EASE 5698: EL PASO NATURAL GAS CO. FOR DOWNHOLE COMMINGLING, RIO ARRIBA COUNTY, NEW MEXICO

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### CASE NO.

5698

APPlication, Transcripts, Small Exhibits,

ETC.

Dear Dick. Ce/23/76 the oet production figures for The 28-7#82 Mara decle well. how the Eughidering Report Chundle for 72, 73, 74 + 75 Hus the Mouthly Valuer for Jan, Fab, May 76. The volumes are Call () Juertions , please (Sole (a) 5698 ).



DIRECTOR

JOE D. RAMEY

### **OIL CONSERVATION COMMISSION**

STATE OF NEW MEXICO P. O. BOX 2088 - SANTA FE

87501

PHIL R. LUCERO

July 6, 1976



STATE GEOLOGIST EMERY C. ARNOLD

Mr. Randy Se El Paso Nati	ural Gas					5698 R-5233		
P. O. Box 16 El Paso, Te		78	4	Appli	.cant	:		
			-	E1	Pasc	Natural	Gas	Company
Dear Sir	•							
		th are two recently						
JOE D. R Director	Mair AMEY	ey .	-					
JDR/fd								
Copy of	order al	lso sent t	o:					
Hobbs 00								
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Aztec 00	C							
Ohloon								

### BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

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

> CASE NO. 5698 Order No. R-5233

APPLICATION OF EL PASO NATURAL GAS COMPANY FOR DOWNHOLE COMMINGLING, RIO ARRIBA COUNTY, NEW MEXICO.

### ORDER OF THE COMMISSION

### BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 23, 1976, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 6th day of July, 1976, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

### FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, El Paso Natural Gas Company, is the owner and operator of the San Juan 28-7 Unit Well No. 82, located in Unit A of Section 4, Township 27 North, Range 7 West, NMPM, Rio Arriba County, New Mexico.
- (3) That the applicant seeks authority to commingle South Blanco-Pictured Cliffs and Blanco Mesaverde production within the wellbore of the above-described well.
- (4) That from the South Blanco-Pictured Cliffs zone, the subject well is capable of low marginal production only.
- (5) That from the Blanco Mesaverde zone, the subject well is capable of low marginal production only.
- (6) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.
- (7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.

-2-Case No. 5698 Order No. R-5233

- (8) That to afford the Commission the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Aztec district office of the Commission any time the subject well is shut-in for 7 consecutive days.
- (9) That in order to allocate the commingled production to each of the commingled zones in the subject well, 30 percent of the commingled gas production should be allocated to the South Blanco-Pictured Cliffs zone, and 70 percent and 100 percent of the commingled gas and oil production, respectively, to the Blanco Mesaverde zone.

### IT IS THEREFORE ORDERED:

- (1) That the applicant, El Paso Natural Gas Company, is hereby authorized to commingle South Blanco-Pictured Cliffs and Blanco Mesaverde production within the wellbore of the San Juan 28-7 Unit Well No. 82, located in Unit A of Section 4, Township 27 North, Range 7 West, NMPM, Rio Arriba County, New Mexico.
- (2) That 30 percent of the commingled gas production shall be allocated to the South Blanco-Pictured Cliffs zone and 70 percent and 100 percent of the commingled gas and oil production, respectively, shall be allocated to the Blanco Mesaverde zone.
- (3) That the operator of the subject well shall immediately notify the Commission's Aztec district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Commission, a plan for remedial action.
- (4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

