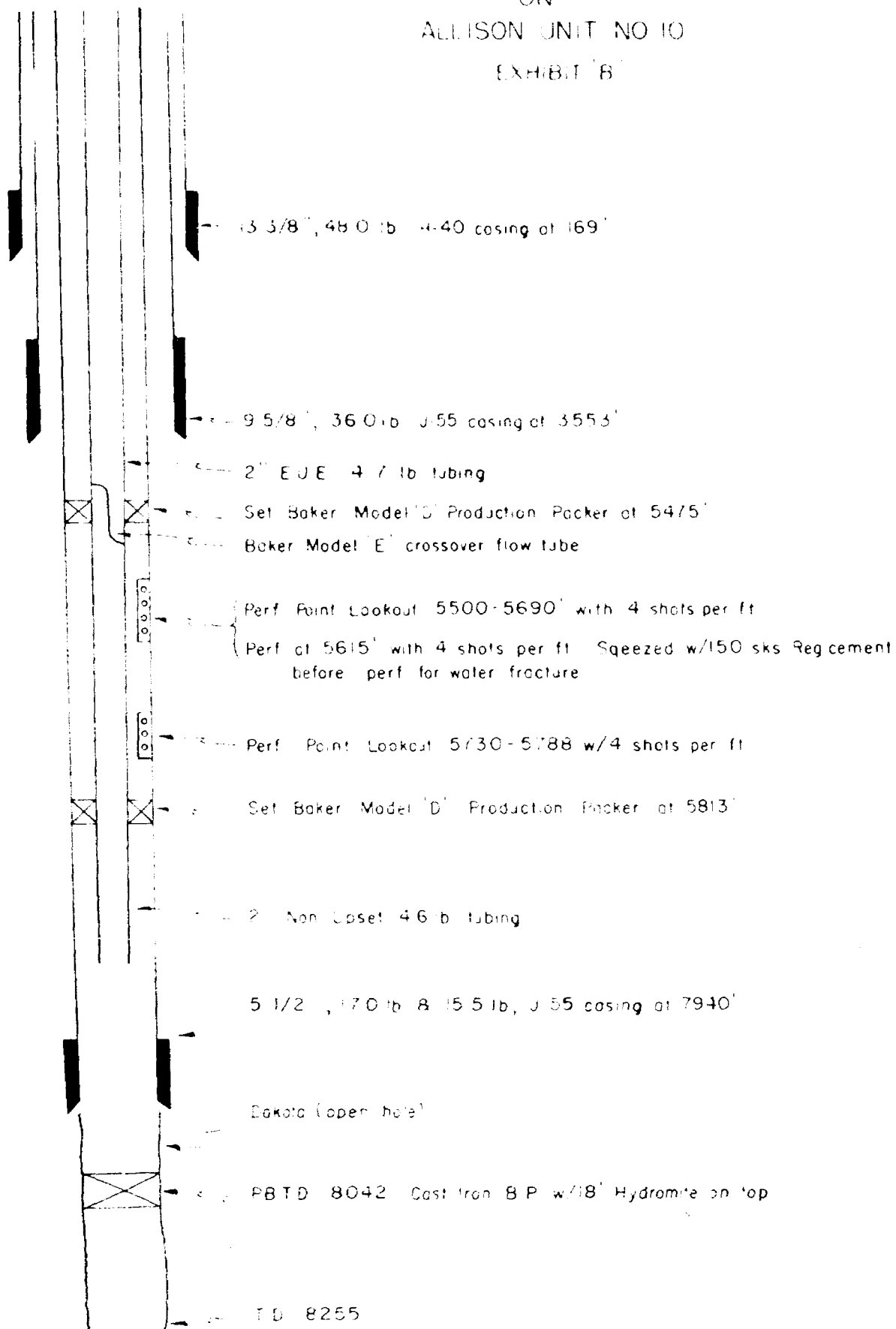
El Paso Natural Gas Company;	47.6768190% of 87.5%	.41717217
Amerada Petroleum Corporation;	44.6322555% of 87.5%	.39053224
Stanolind Oil & Gas Company;	.3424875% of 87.5%	.00299677
Phillips Drilling Company;	.2903975% of 87.5%	.00254098
Three States Natural Gas Co.	.5303200% of 87.5%	.00464030
J. Glenn Turner	4.6463620% of 87.5%	.04065566
Squire Production Company	.07259900% of 87.5%	.00063524
Western Natural Gas Company	1.2058395% of 87.5%	.01055109
San Jacinto Petroleum Corp.	.6029200% of 87.5%	.00527555

