CASE 5463: Application of J. GREGORY MERRION for downhole commingling, Rio Arriba County

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Application,
Transcripts,

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BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION Santa Fe, New Mexico April 30, 1975

EXAMINER HEARING

IN THE MATTER OF:

Application of J. Gregory Merrion for downhole commingling, Rio Arriba County, New Mexico.

CASE NO. 5463

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

APPEAHANCES

For the New Mexico Oil Conservation Commission:

William F. Carr, Esq.
Legal Counsel for the
Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant:

J. Gregory Merrion (Appearing Pro se)

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Direct Testimony of Mr. Merrion
Cross Examination by Mr. Stamets

E X H I B I T

Merriow's Exhibits 1, 2, 3 & 4

MR. STAMETS: Case 5463.

MR. CARR: Case 5463. Application of J. Gregory Merrion for downhole commingling, Rio Arriba County, New Mexico.

MR. MERRION: Mr. Chairman, I am J. Gregory
Merricn, owner and operator of the Edna No. 4 which is the
subject of this hearing and I am here testifying on behalf
of myself.

(Witness sworn.)

J. GREGORY MERRION

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

DIRECT TEXTIMONY OF MR. MERRION:

MR. MERRTON: Mr. Examiner, I have prepared four exhibits. I have marked them.

MR. STAMETS: You may proceed, Mr. Merrion.

MR. MERRION: Mr. Examiner, the Exhibit No. 1 is a plat showing the location of wells in the vicinity of the Edna No. 4 which is located in Section 7 of Township 24 North, Range 6 West, Rio Arriba County, and has been producing from the Devils Fork-Gallup Field since 1962. This well was worked over and several zones in the Mesa Verde were tested. The interval 4466 to 72 was completed and

MERRION-DIRECT

Page. 4

fracked and was gas productive in this well, and it was subsequently commingled with the Gallup Zone which was also worked over during this work-over procedure. The purpose of the Exhibit is to show the location with respect to other wells in the field. Most wells here are producing from the Gallup Formation only. In Section 16, you will find three wells which are encircled, and they have been commingled with the Mesa Verde and approved by the Commission in our hearings. So, the Edna No. 4 is the fourth well in this field which we are requesting permission to commingle.

Are there any questions about that exhibit?

Going on to Exhibit No. 2, this is a Xerox copy of an electric log on the Edna No. 4 showing the zone in the Mesa Verde which was completed. It was perforated with two chots per foot from 4466 to 72, fracked with 4158 gallons of jelled water and 5200 pounds of sand and flow-tested at the rate of 75 MCF of gas per day with 10 barrels of water per day, which was fresh and thought to be fracked water.

MR. STAMETS: Is that potential against atmospheric pressure?

MR. MERRION: Yes, it is.

Going on to Exhibit No. 3, a Xerox copy of the

MERRION-DIRECT

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electric log on the Edna No. 4 over the Galluo interval. The interval of 5772 to 87 were the original perforations when the well was completed in 1962. This interval had been fracked with 45,000 gallons of oil and 45,000 pounds of sand. The Upper Gallup interval was perforated and was fracked during this work-over. The perforations were 5598 to 5602, 5640 to 5646, 5660 to 5666. A bridge plug was set, a temporary bridge plug was set above the lower purse and the top three sets of perforations were sand-water fracked with 21,084 gallons of jelled water and 25,650 pounds of sand in three stages with two sets of 12-ball sealers.

as well as the Mesa Verde Zone because the jelled water which was used in the frac failed to break, and the Upper Gallup interval was acidized several times trying to break the jell, and eventually we broke the cement jog down between the Upper Gallup and Lower Gallup which had been previously perforated which made it difficult to continue our clean-up work, so we never really successfully broke the jell in the Gallup, and we put the well on the pump and commingled the Gallup and Mesa Verde.

MR. STAMETS: You said that you caused commingling

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MERRION-DIRECT

behind the pipe, and you are referring to the two Gallup zones?

MR. MERRION: Yes, sir.