SEAL

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

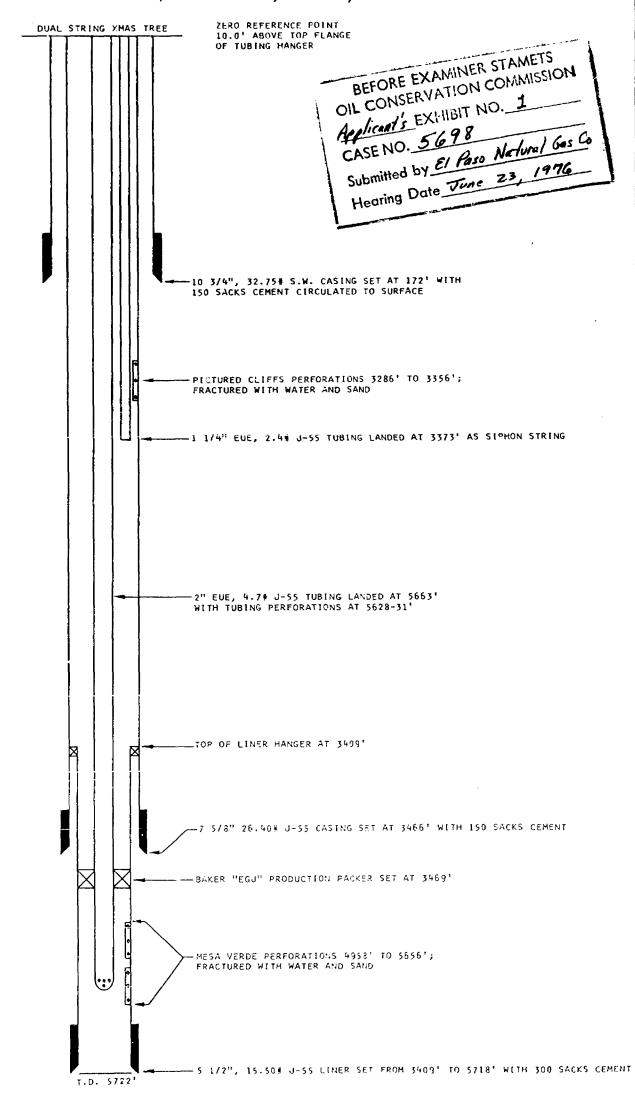
PHIL R. LUCERO, Chafrman

EMERY C. ARNOLD, Member

JOE D. RAMEY, Member & Secretary

### EXHIBIT No. 1

SCHEMATIC DIAGRAM of DUAL COMPLETION
El Paso Natural Gas Co. San Juan 28-7 Unit No. 82 (PM)
NE/4 Section 4, T-27-N, R-7-W



### NATURAL GAS

P. O. BOX 1492 EL PASO, TEXAS, 79978 PHONE: 915-543 2600

EXHIBIT NO. 2

May 5, 1976

San Juan 28-7 Unit Pictured Cliffs & Mesaverde Participating Area Working Interest Owners

Re: San Juan 28-7 Unit #82 Well (PC/MV Dual) NE/4 Section 4-27N-7W Rio Arriba County, New Mexico

OIL CONSERVATION COMMISSION Applicant's EXHIBIT NO.2A - 2F CASE NO. 5698 Submitted by El Paro Natural Gos Co Hearing Date June 23, 1976

BEFORE EXAMINER STAMETS

Dear Interest Owner:

The 1975 Packer leakage test performed on the referenced well indicated communication between the Mesaverde and Pictured Cliffs zones, and the New Mexico Oil Conservation Commission has directed that if a satisfactory Packer leakage test has not been received by May 19, 1976, the well will be shut-in. It is El Paso's recommendation that in lieu of a . workover to re-establish separate producing zones, an application be made to the Conservation Commission to allow production from the two zones to be commingled.

Production from the well has been relatively stable. Over the past year, production from the Pictured Cliffs Formation has averaged 40 MCF/D and the Mesaverde Formation, 119 MCF/D. The well produces only a small amount of liquid hydrocarbons from the Mesaverde Formation. In commingling, it is recommended that production be allocated to the two zones as follows: Pictured Cliffs - 30% of all dry gas produced, Mesaverde - 70% of all dry gas produced and all liquids.

If you agree with our recommendation, please indicate so by signing and returning one copy of this letter to this office. Your prompt reply will be appreciated since the well will be shut-in on May 19, 1976 if some type of action is not taken.

Yours very truly,

Don Wadswurth

Landman

Land Department

Energy Resource Development

SJ 28-7, 4.1, 4.2

APPROVED this 14th day of lay

Targaret Hoyahidas
Ancillary Counties of Tella

P.O. BOX 1492 £L PASO, TEXAS 79378 PHONE: 915-543-2600

May 5, 1976

EXHIBIT NO. 2

San Juan 28-7 Unit Pictured Cliffs & Mesaverde Participating Area Working Interest Owners

Re: San Juan 28-7 Unit #82 Well (PC/MV Dual)

NE/4 Section 4-27N-7W

Rio Arriba County, New Mexico

Dear Interest Owner:

The 1975 Packer leakage test performed on the referenced well indicated communication between the Mesaverde and Pictured Cliffs zones, and the New Mexico Oil Conservation Commission has directed that if a satisfactory Packer leakage test has not been received by May 19, 1976, the well will be shut-in. It is El Paso's recommendation that in lieu of a workover to re-establish separate producing zones, an application be made to the Conservation Commission to allow production from the two zones to be commingled.

