

CASE 5331: Appli. of J. GREGORY
MERRION FOR DOWNHOLE COMINGLING,
RIO ARRIBA COUNTY, NEW MEXICO.

CASE No.

5331

Application,

Transcripts,

Small Exhibits

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
October 2, 1974

EXAMINER HEARING

IN THE MATTER OF:

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

Case No. 5331

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil
Conservation Commission:

Thomas Derryberry, Esq.
Legal Counsel for the
Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant:

William J. Cooley, Esq.
BURR & COOLEY
152 Petroleum Center Building
Farmington, New Mexico

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J. GREGORY MERRION

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MR. NUTTER: Case 5331.

MR. DERRYBERRY: Case 5331. Application of
J. Gregory Merrion for downhole commingling, Rio Arriba
County, New Mexico.

MR. COOLEY: William J. Cooley, Burr and Cooley,
Farmington, New Mexico, appearing on behalf of the
Applicant. We have one witness, Mr. Merrion.

(Witness sworn.)

J. GREGORY MERRION

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

DIRECT EXAMINATION

BY MR. COOLEY:

Q State your name for the record, please?

A I am J. Gregory Merrion.

Q Where do you reside, Mr. Merrion?

A Farmington, New Mexico.

Q How are you employed?

A I am an independent oil producer.

Q Are you and your partner the operator of --

A (Interrupting) My partner is not a partner in
this.

Q Are you the operator of the NCRA State Well No. 1

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and No. 4?

A I am.

Q Have you prepared a plat which shows the relative location of these wells in respect to other wells in the area?

A I have.

(Whereupon, a discussion was held off the record.)

BY MR. COOLEY:

Q Would you tell the Examiner what is portrayed on this exhibit?

A The acreage bordered in yellow is my NCRA State Lease. The well encircled is the NCRA State No. 3 Well, which is currently commingled pursuant to an Order from the Commission in 1969 in the Devils Fork-Mesaverde Zone and Devils Fork-Gallup Zone which have been commingled in that zone for the past five years. The wells with triangles around them are my NCRA States Nos. 1 and 4 Wells which have recently had their corrosion leaks repaired and have been completed in the Devils Fork-Mesaverde Zone and it is those wells which I am seeking permission to commingle with the Devils Fork-Gallup at this Hearing.

Q Have you done a take-off on the electric logs

on the wells in question showing the intervals perforated and the production from each?

A I have.

Q I hand you what has been marked as Applicant's Exhibits 2 and 3 and ask you to identify those?

A Do you wish for me to identify --

Q (Interrupting) Directing your attention to Exhibit No. 2, would you tell the Examiner what this is intended to portray?

A Exhibit No. 2 is an electric log, or a Xerox copy of a portion of the electric log on the NCRA State No. 1 Well. I have indicated on that log the different perforated intervals which currently are perforated in the well, and also the bridge plugs which are currently placed in the well. Starting from the bottom, the Lower Gallup perforations, 5760 to 5786 were the original perforations in the well, and this zone produced from the Devils Fork-Gallup until about a year ago when it developed a corrosion hole and a bridge plug was placed at 5700. The final pump rate prior to its developing a corrosion hole was 3 barrels of oil per day and 110 MCF of gas per day. In August, we moved in on the well and repaired the corrosion leaks in the Mesaverde and placed cement across the Lower

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Mesaverde while we were repairing corrosion holes. We opened the Upper Gallup 5643 to 5653 and sand fraced that. We then opened the three intervals in the Basal Mesaverde 4785 to 4805, 4526 to 4534 and 4514 to 4519, separated those intervals by packers and retrievable bridge plugs and sand fraced those intervals, and swab tested the clean-up of all intervals above the bottom bridge plug at 5700. Based upon this swab test, it would appear that the Upper Gallup interval of 5643 to 5653 would be capable of making approximately 10 barrels of oil per day, plus a quarter of a million feet of gas per day. We then placed a retrievable bridge plug at 4950 and put the Mesaverde perforations on the pump. After approximately one month's production, as of yesterday, October 1st, 1974, this well was making 32 barrels of oil per day and 7 barrels of water per day and 52 MCF of gas per day. The gravity of the oil is 43.7 degrees API. The gas-oil ratio, 1625 to 1.

MR. NUTTER: That is all coming from the Mesaverde?

THE WITNESS: Yes, sir.

BY MR. COOLEY:

Q Directing your attention to Exhibit 3, will you tell the Examiner what you have depicted here?

THE NYE REPORTING SERVICE
STATE-WIDE DEPOSITION NOTARIES
225 JOHNSON STREET
SANTA FE, NEW MEXICO 87501
TEL. (505) 982-0386

A Exhibit 3 is an Xerox copy of portions of the electric log on my NCRA State No. 4 Well. Starting from the bottom of the well, perforations of 5752 to 5777 were the original perforations in the well when it was completed in 1962. It produced from that zone until November of 1972, at which time it developed corrosion holes and a bridge plug was set at 5720. Final pump rate from that zone was 2 barrels of oil per day, 47 MCF of gas per day. In August, we moved in and repaired our corrosion hole in Mesaverde and placed cement across the Basal Mesaverde, perforated the Upper Gallup 5647 to 5657 and sand-fraced it. We swabbed and floated separately from the other zones, and the final flow rate was 8 barrels of oil per day and 500 MCF of gas per day. A drillable bridge plug was set at 4850 and the intervals 4793 to 4813, 4531 to 4541 and 4501 to 4504, 4477 to 4482, were perforated and sand-fraced. The well was then put on the pump, and after 6 weeks of production, on September 26, 1974, the well was tested at the rate of 22 barrels of oil per day, 4 barrels of water per day and 25 MCF of gas per day. Gravity of the oil is 43.7 degrees API. The gas-oil ratio 1136 cubic feet per barrel.