Plat Accompanying Application
for Unorthodox Location

Allison Unit No. 10 Well

BEFORE THE COMMISSION
OIL CONS
SAY
CASE 1076

SCHEMATIC DIAGRAM OF DUAL COMPLETION
ON
ALLISON UNIT NO 10
EXHIBIT 'B'



NOTICE OF PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION
SANTA FE - NEW MEXICO

The State of New Mexico by its Oil Conservation Commission hereby gives notice pursuant to law and the Rules and Regulations of said Commission promulgated thereunder of the following public hearing to be held at 9:00 o'clock a.m. on May 23, 1956, at the auditorium located in the Offices of the New Mexico Oil Conservation Commission, Hobbs, New Mexico, before Warren W. Mankin, Examiner, duly appointed for said hearing as provided by law.

STATE OF NEW MEXICO TO:

All named parties and persons
having any right, title, interest
or claim in the following cases,
and notice to the public.

(Note: All land descriptions herein refer to the New Mexico Principal Meridian, whether or not so stated.)

CASE 1076: (Readvertisement)

In the matter of the application of El Paso Natural Gas Company for an order approving a dual completion in the Blanco Mesaverde Gas Pool and North Los Pinos Dakota Gas Pool in compliance with Rule 112 (a) of the New Mexico Oil Conservation Commission Statewide Rules and Regulations, and further applicant seeks approval of an unorthodox location of said well as an exception to Section 1 (c) of Order R-110 as amended by Paragraph (4) of Order R-397.

Applicant, in the above-styled cause, seeks an order granting them permission to dually complete by the use of a double crossover flow tube on their Allison Unit Well No. 10 in the Blanco Mesaverde Gas Pool and the North Los Pinos Gas Pool; said well being located 1750 feet from the North line and 990 feet from the West line of Section 20, Township 32 North, Range 6 West, San Juan County, New Mexico. Applicant further seeks an order approving the unorthodox location of said well in the Blanco Mesaverde Gas Pool in exception to Section 1 (c) of Order R-110 as amended by Paragraph (4) of Order R-397.

GIVEN under the seal of the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, this 9th day of May, 1956.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

A. L. PORTER, JR.
SECRETARY

S E A L

El Paso Natural Gas Company
El Paso, Texas
May 7, 1956
RECEIVED MAY 11 1:29
OFFICE GOC

New Mexico Oil Conservation Commission
State of New Mexico
Post Office Box 871
Santa Fe, New Mexico

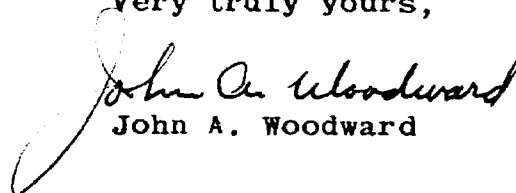
Attention: Mr. A. L. Porter, Jr.

Gentlemen:

Enclosed herewith is El Paso application, in triplicate, for authority to dually complete its Allison Unit Well #10 and for unorthodox location of said well in the Mesaverde Formation.

We request this application be set down for hearing by an Examiner in Santa Fe as soon after the regular monthly meeting in May as time and the Commissioner's rules permit.

Very truly yours,


John A. Woodward

JAW:ha
Encls.

SCHEMATIC DIAGRAM OF DUAL COMPLETION
ON

ALLISON UNIT NO 10

EXHIBIT B