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Yours very truly,

Don Wadsworth

Landman

Land Department

Energy Resource Development

SJ 28-7, 4.1, 4.2

APPROVED this 10th day of May , 1976.

BY: Solm (W) 19 14 President

THE WISER OIL COMPANY

P. O. BOX 1402 EL PASO, 1EXAS 79978 PHONE: 915-543-2600

May 5, 1976

EXHIBIT NO. 2

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RECEIVED

MAY - 7 1976

San Juan 28-7 Unit Pictured Cliffs & Mesaverde Participating Area Working Interest Owners

AMA. PROD.

Re: San Juan 28-7 Unit #82 Well (PC/MV Dual)

NE/4 Section 4-27N-7W

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Yours very truly,

Don Wadsworth

Landman

Land Department

Energy Resource Development

SJ 28-7, 4.1, 4.2

APPROVED this 11 day of 11/0, 1976.

BY: Affire Comment of March 1976.

P. O. BOX 1492 EL PASO, TEXAS 79978 PHONE: 915 543 2800

May 5, 1976

EXHIBIT NO. 2

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Re: San Juan 28-7 Unit #82 Well (PC/MV Dual)

NE/4 Section 4-27N-7W

Rio Arriba County, New Mexico

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Don Wadsworth
Landman
Land Department
Energy Resource Development

SJ 28-7, 4.1, 4.2

APPROVED this \_// day of \_\_\_\_\_\_\_\_\_, 1976.

BY: \_//\_ AL, // Landman
DIVISION PRODUCTION MANAGER
TENNECO OIL COMPANY

### EIPESD NATURAL GAS

May 5, 1976



P. O. BOX 1492 EL PASO, TEXAS 79978 PHONE: 915 543-2600

EXHIBIT NO. 2

San Juan 28-7 Unit Pictured Cliffs & Mesaverde Participating Area Working Interest Owners

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NE/4 Section 4-27N-7W

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Yours very truly,

Don Wadsworth

Landman

Land Department

Energy Resource Development

SJ 28-7, 4.1, 4.2

APPROVED this 7th day of May, 1976.

BY: Telenca Fr. Simmerca

### EIPEED NATURAL GAS

P.O. BOX 1492 EL PASO, TEXAS 79978 PHONE: 915-543-2600

May 5, 1976

EXHIBIT NO. 2

San Juan 28-7 Unit Pictured Cliffs & Mesaverde Participating Area Working Interest Owners

Re: San Juan 28-7 Unit #82 Well (PC/MV Dual) NE/4 Section 4-27N-7W

Rio Arriba County, New Mexico

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Yours very truly,

Don Wadsworth

Landman ....

Land Department Energy Resource Development

SJ 28-7, 4.1, 4.2

APPROVED this Bit day of Mily, 1976.

### BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

IN THE MATTER OF THE APPLICATION OF EL PASO NATURAL GAS COMPANY FOR DOWNHOLE COMMINGLING AT SAN JUAN 27-8 UNIT WELL No. 82, SECTION 4, TOWNSHIP 27 NORTH, RANGE 7 EAST, RIO ARRIBA COUNTY, NEW MEXICO.

Case No. 5698

### ENTRY OF APPEARANCE

COMES NOW MONTGOMERY, FEDERICI, ANDREWS, HANNAHS & BUELL, and enters its appearance in the above-entitled matter, on behalf of the Applicant.

> MONTGOMERY, FEDERICI, ANDREWS, HANNAHS & BUELL

Attorneys for Applicant Post Office Box 2307

Santa Fe, New Mexico 87501 Pockets "os. 19-76 and 20-76 are tentatively set for hearing on July 7 and July 21, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EMANINER MEARING - WEINESPAY - JUNE 23, 1976

9 A.M. - OIL COMPRENA ION COMPISSION CONFERENCE FORM, STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

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

CASE 5689: (Continued from June 9, 1976 Examiner Hearing)

Application of Dalport Oil Corporation for an unorthodox oil well location, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Jones Federal Well No. 4 to be drilled 990 feet from the South line and 1477 feet from the West line of Section 22, Township 15 South, Range 29 East, South Lucky Lake-Queen Pool, Chaves County, New Mexico.