MR. NUTTER: Now, that bridge plug was in there

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and all that production is from the Mesaverde also?

THE WITNESS: That is correct. The bridge plugs appearing on both of these plugs are currently in the hole.

MR. NUTTER: Mr. Merrion, do you consider both the oil and gas production from the zones in question, that being the Mesaverde and the Gallup, as being marginal?

THE WITNESS: They are not capable of making their allowable, therefore, they are marginal.

BY MR. COOLEY:

Q From an economic standpoint, would it be feasible at depths here involved to drill and complete in individual zones, or to dually complete?

A Well, these wells have 4 $\frac{1}{2}$ casing in them, and a dual completion with 4 $\frac{1}{2}$ casing with pumping wells is not feasible. Drilling of additional wells to the Mesaverde, I think, is uneconomical.

Q Do you have a proposal as to how the production from the combined streams should be allocated between the Devils Fork Field and the Gallup, and the Devils Fork-Mesaverde?

A Yes, I do. Of course, it would be our proposal, if this Application is approved to remove the bridge plugs which are currently in both wellbores and commingle the

two Gallup zones together with the various Mesaverde zones and produce the Mesaverde and Gallup commingled. I have prepared a method of allocation.

Q I hand you what has been marked as Applicant's Exhibit 4 and ask you if that is the proposed method of allocation to which you refer?

A It is.

Q Would you explain that, please?

A Okay. I have proposed: (Reading)

(1) Take a 24-hour test of oil, water and gas rate from Mesaverde while pumping. Run a sonolog to be certain of good pump action, and call the resulting oil rate No. 1 and the ratio of gas to oil, the Mesaverde Gas-Oil Ratio.

(2) Remove bridge plugs. Re-run tubing and rods. Pump test for two weeks. Then run 24-hour test pumping of oil, water and gas rate from Mesaverde and Gallup commingled. Run a sonolog to be certain of good pump action. Call the resulting oil rate, Oil Rate No. 2, and the resulting gas rate the Commingled Gas Production.

(3) Determine the Mesaverde allocation of production as follows: (MV_f) which is a fraction of Mesaverde oil, is equal to oil rate as determined in No. 1,

divided by oil rate as determined in No. 2.

(4) Determine monthly allocation of production as follows:

- a. Mesaverde oil production is equal to the MV_f as determined in No. 3 times the total commingled oil production.
- b. Mesaverde gas production is equal to Mesaverde oil production times Mesaverde gas-oil ratio.
- c. Gallup oil production is equal to total commingled oil production less Mesaverde oil production.
- d. Gallup gas production is equal to total commingled gas production less Mesaverde gas production.

(5) Gas-oil ratios to be run annually in accordance with Devils Fork-Gallup Field rules.

Q Mr. Merrion, in your opinion, will the allocations that you have proposed result in a realistic fair and just and reasonable allocation between the two pools?

A Yes, I believe so.

Q Mr. Merrion, what is the offsetting land ownership situation? Does the proposed commingling in any way affect any offset operator other than yourself?

A Skelly Oil Company has a well to the northeast about a mile, approximately, perhaps a little less from the

NCRA No. 4. The other wells offsetting the lease are all owned by myself and my partner, Bob Bayless.

Q In your opinion, would the proposal that you made with respect to the downhole commingling in any way adversely affect correlative rights of Skelly Oil Company or any other offsetting operator?

A No, I don't think they would.

Q Would the proposed commingling, in your opinion, prevent underground waste and permit increased ultimate recovery from the wells in question?

A Yes, I think that we will recover more oil and gas if we are permitted to do this.

Q Is this basically the Mesaverde oil we are speaking of?

A Well, the Mesaverde oil and the -- well, of course, the Upper Gallup is permitted to be commingled under the present rules, so the Mesaverde oil is what I am talking about.

Q Do you have anything further to offer to the Examiner in connection with this Application?

A Well, I might mention that in reviewing this thing, I was about to withdraw my Application when I noted the gas proration schedule and some of the problems which

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might have been introduced by the Upper Gallup here, but in talking to Jim Captiena there, apparently, they have brought the Devils Fork allocations formula up to date and all gas wells in Devils Fork are now marginal, and all oil wells are marginal, so one of the big problems in this, of course, is keeping accounts for the volumetric equivalent withdrawals formula, and it now appears that with everything marginal, perhaps that has served its purpose and it might not be necessary to continue. Perhaps we might follow through with some kind of a hearing on that.

MR. COOLEY: I have nothing further to offer in this case. We would like to ask that Exhibits 1, 2, 3 and 4 of the Applicant be admitted into evidence.

MR. NUTTER: Applicants Exhibits 1 through 4 will be admitted in evidence.

(Whereupon, Applicant's Exhibits Nos. 1, 2, 3 and 4 were marked for identification, and were admitted into evidence.)

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Merrion, referring to your Exhibits 2 and 3, apparently your Well No. 4, you got a test on the Upper

Gallup without interference from the Mesaverde. Is this correct?

A This is correct. I fraced it separately and tested it for every perforation necessary.

Q So you know that that Upper Gallup will make that 8 barrels of oil per day, or would at that time. Now, on your No. 1 well, the only test that you got on the Upper Gallup was when it was commingled with the Mesaverde. How did you arrive at this estimated 10 barrels of oil from the Upper Gallup?

A It was just a guess, really. I know it was making a lot more gas when we were swabbing the total zones together, and we estimated about a quarter of a million. I am just estimating the 10 barrels.

Q But you can get a good stabilized test on the Mesaverde when you pull the bridge plug? You get a good stabilized production test on both and you should be able to determine what the Gallup will yield here then?

A Right.

MR. NUTTER: Are there further questions of Mr. Merrion? Mr. Kendrick?