Going on to Exhibit No. 4, I have a summary of the test and proposed method of allocating production of the Edna No. 4 Well. One on February 12, 1975, the Mesa Verde was flow-tested at the rate of 75 MCF per day and 10 barrels of water per day on a 24-hour test to the atmosphere On March 25th, after a pump had been installed, the Gallup-Mesa Verde Zones commingled were tested at the rate of 7 barrels of oil per day, 6 barrels of water per day and 75 MCF of gas per day. The water was essentially fresh and thought to be frac water, all of which had never been recovered from the well. As of yesterday, the well was again pump-tested commingled from the Gallup-Mesa Verde, the rate being slightly less than 5 barrels of oil per day, 1 barrel of water per day and 75 MCF of gas per day.

We propose that the method of allocation, if this commingling order is approved, be 100 percent of the gas to the Mesa Verde and 100 percent of the oil to the Gallup.

That concludes my case, Mr. Examiner.

CROSS EXAMINATION

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MERRION-CROSS

BY MR. STAMETS:

Q Do you know if that is the same allocation formula that is used in the other three commingled wells?

It is not. Well, if one accepts the -- the allocation formula on the other three wells in Devils Fork, each zone is tested separately and the gas-oil ratio for the Mesa Verde was determined, and based on the test of the individual zone, the oil was allocated, the gas was determined by multiplying the Mesa Verde gas-oil ratio by the Mesa Verde oil and then the remaining gas was allocated to the Gallup. We had a great deal of trouble on this well and it was a very extensive work-over and we have had rather minimal results, and we would hope that the Commission would approve this method of allocation since it seems essentially to be accurate. We plead a kind of hardship in the case because of the great deal of trouble we did have. I think the total work-over was close to \$100,000, between bad cement jobs and jell that didn't break and having to go back in and acidize to try and break the jell and so forth. Additionally, we felt we should get the well on the pump and try to reduce bottomhole pressure in the hopes that this jell would eventually break and come back.

MERRION-CROSS

You indicated the Mesa Verde in these other three wells was making some oil as well as gas?

A This Mesa Verde here is essentially dry gas and it differs from the Mesa Verde in the other three wells in that they are fairly low gas-oil ratio oil. The gas-oil ratio was less than 1000 in those wells.

Q This is the identical zone, or are those separate stringers?

A The Mesa Verde is rather linticular in the area. It is difficult to correlate between zones. It is the approximate same interval, immediately above the Point Lookout and the Basal Menefee, and there are several little stringers of sand which are roughly in the same interval, and yet, you can't really swear that they are continuous.

Q Was the Gallup Zone making any appreciable amount of gas before the work-over?

A Before the work-over in the Lower zone of the Gallup, it was making roughly 1 barrel of oil per day, plus about 15 MCF of gas per day. I am not sure, it still may be making some gas. We feel that some of this jell actually got into the lower Gallup and we didn't test it separately. I am not sure that it is cleaned up, or just what the status of it is right now.

MERRION-CROSS-

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Q Based on the test as you show here on Exhibit 4, though, there was no increase in gas production in the Gallup Zone?

A This is correct.

MR. STAMETS: Are there any other questions of the witness? He may be excused.

(Witness dismissed.)

MR. STAMETS: Is there anything further in this case? We will take the case under advisement.

CASE 5463

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STATE OF NEW MEXICO)
OUNTY OF SANTA FE)

I, RICHARD L. NYE, Court 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.

JOHN REPORTER

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 5763 heard by me on 1974.