CASE 4843: (Reopened) (Continued from June 9, 1976 Examiner Hearing)

In the matter of Case 4843 being reopened pursuant to the provisions of Order No. R-4435-A, which order extended the special pool rules for the Southeast Chaves Queen Cas Area, Chaves County, New Mexico, including a provision for 320-acre spacing and proration units for gas wells. All interested parties may appear and show cause why said Order No. R-4435 should not be rescinded.

- CASE 5695: Application of Yates Petroleum Corporation for an unorthodox oil well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its J Lazy J Well No. 13, to be drilled as the 5th well on the 40-acre tract, in the center of Unit G, of Section 22, Township 17 South, Range 25 East, Eagle Creek-San Andres Pool, Eddy County, New Mexico.
- CASE 5696: Application of Yates Petroleum Corporation for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Eagle Creek-San Andres Pool by the injection of water into the San Andres formation through its J Lazy J Wells Nos. 3, 6, 9, and 11, all located in Unit G of Section 22, Township 17 South, Range 25 East, Eddy County, New Mexico.
- CASE 5697: Application of Elk 0il Company for a unit agreement, Lea County, New Laxico. Applicant, in the above-styled cause, seeks approval for the Mortheast Kemnith Unit Area comprising 3520 acres, more or less, of State land in Township 16 South, Range 34 East, Lea County, New Mexico.
- CASE 5693: Application of El Paso Natural Gas Company for downhole compingling, Rio Arriba County, New Mexico.

  Applicant, in the above-styled cause, seeks authority to commingle South Blanco-Pictured Cliffs and Blanco Mesaverde gas production in the wellbore of its San Juan 27-7 Unit Well Mo. 82 located in Unit A of Section 4, Township 27 North, Range 7 West, Rio Arriba County, New Mexico.
- CASE 5699: Application of Dalport Oil Corporation for an exception to the provisions of Order No. R-3221, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks, as an exception to the provisions of Commission Order No. R-3221, permission to dispose of, into earthen pits, produced salt water from its Jones-Federal Well No. 3 located in Unit K of Section 22, Township 15 South, Range 29 East, South Lucky Lake-Queen Pool, Chaves County, New Mexico.
- Application of Morris R. Antwell for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp and Pennsylvanian formations underlying the S/2 of Section 24, Township 20 South, Range 27 Wast, Eddy County, New Mexico, to be dedicated to a proposed gas well to be drilled at an orthodox location in the S/2 of said Section 24. Also to be considered will be the cost of drilling and completing said well and the allocation of the costs thereof, as well as artual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 5701: Application of Araho, Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres, Abo and Paddock formations through the perforated interval from approximately 3528 feet to 3900 feet in its State SWD Well No. 2, located in Unit F of Section 2, Township 17 South, Range 36 East, Lovington Field, Lea County, New Mexico.
- CASE 5702: Application of Cities Service Oil Company for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Tubb Gas Fooû and Drinkard Oil Pool production in the wellbore of its Brunson "B" Well No. 7 located in Unit N of Section 3, Township 22 South, Range 37 Fast, Lea County, New Mexico.

E Paso NATURAL GAS

HAY 24 1976 HAY 2.4 1976 HAY 2.4 1976 HAY 2.4 1976 COMMA. P. O. BOX 14924 FASO. TEXAS FASTS
PHONE 915.543.2600

May 19, 1976

The New Mexico Oil Conservation Commission P. O. Box 2088
Santa Fe, New Mexico 87501

Gentlemen:

El Paso Natural Gas Company respectfully requests a hearing be set before the Commission or its designated examiner at your convenience. El Paso seeks approval to downhole commingle gas from the South Blanco Pictured Cliffs with gas from the Blanco Mesaverde in its San Juan 28-7 Unit No. 82 well. El Paso's Unit No. 82 well is located in the NE/4 Section 4, T-27-N, R-7-W, Rio Arriba County, New Mexico.