CROSS EXAMINATION

BY MR. KENDRICK:

Q Mr. Merrion, your statement about having the Devils Fork-Gallup pool rules, or those pool rules having served their purpose. Is your recommendation that possibly the volumetric formula is to be dispensed with?

A I would think so. I haven't studied it, Mr. Kendrick, and after talking to Mr. Kaptiena this morning, he says that all gas wells are now marginal and all oil wells are now marginal, hence, I would think that it would serve no further purpose.

Q The volumetric formula served as a proration scheme, is this correct?

A Yes, sir.

Q So, if all of them were marginal, we are no longer prorating?

A That is correct.

MR. KENDRICK: I believe that is all the questions that I have.

MR. NUTTER: Are there any further questions?
The witness may be excused.

(Witness dismissed.)

MR. NUTTER: Do you have anything further, Mr. Cooley?

MR. DOOLEY: No.

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MR. NUTTER: Does anyone have anything they wish
to offer in Case 5331?

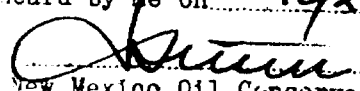
We will take the case under advisement.

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SANTA FE, NEW MEXICO 87501
TEL. (505) 982-0386

STATE OF NEW MEXICO)
) SS.
 COUNTY 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.


 COURT REPORTER

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 5331 heard by me on 10/2, 1974.
 Examiner
 New Mexico Oil Conservation Commission

THE NYE REPORTING SERVICE
 STATE-WIDE DEPOSITION NOTARIES
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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. 5331
Order No. R-4882

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 October 2, 1974, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 22nd day of October, 1974, 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 NCRA State Wells Nos. 1 and 4, located in Units E and J, respectively, of Section 16, Township 24 North, Range 6 West, NMPM, Rio Arriba County, New Mexico.
- (3) That the applicant seeks authority to commingle Devils Fork-Mesaverde and Devils Fork-Gallup production within the wellbore of the above-described wells.
- (4) That in each well, the Mesaverde formation is capable of low marginal production only.
- (5) That in each well the Gallup formation is capable of low marginal production only.
- (6) That the proposed commingling in each of the subject wells 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 in each of the subject wells 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.

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CASE NO. 5331
Order No. R-4882

(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 either of the subject wells are 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, certain tests both prior to and after commingling the two formations should be conducted on each of the subject wells.

IT IS THEREFORE ORDERED:

(1) That the applicant, J. Gregory Merrion, is hereby authorized to commingle Devils Fork-Mesaverde and Devils Fork-Gallup production within the wellbore of the NCRA State Wells Nos. 1 and 4, located in Units E and J, respectively, of Section 16, Township 24 North, Range 6 West, NMPM, Rio Arriba County, New Mexico.

(2) That the following procedure shall be used for determining production from each of the commingled zones in each of the subject wells:

(a) Conduct a 24-hour test of the Mesaverde formation to determine the rate of production of oil, gas, and water from said formation while pumping. This test shall be used to determine Oil Rate No. 1 and the Mesaverde GOR.

(b) Remove bridge plugs, re-run tubing, rods, and pump, and produce both zones for two weeks, then conduct a 24-hour test to determine the rate of production of oil, gas, and water from both zones. This test shall be used to determine Oil Rate No. 2.

(c) Determine Mesaverde allocation factor as follows:

$$MV_f = \text{Oil Rate No. 1} / \text{Oil Rate No. 2}$$

(d) Allocate monthly production as follows:

1. Mesaverde Oil Production = MV_f (Total Oil Production)
2. Gallup Oil Production = Total oil production minus Mesaverde oil production.
3. Mesaverde Gas Production = (Mesaverde oil production) (Mesaverde GOR)
4. Gallup Gas Production = Total gas production minus Mesaverde gas production.

(e) GOR Tests shall be run annually in accordance with Devils Fork-Gallup Associated Pool Rules.

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CASE NO. 5331
Order No. R-4882

(3) That the operator of the subject wells shall immediately notify the Commission's Aztec district office any time either of the wells have 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


ALEX J. ARMILLO, Member


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

S E A L

jr/

Dockets Nos. 29-74 and 30-74 are tentatively set for hearing on October 16 and October 30. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 2, 1974

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

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

CASE 5329: In the matter of the hearing called by the Oil Conservation Commission on its own motion to consider the amendment of Rule 109 of the Commission Rules and Regulations to require installation of blowout preventers on all drilling and workover rigs operating in areas of unknown pressures or high pressures and on all drilling and workover rigs operating within the corporate limits of any city, town, or village or within 1320 feet of a habitation, school, or church, wherever located.

CASE 5305: (Continued and Readvertised)

Application of Continental Oil Company for simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order approving the simultaneous dedication of its Britt B Well No. 17 located in Unit P of Section 10 and its Skaggs B Well No. 7 located in Unit K of Section 11, Township 20 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, said wells to be dedicated to a 320-acre non-standard proration unit comprising the SE/4 of said Section 10 and the SW/4 of said Section 11, said unit having previously been approved by Commission Order No. R-908.

CASE 5330: Application of Texas Pacific Oil Company, Inc. for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its J. H. Ansley Unit Well No. 1 to be located 660 feet from the North and East lines of Section 27, Township 17 South, Range 26 East, Kennedy Farms-Morrow Gas Pool, Eddy County, New Mexico, the N/2 of said Section 27 to be dedicated to the well.

CASE 4976: (Reopened)

In the matter of Case No. 4976 being reopened pursuant to the provisions of Order No. R-4638 to permit all operators in the West Parkway-Strawn and West Parkway-Atoka Gas Pools in Section 28, Township 19 South, Range 29 East, Eddy County, New Mexico, to appear and present evidence to clearly establish the nature of the reservoirs, proper rates of production for wells therein, and special rules therefor.