New Mexico Oil Conservation Commission



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO P. O. BOX 2088 - SANTA FE 87501

May 6, 1975

I. R. TRUJILLO CHAIRMAN

LAND COMMISSIONER PHIL R. LUCERO MEMBER

STATE GEOLOGIST A. L. PORTER, JR. SECRETARY — DIRECTOR

Farmington, New Mexico 87401		Applicant:	Merrion
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Dear Sir:			
Enclosed herewith are two co	opies on ntered	of the above in the subj	ect case.
Ver	y trul	y yours,	0
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Sec	retary	-Director	; -
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ALP/ir			
copy of order also sent to	•		
Hobbs OCC x			
Artesia OCC			
Aztec OCCx			
Other			

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. 5463 Order No. R-5013

APPLICATION OF J. GREGORY MERRION 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 April 30, 1975, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 6th day of May, 1975, 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, J. Gregory Merrion, is the owner and operator of the Edna Well No. 4, located in Unit H of Section 7, Township 24 North, Range 6 West, NMPM, Rio Arriba County, New Mexico.
- (3) That the applicant seeks authority to commingle undesignated Mesaverde and Devils Fork-Gallup production within the wellbore of the above-described well.
- (4) That from the undesignated Mesaverde zone, the subject well is capable of low rates of production only.
- (5) That from the Devils Fork-Gallup 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. 5463 Order No. R-5013

- (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 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, 100 percent of the commingled gas production should be allocated to the undesignated Mesaverde zone, and 100 percent of the commingled oil production to the Devils Fork-Gallup zon?.

IT IS THEREFORE ORDERED:

- (1) That the applicant, J. Gregory Merrion, is hereby authorized to commingle undesignated Mesaverde and Devils Fork-Gallup production within the wellbore of the Edna Well No. 4, located in Unit H of Section 7, Township 24 North, Range 6 West, NMPM, Rio Arriba County, New Mexico.
- (2) That 100 percent of the commingled gas production shall be allocated to the undesignated Mesaverde zone and 100 percent of the commingled oil production shall be allocated to the Devils Fork-Gallup 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.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