Very truly yours,

E. R. Manning

Chief Proration Engineer

ERM:sh

cc: A. R. Kendrick

### BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN CAI

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

CASE NO. 5698

Order No. R- 5233

APPLICATION OF EL PASO NATURAL GAS COMPANY FOR DOWNHOLE COMMINGLING, RIO ARRIBA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

### BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 23, 19 76, at Santa Fe, New Mexico, before Examiner Richard L. Stamets

NOW, on this day of July, 1976, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

### FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, El Paso Natural Gas Company, is the owner and operator of the San Juan 28-7 Unit Well No. 82, located in Unit A of Section 4, Township 27 North, Range

  7 West, NMPM, Rio Arriba County, New Mexico.
- (3) That the applicant seeks authority to commingle South Blanco-Pictured Cliffs and Blanco Mesaverde production within the wellbore of the above-described well.
  - (4) That from the South Blanco-Pictured Cliffs zone, the subject well is capable of low marginal production only.
  - (5) That from the Blanco Mesaverde zone, the subject well is capable of low marginal production only.
  - (6) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

-2-		
Case	No.	
Order	No.	R-

- (7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.
- (8) That to afford the Commission the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the <u>Aztec</u> district office of the Commission any time the subject well is shut-in for 7 consecutive days.
- (9) That in order to allocate the commingled production to each of the commingled zones in the subject well, 30

  percent of the commingled production should be allocated to the South Blanco-Pictured/zone, and 70 percent of the commingled 265 and 01/ production to the Blanco Mesaverde zone.

### IT IS THEREFORE ORDERED:

(1) That the applicant,	El Paso Natural Gas Company , is
hereby authorized to commingle	South Blanco-Pictured Cliffsand
Blanco Mesaverde	production within the wellbore
of the San Juan 28-7 Unit Well	No. 82 , located in Unit A
of Section 4 , Township	27 North , Range 7
West , NMPM, Rio Arriba	a County, New Mexico.
(2) That 30 percent	of the commingled

production shall be allocated to the South Blanco-Pictured Cliffs

zone and 70 percent and 100 percent of the commingled percent of the commingled percent of the maintain production shall be allocated to the Blanco

and oil

Mesaverde zone.

- (3) That the operator of the subject well shall immediately notify the Commission's Aztec district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Commission, a plan for remedial action.
- (4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

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COMMISSION			

### BEFORE THE NEW MEXICO OIL CONSERVATION Santa Fe, New Mexico June 23, 1976

3 EXAMINER HEARING IN THE MATTER OF: 6 Application of El Paso Natural Gas case 7 Company for downhole commingling, 5698 Rio Arriba County, New Mexico. 8 10

BEFORE: Richard L. Stamets, Examiner

### TRANSCRIPT OF HEARING

### APPEARANCES

For the New Mexico Oil William F. Carr, Esq. Conservation Commission: Legal Counsel for the Commission State Land Office Building Santa Fe, New Mexico For the Applicant: Rand C. Schmidt, Esq. Associate Counsel El Paso Natural Gas Company

P. O. Box 1492 El Paso, Texas

MONTGOMERY, FEDERICI, ANDREWS, HANNAHS & BUELL Attorneys at Law 350 East Palace Avenue Santa Te, New Mexico

sid morrish reporting service

General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

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sid morrish: reporting service

General Court Reporting Service
825 Calle Mejia, No. 152, Santa Fe, New Mexico 87501
Phone (505) 982-9212

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MR. STAMETS: We will call next Case 5698.

MR. CARR: Case 5698, application of El Paso
Natural Gas Company for downhole commingling, Rio Arriba
County, New Mexico.

MR. STAMETS: Call for appearances.

MR. SCHMIDT: Mr. Examiner, my name is Rand Schmidt, I'm an attorney with El Paso Natural Gas Company in the office of General Counsel. I have a letter of appearance here that I would like to present here from the law firm of Montgomery, Federici and I would like to have that entered in the record.

MR. STAMETS: This will be entered.

MR. SCHMIDT: And we also have two exhibits that we are going to ask to have entered into the record.

MR. STAMETS: Okay. I would like the witness in this case to stand and be sworn.

(THEREUPON, the witness was duly sworn.)

MR. SCHMIDT: Mr. Examiner, we have one witness today, Mr. Paul Burchell.

### PAUL W. BURCHELL

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

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### DIRECT EXAMINATION

BY MR. SCHMIDT:

Q For the record would you please state your name and where you reside?

A. My name is Paul W. Burchell and I reside in El Paso, Texas.

- By whom are you employed and in what capacity?
- A. I'm employed by the El Paso Natural Gas Company as Senior Proration Engineer.
- 0. Mr. Burchell, are you familiar with Case 5698
  involving El Paso Natural Gas Company?
  - A. Yes, I am.
- As a Proration Engineer have you previously been qualified as a witness before this Commission or one of its Examiners?
  - A. Yes, I have.
  - Q. And your qualifications were accepted at that time?
  - A Yes, they were.
- MR. SCHMIDT: Mr. Examiner, would the witness's qualifications be acceptable to you?