CASE 5331: Application of J. Gregory Merrion for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Devils Fork-Mesaverde and Devils Fork-Gallup production in the wellbore of his NCRA State Wells Nos. 1 and 4 located in Units E and J, respectively, of Section 16, Township 24 North, Range 6 West, Rio Arriba County, New Mexico.

CASE 5288: (Continued from the September 18, 1974, Examiner Hearing)

Application of Merrion & Bayless for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of hydrocarbon production from the top of the Gallup formation at 5434 feet to the base of the Dakota formation at 6570 feet in its Keeling Federal Well No. 1 located in Unit B of Section 20, Township 25 North, Range 8 West, Dufers Point-Dakota Pool, San Juan County, New Mexico.

CASE 5332: Application of C & K Petroleum, Inc. for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the West Airport Unit Area comprising 3,840 acres, more or less, of Federal, Fee and State lands in Township 22 South, Range 26 East, Eddy County, New Mexico.

CASE 5333: Application of Mark Production Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a gas well to be drilled 660 feet from the South and West lines of Section 9, Township 20 South, Range 25 East, Cemetery-Morrow Gas Pool, Eddy County, New Mexico, the S/2 of said Section 9 to be dedicated to the well.

CASE 5334: Application of Stoltz, Wagner & Brown for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to re-enter and clean out to a depth of approximately 8400 feet its H. L. Vinson Well No. 1, formerly Gulf Oil Corporation Vinson Well No. 2, the surface location of which is 1980 feet from the North and East lines of Section 22, Township 9 South, Range 36 East, Crossroads Siluro-Devonian Pool, Lea County, New Mexico, and to then directionally drill said well in such a manner as to bottom the well in the Devonian formation within a 180-foot radius of a point 2310 feet from the North line and 1320 feet from the East line of said Section 22.

CASE 5337: Application of Keesee & Thomas for an unorthodox oil well location, Sandoval County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Chacon Jicarilla Apache "D" Well No. 1 located 870 feet from the North line and 1140 feet from the East line of Section 23, Township 23 North, Range 3 West, Sandoval County, New Mexico. Said well was projected at an orthodox location for a Basin-Dakota gas well, but was completed as an oil well in the Dakota formation.

CASE 5335: Northwestern nomenclature case calling for the creation and extension of certain pools in Rio Arriba, San Juan and McKinley Counties, New Mexico:

(a) Create a new pool in McKinley County, New Mexico, classified as an oil pool for Gallup production, designated the Arroyo Chico-Gallup Oil Pool. The discovery well is the Northern Minerals, Inc. Santa Fe Pacific Railroad Well No. 7 located in Unit G of Section 29, Township 16 North, Range 6 West, completed October 15, 1973. The depth of the casing shoe is 764 feet. Said pool would comprise:

TOWNSHIP 16 NORTH, RANGE 6 WEST, NMPM
Section 29: SW/4 NE/4

(b) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Chacra production, designated the Bloomfield-Chacra Pool. The discovery well is the El Paso Natural Gas Company Hubbell Well No. 9, located in Unit P of Section 18, Township 29 North, Range 10 West. Said pool would comprise:

TOWNSHIP 29 NORTH, RANGE 10 WEST, NMPM
Section 7: SW/4
Section 18: All
Section 19: All
Section 20: NW/4

TOWNSHIP 29 NORTH, RANGE 11 WEST, NMPM
Section 4: SW/4
Section 5: SE/4
Section 9: N/2 & SE/4
Section 10: S/2
Section 11: S/2
Section 12: W/2 & SE/4
Section 13: All
Section 14: E/2
Section 23: E/2
Section 24: All
Section 26: E/2

(c) Create a new pool in Rio Arriba County, New Mexico, classified as a gas pool for Gallup production, designated the Campo-Gallup Pool. The discovery well is the Continental Oil Co. Conoco 29-4 Well No. 2 located in Unit H of Section 11, Township 29 North, Range 4 West. Said pool would comprise:

TOWNSHIP 29 NORTH, RANGE 4 WEST, NMPM
Section 11: NE/4

(Case 5335 continued from Page 3)

(d) Create a new pool in Rio Arriba County, New Mexico, classified as a gas pool for Pictured Cliffs production, designated the Gobernador-Pictured Cliffs Pool. The discovery well is the Lone Star Industries, Inc. Schalk 52 Well No. 1 located in Unit M of Section 24, Township 29 North, Range 5 West. Said pool would comprise:

TOWNSHIP 29 NORTH, RANGE 5 WEST, NMPM
Section 24: All

(e) Create a new pool in Rio Arriba County, New Mexico, classified as a gas pool for Gallup production, designated the Rosa-Gallup Pool. The discovery well is the Merrion & Bayless Gibbins Well No. 1, located in Unit L of Section 20, Township 32 North, Range 5 West. Said pool would comprise:

TOWNSHIP 32 NORTH, RANGE 5 WEST, NMPM
Section 20: S/2
Section 28: SW/4
Section 29: E/2
Section 33: NW/4

(f) Extend the Aztec-Pictured Cliffs Pool boundary in San Juan County, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 10 WEST, NMPM
Section 15: SW/4

TOWNSHIP 30 NORTH, RANGE 10 WEST, NMPM
Section 7: N/2

(g) Extend the Blanco-Mesaverde Pool boundary in Rio Arriba & San Juan Counties, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 2 WEST, NMPM
Section 16: All

(h) Extend the Blanco-Pictured Cliffs Pool boundary in Rio Arriba & San Juan Counties, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 7 WEST, NMPM
Section 7: All

TOWNSHIP 29 NORTH, RANGE 8 WEST, NMPM
Section 9: SW/4

TOWNSHIP 30 NORTH, RANGE 8 WEST, NMPM
Section 17: SW/4

TOWNSHIP 30 NORTH, RANGE 9 WEST, NMPM
Section 25: NE/4

TOWNSHIP 30 NORTH, RANGE 10 WEST, NMPM
Section 5: SW/4
Section 26: SE/4

(Case 5335 continued from Page 4)