I. R. TRUJILLO, Chairman

PULL R. LUCERO, Member

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

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Legend

· Gallup O'll Well

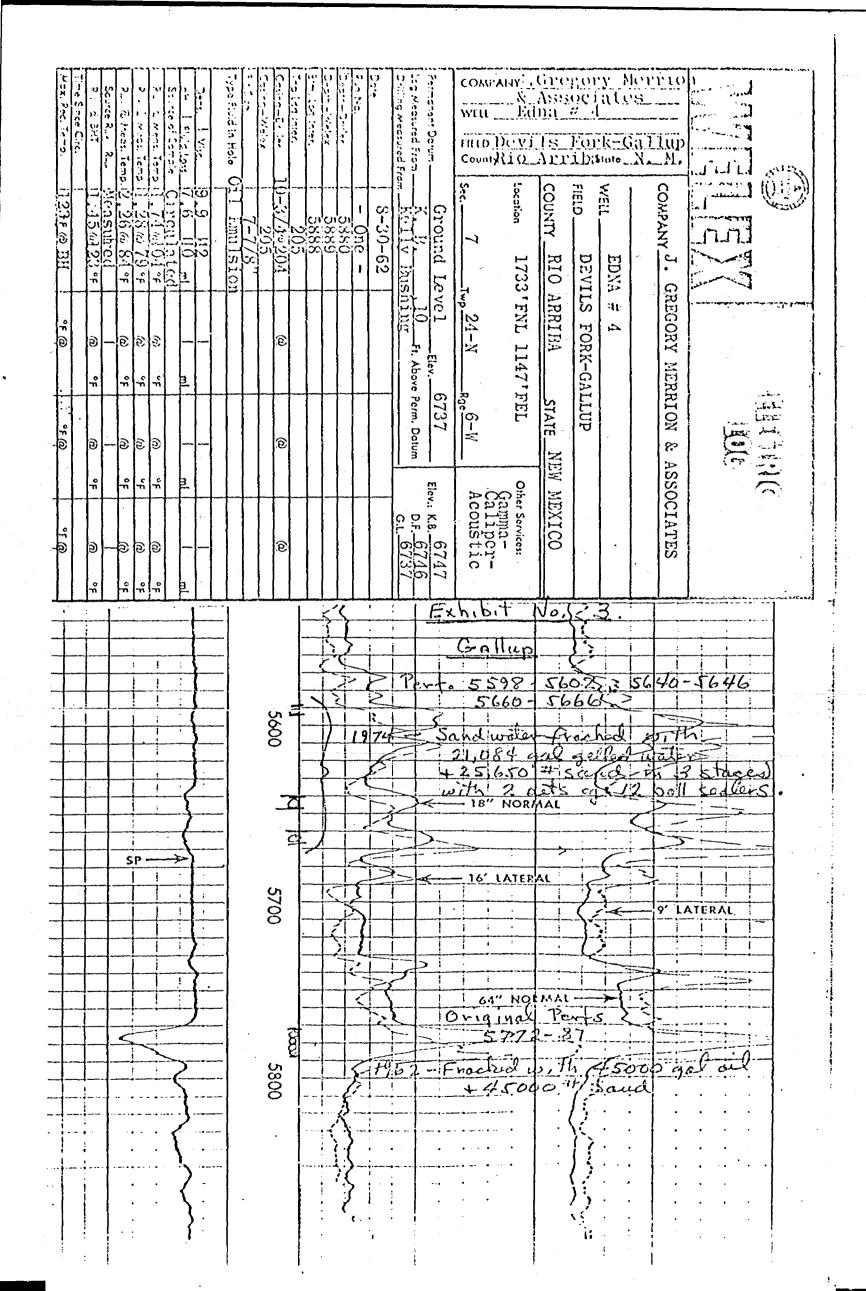
* Gallup Gas Well

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Exhibit No.1. I. Gregory Merrion
Edna # 4
Application to Comingle Devils Fork Gallup and Devils Fork Mesaverde



Summary of Tests and Proposed Method of Allocating Production

2-12-75	Flow	tested	Mesaverde	24	hours	at	75	MCF/da	+	10	BWPD.
E-4E-17								14			

3-25-75 Pump tested Gallup - Mesaverde. Commingled at 7 BOPD, 6 BWPD and 75 MCF/da.

h-29-75 Pump tested Gallup - Mesaverde. Commingled at 5 BOPD, 1 BWPD and 75 MCF/da.

Proposed Allocation:

100% Gas to Mesaverde 100% Oil to Gallup Dockets Nos. 11-75 and 12-75 are tentatively set for hearing on May 14 and May 28, 1975. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - APRIL 30, 1975

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

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

- CASE 5459: Application of McClellan Oil Corporation for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the East Henshaw Unit Area covering 1282 acres, more or less, of State and Federal lands in Township 16 South, Range 30 East, Eddy County, New Mexico.
- CASE 5460: Application of McClellan 0il Corporation for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its East Henshaw Unit Area by the injection of water into the Grayburg formation through eight wells located in Sections 1 and 2, Township 16 South, Range 30 East, West Henshaw-Grayburg Pool, Eddy County, New Mexico.
- CASE 5461: Application of General American Oil Company for pool extension, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the extension of the vertical limits of the Grayburg-Jackson (Queen-Grayburg-San Andres) Pool, Eddy County, New Mexico, to include the Seven Rivers formation excepting, however, that area of said Grayburg-Jackson Pool overlain by the Fren-Seven Rivers Pool.
- CASE 5462: Application of General American 011 Company for an unorthodox location and administrative procedure, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox oil well location 825 feet from the North line and 1295 feet from the West line of Section 13, Township 16 South, Range 29 East, East High Lonesome Penrose Unit, High Lonesome Pool, Eddy County, New Mexico. Applicant further seeks the establishment of an administrative procedure whereby additional unorthodox producing and injection well locations could be approved for said unit area without hearing.

CASE 5463:

Application of J. Gregory Merrion for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle undesignated Mesaverde and Devils Fork-Gallup production in the wellbore of his Edna Well No. 4 located in Unit H of Section 7, Township 24 North, Range 6 West, Rio Arriba County, New Mexico.