MR. STAMETS: They are.

- 0. (Mr. Schmidt continuing.) Mr. Burchell, what is El Paso seeking in Case Number 5698?
- A. Bl Paso seeks permission to downhole commingle gas from the South Blanco-Pictured Cliffs Pool with gas of the

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Plance-Mesaverde Fool and we would like to produce this gas through one meter located at our Well, the 28-7 Init Well which is No. 82. This well is located in Unit A of Section 4, 27 North, 7 West, Rio Arriba County, New Mexico, of course.

We further propose to allocate the gas from both of these zones in such a manner that a certain percentage would be considered Mesaverde and the remaining percentage would be considered Pictured Cliffs.

A Yes, the 1975 Annual Packer Leakage Tests indicated communications between both zones in this dually completed well.

Q Has an attempt been made to determine the cause of this leak?

A. Yes, a temperature survey was run in the Mesaverde tubing, however, we were not able to pinpoint an abnormality, however, subsequent testing of pressures alternating production on both sides of the well confirmed that communication still does exist.

Q. Why is El Paso asking for permission to downhole commingle?

El Paso considers this to be the most economic and conservative method to undertake, mainly due to both zones' poor or low productivity and also because of the high cost

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that is involved in repairing the suspected leak.

- 0 Do you have an exhibit showing the equipment that is located in this well?
  - A. Yes, I do.
- Would you please explain what this exhibit shows?
  This is Exhibit Number One that you have there.
- A Exhibit Number One is a diagrammatic sketch of the equipment that has been marked as El Paso's Exhibit Number One.

This shows several things but in particular there are two strings of tubing installed in the San Juan 28-7 Unit

No. 82 Well. It also shows that there is a Baker EGJ production packer which is set at three thousand, four hundred and sixty-nine feet.

The well is perforated from three thousand, two hundred and eighty-six feet to three thousand, three hundred and fifty-six feet in the Pictured Cliff Pool, which is above the packer and the Mesaverde Pool : perforated from four thousand, nine hundred and fifty-eight feet to five thousand, six hundred and fifty-six feet below the packer.

- Q. Prior to the time that communications were noted between these two zones, what was the normal producing rate from each zone in the well?
- A. For the year 1974 both zones were prorated marginal and that year production amounted to forty-four thousand, two

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hundred and forty MCF from the Mesaverde and nineteen thousand, and forty-eight MCF from the Pictured Cliffs. This amounts to seventy percent Mesaverde and thirty percent Pictured Cliffs.

During 1974 the daily average was a hundred and forty MCF for the Mesaverde and sixty-two MCF for the Pictured Cliffs. This is a combined daily rate of two hundred and two MCF.

- Q. What is the ability of the San Juan 28-7 Unit No. 82
  Well to produce gas at this present time?
- A. As of April 1976 the well was producing at a combined daily rate of two hundred and three MCF.
- Q So there has actually been no loss of production due to the communication between the two zones?
  - A. No, there hasn't.
- Q Are the flow rates for this well considered to be quite small?
- A. Yes, I consider these flow rates to be quite small and as I have previously stated both zones are prorated marginal.
  - O Does the well produce any liquids?
- A. Yes, the Mesaverde formation does produce a small amount of liquid hydrocarbons. I believe for 1975 this amounted to approximately twenty barrels.
- 0 What work would need to be done to repair the suspected leak in this well?

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A. You would have to work the well over, first bring in a work-over rig, then you would have to kill the well, pull both strings of tubing as well as the packer and then you would have to replace any of the tubing that was corroded or eroded and the packer and you would have to run it all back in the hole, retest it. That is the total amount of work, generally.

- Q. What would be the estimated cost of this repair work that you have just described?
- A. It is estimated that it would cost at least seventeen thousand, three hundred and seventy dollars.
- Q. Is it possible that a greater cost might be involved?
- A. This is possible if you got over the hole and spent a little bit longer time than you anticipated or if you had to replace more tubing than you estimated.
- Q. Might the cost of repairing this well as a dual completion be considered economically infeasible?
- A. Yes, it might be that we could not repair the well and the Pictured Cliffs formation out of necessity would have to be abandoned or plugged and the gas in that pool would be abandoned.
- n. In your opinion would granting this application for downhole commingling of the gas prevent waste?
  - A. Yes, it would.