TOWNSHIP 31 NORTH, RANGE 11 WEST, NMPM

Section 2: NW/4

Section 7: E/2

TOWNSHIP 32 NORTH, RANGE 11 WEST, NMPM

Section 19: E/2

Section 20: All

Section 21: W/2

Section 22: SE/4

(i) Extend the Gonzales-Mesaverde Pool boundary in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 25 NORTH, RANGE 6 WEST, NMPM

Section 1: NE/4

(j) Extend the Harris Mesa-Chacra Pool boundary in San Juan County, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 9 WEST, NMPM

Section 34: NE/4

(k) Extend the Largo-Chacra Pool boundary in Rio Arriba & San Juan Counties, New Mexico, to include therein:

TOWNSHIP 27 NORTH, RANGE 7 WEST, NMPM

Section 5: SW/4

Section 6: E/2

Section 7: E/2

Section 8: All

Section 9: W/2 & SE/4

Section 16: All

Section 17: All

Section 18: All

Section 19: N/2

Section 20: All

Section 21: All

Section 28: W/2

Section 29: N/2

Section 30: All

Section 33: W/2

TOWNSHIP 27 NORTH, RANGE 8 WEST, NMPM

Section 13: NE/4

Section 24: N/2

Section 25: E/2

TOWNSHIP 28 NORTH, RANGE 7 WEST, NMPM

Section 31: SE/4

(Case 5335 continued from Page 5)

(1) Extend the Otero-Chacra Pool boundary in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 6 WEST, NMPM

Section 36: NE/4

TOWNSHIP 26 NORTH, RANGE 7 WEST, NMPM

Section 24: E/2

(m) Extend the Tapacito-Pictured Cliffs Pool boundary in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 4 WEST, NMPM

Section 3: N/2

Section 4: N/2

TOWNSHIP 27 NORTH, RANGE 4 WEST, NMPM

Section 19: NW/4

Section 22: SE/4

Section 26: NW/4

Section 27: All

Section 28: All

Section 33: E/2

Section 34: All

TOWNSHIP 27 NORTH, RANGE 5 WEST, NMPM

Section 9: SE/4

Section 10: SW/4

Section 27: SE/4

Section 34: NE/4

Section 35: NW/4

(n) Extend the Tocito Dome-Pennsylvanian D Oil Pool boundary in San Juan County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 18 WEST, NMPM

Section 7: SW/4

Section 15: S/2 & NE/4

Section 20: NW/4

Section 22: N/2

Section 26: NE/4

Section 27: SE/4

CASE 5336: Southeastern nomenclature case calling for the creation and extension of certain pools in Chaves, Eddy and Lea Counties, New Mexico:

(a) Create a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated the Avalon-Morrow Gas Pool. The discovery well is the David Fasken El Paso Federal Well No. 1 located in the SW/4 NW/4 of Section 3, Township 21 South, Range 26 East, NMPM. Said pool would comprise:

(Case 5336 continued from Page 6)

TOWNSHIP 20 SOUTH, RANGE 27 EAST, NMPM
Section 33: S/2

TOWNSHIP 21 SOUTH, RANGE 26 EAST, NMPM
Section 3: Lots 1 through 16
Sections 4 and 5: All
Sections 8 and 9: All
Section 16: All
Section 21: All

(b) Create a new pool in Eddy County, New Mexico, classified as a gas pool for Strawn production and designated the Avalon-Strawn Gas Pool. The discovery well is the David Fasken El Paso Federal Well No. 1 located in the SW/4 NW/4 of Section 3, Township 21 South, Range 26 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 26 EAST, NMPM
Section 3: Lots 1 through 16

(c) Create a new pool in Chaves County, New Mexico, classified as a gas pool for Mississippian production and designated the Denton Camp-Mississippian Gas Pool. The discovery well is The Superior Oil Company Chatten & Muncy Well No. 1 located in Unit 0 of Section 18, Township 6 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 6 SOUTH, RANGE 28 EAST, NMPM
Section 18: S/2
Section 19: E/2

(d) Create a new pool in Eddy County, New Mexico, classified as an oil pool for Wolfcamp production and designated the LaHuerta-Wolfcamp Pool. The discovery well is the Cities Service Oil Company Simpson A Well No. 1 located in Unit H of Section 29, Township 21 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 27 EAST, NMPM
Section 29: NE/4

(e) Extend the Antelope Ridge-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 34 EAST, NMPM
Section 21: S/2
Section 28: E/2

(f) Extend the Atoka-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 26 EAST, NMPM
Section 10: E/2

(Case 5336 continued from Page 7)

(g) Extend the North Bagley-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 12 SOUTH, RANGE 33 EAST, NMPM
Section 6: NW/4

(h) Extend the South Bell Lake-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 34 EAST, NMPM
Section 5: NW/4
Section 6: N/2

(i) Extend the Blinebry Oil and Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
Section 35: NE/4

(j) Extend the Boyd-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 25 EAST, NMPM
Section 16: N/2

(k) Extend the Burton Flat-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 27 EAST, NMPM
Section 14: N/2

(l) Extend the Cabin Lake-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 30 EAST, NMPM
Section 1: S/2

(m) Extend the Catclaw Draw Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 25 EAST, NMPM
Section 27: All
Section 34: All

TOWNSHIP 22 SOUTH, RANGE 25 EAST, NMPM
Section 3: All

(Case 5336 continued from Page 8)

- (n) Extend the Cemetary-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 25 EAST, NMPM
Section 5: S/2

- (o) Extend the Double L-Queen Associated Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 29 EAST, NMPM
Section 2: All

- (p) Extend the Eagle Creek-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 25 EAST, NMPM
Section 13: E/2 SW/4