- CASE 5464: Application of Petro-Lewis Corporation for a unit agreement, Sandoval County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Media Entrada Unit Area covering 580 acres of Federal lands, Media-Entrada Oil Pool, Township 19 North, Range 3 West, Sandoval County, New Mexico.
- CASE 5465: Application of Petro-Lewis Corporation for a pressure maintenance project, Sandoval County, New Mexico. Applicant, in the above styled cause, seeks authority to institute a pressure maintenance project in its Media Entrada Unit Area by the injection of water into three wells, being the Fluid Power Pump Wells Nos. 4 and 2 located, respectively, 990 feet from the South line and 1650 feet from the East line, and 2310 feet from the North line and 330 feet from the East line, of Section 15, and the Federal Media Well No. 4 located 990 feet from the South line and 1650 feet from the West line of Section 14, all in Township 19 North, Range 3 West, Media-Entrada 0il Pool, Sandoval County, New Mexico.
- CASE 5466: Application of Mark Production Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox gas well location 1650 feet from the South line and 1980 feet from the West line of Section 1, Township 18 South, Range 26 East, Atoka-Pennsylvanian Gas Pool, Eddy County, New Mexico, the W/2 of said Section 1 to be dedicated to the well.
- CASE 5467: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Colfax Carbon Dioxide Corporation. F. E. Sauble, American Surety Company of New York, and all other interested parties to appear and show cause why the Tex-Mex Cattle Co. Well No. 1 located in Unit D of Section 2, Township 26 North, Range 24 East, Colfax County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.
- CASE 5468: In the matter of the hearing called by the 0il Conservation Commission on its own motion to permit Kenneth M. Hankins, Great American Insurance Company, and all other interested parties to appear and show cause why the Virginia Branch Well No. 1 located in Unit D of Section 9, Township 10 North, Range 25 East, Guadalupe County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

Cose 5463 OFF. 326-5093

J. GREGORY MERRION PETROLEUM ENGINEER

P. D. EOX 507

FARMINGTON, NEW MEXICO 87401

APR 8 - 1975

OIL CONSERVATION COMM.

Santa Fe

April 7, 1975

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

Unit H

Re: Request for Hearing

Gentlemen:

Please schedule a hearing to consider permission to commingle production in the well bore of my Edna #4 well Section 7, T24N, R6W, Rio Arriba County, New Mexico.

After a recent workover the well is producing 75 MCF/da of gas from Mesaverde perforations 4468-76 and 7 BOPD and 6 BWPD from Gallup perforations 5595-5602, 5640-46, 5660-66 and 5772-87.

It would be my proposal to allocate all oil produced to the Gallup and all gas produced to the Mesaverde.

Yours very truly,

Gregory Merrion

JGM/su

cc New Mexico Oil Conservation Commission Aztec, New Mexico

DOCKET MAILER

Date 7-18-75

dr/

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. 5463

Order No. R-50/3

APPLICATION OF J. GREGORY MERRION 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 April 30 , 75 at Santa Fe, New Mexico, before Examiner Richard L. Stamets

NOW, on this day of May , 19⁷⁵, 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, J. Gregory Merrion, is the owner and operator of the Edna Well No. 4, located in Unit H of Section 7, Township 24 North, Range 6 West, NMPM, Rio Arriba County, New Mexico.

-2-Case No. 5463 Order No. R-

- (3) That the applicant seeks authority to commingle undesignated Mesaverde and Devils Fork-Gallup production within the wellbore of the above-described well.
- (4) That from the undesignated Mesaverde zone, the subject well is capable of low warying production only.
- (5) That from the Devils Fork-Gallup 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.
- (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, //O

 percent of the commingled production should be allocated to the undesignated Mesaverde zone, and //O percent of the commingled Oi production to the Devils Fork-Gallup zone.

IT IS THEREFORE ORDERED:

(1) That the applicant, J. Gregory Merrion, is hereby authorized to commingle undesignated Mesaverde and Devils Fork-Gallup production within the wellbore of the Edna Well No. 4, located in Unit H of Section 7, Township 24 North, Range 6 West, NMPM, Rio Arriba County, New Mexico.

- (2) That 100 percent of the commingled 100 production shall be allocated to the undesignated Mesaverde zone and 100 percent of the commingled 61 production shall be allocated to the Devils Fork-Gallup 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 demm necessary.

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