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(. Does El Paso propose a formula by which gas production can be apportioned between the two producing zones?

A. Yes, based on my prior testimony related to the production history, it is recommended that seventy percent of the well's production, gas production, be attributed to the Blanco-Mesaverde Pool and thirty percent of the production be attributed to the South Blanco-Pictured Cliffs Pool.

It is further recommended that any liquid hydrocarbons that would be produced would be attributed to the Mesaverde.

Q What is the nature of the ownership involved in this case?

A. El Paso Natural Gas Company is the working interest owner and the operator. In addition to El Paso there are six other working interest owners in the Unit.

Q. Is there common ownership or royalty and overriding royalty interests in the subject well spacing unit as between the two producing formations?

A. Yes, that's right and, of course, this well is committed to the 28-7 Unit and the unit agreement.

(A Has El Paso approached the other working interest owners regarding commingling of the gas from this well?

A. Yes, El Paso has obtained letters of consent from all of the working interest owners agreeing to a division of the gas based on the formula that I have just stated, seventy percent Mesaverde and thirty percent Pictured Cliffs.

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- A. Yes, I do. These letters have been marked as Exhibit
  Two-A through F.
- Q In your opinion would such an agreement and the granting of this application protect correlative rights?
  - A Yes, it would.
- Do you have anything further you would like to
  present in this case?
  - A No, I do not.
- Q Were Exhibits One through Two-A through F prepared by you or under your supervision?
- A. Yes, Exhibit One was prepared by me, under my supervision. Exhibit Two I acquired them from the Land Department.
  - As an exhibit, though, it was prepared by you?
  - A Yes, it was.

MR. SCHMIDT: Mr. Examiner, we ask now that Exhibits
One and Two-A through F be accepted into evidence at this
time and this completes our direct testimony in this case.

MR. STAMETS: These exhibits will be admitted.

(THEREUPON, El Paso's Exhibits One and Two-A

through F were admitted into evidence.)

### CROSS EXAMINATION

### BY MR. STAMETS:

Q Mr. Burchell, did you say that the Mesaverde made

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twenty barrels of liquids all year?

A. Yes, in checking the most recent annual production report it did say twenty barrels of oil.

Q How about water, is there water production in the zones?

A Just the annual production report just showed gas and oil and I didn't go into the water, I'm sorry. I wasn't prepared to field that question.

Q would there be any effect on the value of the gas production because of the commingling?

A Any additional value?

Well, is there any difference in the value of the
two gases, the Pictured Cliffs and the Mesaverde, or do they
both sell for the same price?

A. I believe they both sell for the same price, around thirty-two cents.

Q. How about pressure differentials?

A. Okay, I looked in the data, I felt the best pressure that I could rely on would be during that year of 1974 prior to the leak so this information I will give you now is based on a deliverability test that was taken in May 6, 1974 and the shut-in tubing pressure for the Mesaverde was four hundred and thirty-five pounds per square inch and the flowing tubing pressure was two hundred and ninety one pounds per square inch. At the same time the Pictured Cliffs had a shut-in

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inch and when it was allowed to flow the flowing tubing pressure was a hundred and sixty-three pounds per square inch.

- Q So there is minimal difference between the shut-in pressures?
  - A That's right.
- Q And since there are no liquids you would assume that the bottom-hole pressure is not going to differ too much?
  - A No, I wouldn't think so.
- Q Is there any potential here for loss of production because of the commingling of these two zones?
- A To date we haven't seen it. Like I pointed out in my testimony, the production way back in 1974 amounted to two hundred and two MCF and then the year 1975 went by where we definitely know there was communication between the two zones and now the combined production for 1976 is two hundred and three MCF, so it's still about the same.
- Q Is there a potential here for ultimate greater recovery because of the reduced cost?
- A. I would think so. As long as you can continue the well producing for a longer period of time, even though the production is small, you will ultimately have more gas produced.

MR. STAMETS: Are there any other questions of the

(THEREUPON, the witness was excused.) MR. STAMETS: Is there anything further in this case? MR. SCHMIDT: No, that's all. MR. STAMETS: We will take the case under advisement. sid morrish reporting service

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witness? He may be excused.

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### REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

Sidney F. Morrish, C.S.R.

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I do hereby certify that the foregoing is a complete record of the proceedings in the Empirical hearing of Case No. 5775 heard by me on

New Mexico Oil Conservation Commission