- (q) Extend the South Flying M-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 32 EAST, NMPM
Section 14: SE/4
Section 23: E/2

- (r) Extend the Golden Lane-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 30 EAST, NMPM
Section 31: E/2

TOWNSHIP 21 SOUTH, RANGE 29 EAST, NMPM
Section 5: Lots 1 & 2, 7, 8, 9 & 10 and 15 & 16

- (s) Extend the Golden Lane-Strawn Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 30 EAST, NMPM
Section 29: S/2

- (t) Extend the Los Medanos-Atoka Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 30 EAST, NMPM
Section 1: N/2

- (u) Extend the McMillan Seven Rivers-Queen Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 26 EAST, NMPM
Section 1: SE/4 NE/4
Section 12: SE/4 NE/4

(Case 5336 continued from Page 9)

- (v) Extend the Monument-Paddock Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM
Section 15: SW/4
Section 22: NW/4

- (w) Extend the South Salt Lake-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 32 EAST, NMPM
Section 4: Lots 3, 4, 5 and 6

- (x) Extend the Sams Ranch Grayburg-San Andres Gas Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 28 EAST, NMPM
Section 10: SE/4
Section 11: S/2
Section 14: N/2 and SE/4
Section 15: NE/4

- (y) Extend the North Shoe Bar-Strawn Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM
Section 13: SW/4

- (z) Extend the Square Lake Grayburg-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 30 EAST, NMPM
Section 9: E/2 NW/4

- (za) Extend the North Vacuum-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM
Section 7: W/2

- (bb) Extend the Vada-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 33 EAST, NMPM
Section 2: NW/4

- (cc) Extend the Winchester-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 28 EAST, NMPM
Section 2: S/2

Examiner Hearing - Wednesday - October 2, 1974

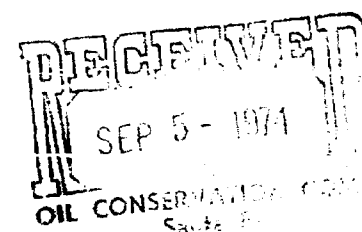
Docket No. 28-74

-11-

CASE 4548: (Reopened)

In the matter of Case No. 4548 being reopened on the motion of the Commission to consider the amendment of the special pool rules for the Catclaw Draw-Morrow Gas Pool, Eddy County, New Mexico, to limit the applicability of said special rules to the confines of the pool's horizontal limits.

J. GREGORY MERRION
PETROLEUM ENGINEER
P. O. BOX 807
FARMINGTON, NEW MEXICO 87401



September 3, 1974

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

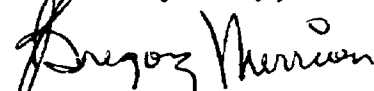
Re: Request for Hearings to Obtain
Permission to Commingle.

Gentlemen:

We have repaired corrosion holes and plugged back and recompleted our NCRA State #1 and #4 wells in the Devils Fork Mesaverde Field in Section 16, T24N, R6W, Rio Arriba County, New Mexico. We anticipate having stabilized producing rates and Gas-Oil Ratio Tests on these wells in two weeks.

Please schedule a hearing (or hearings on the same day) to authorize me to commingle the Devils Fork Mesaverde with the Devils Fork Gallup in these two wells. Devils Fork Gallup

Yours very truly,


J. Gregory Merrion

JGM/su

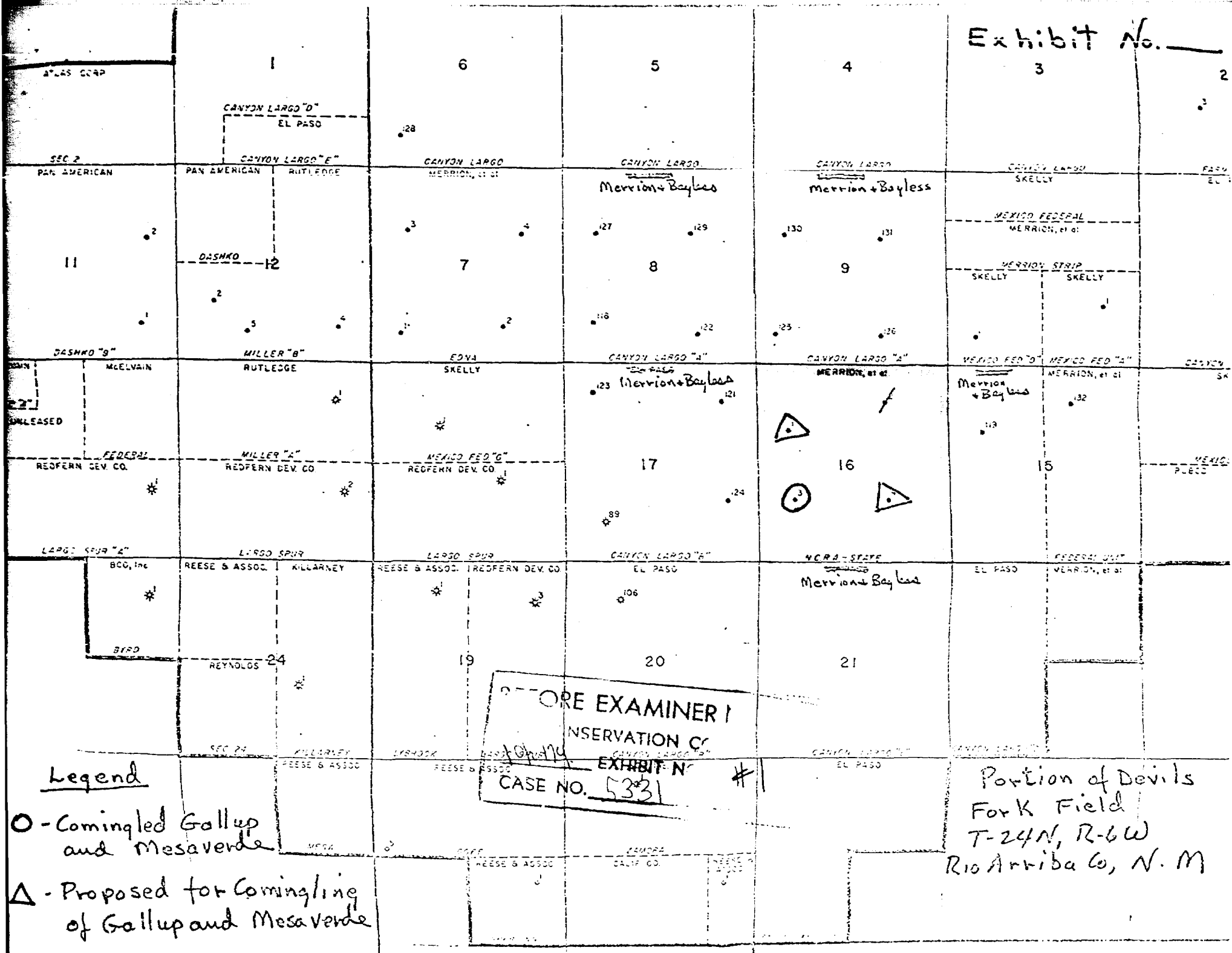
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Clerk's Office*

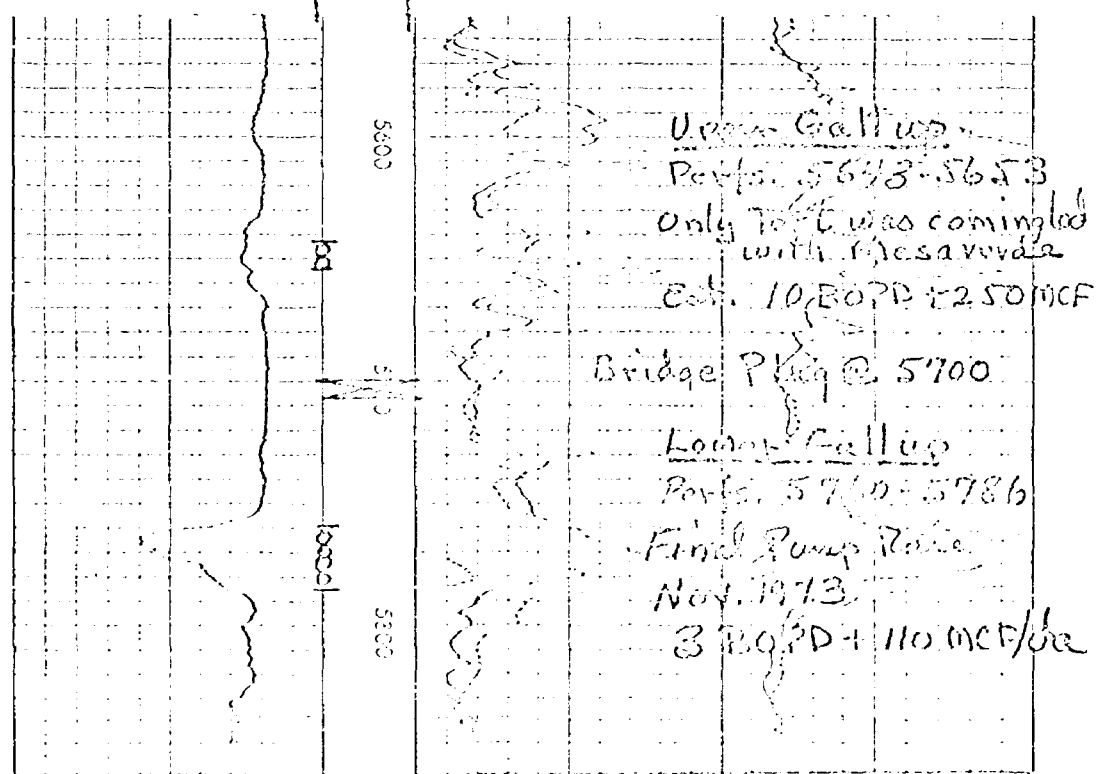
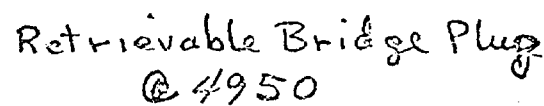
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Date 9-19-74

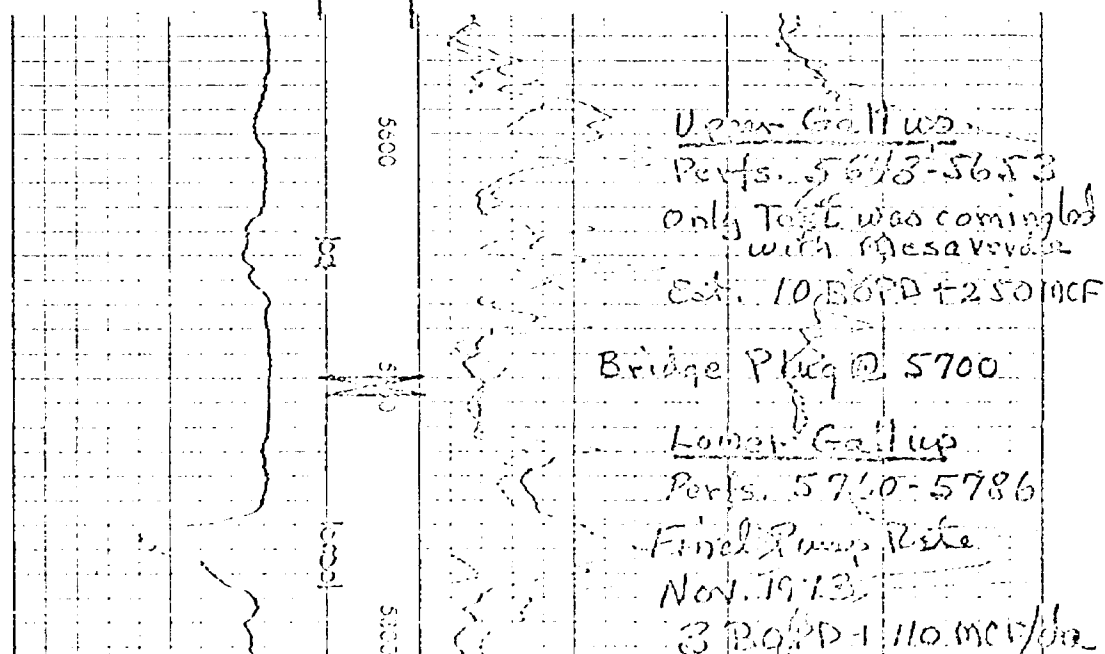
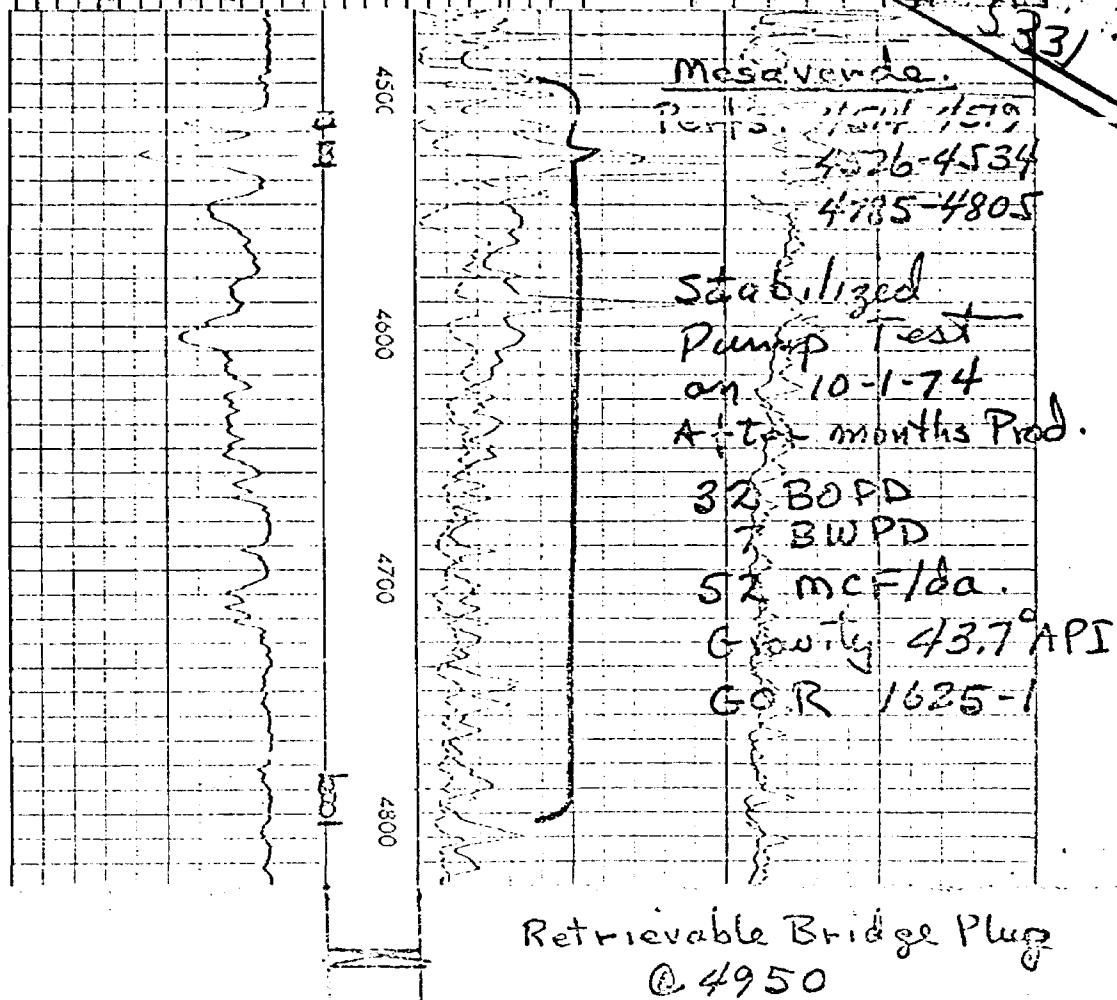
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J. Gregory Morrison
Application to Comingle
Mesaverde and Gallup.
NCRA #1 and #4 Wells.

Proposed Method of Allocation

1. Take 24 hour test of oil, water and gas rate from Mesaverde while pumping. Run sonolog to be certain of good pump action. (Oil Rate #1 + Mesaverde GOR)
2. Remove bridge plugs. Re-run tubing and rods. Pump test for two weeks. Then run 24 hour test of oil, water and gas rate from Mesaverde and Gallup comingled. Run sonolog to be certain of good pump action. (Oil Rate #2 + Comingled Gas Production)
3. Determine Mesaverde allocation of production as follows:
$$(MV_f) = \text{oil rate \#1} / \text{oil rate \#2}$$
4. Determine monthly allocation of production as follows:
 - a.) Mesaverde oil production = $MV_f \times \text{total comingled oil production}$.
 - b.) Mesaverde gas production = Mesaverde oil production \times Mesaverde GOR.
 - c.) Gallup Oil Production = total comingled oil production less Mesaverde oil production.
 - d.) Gallup Gas Production = total comingled gas production less Mesaverde gas production.
5. GOR tests to be run annually in accordance with Devils Fork Gallup Field Rules.

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. 5331

Order No. R-4882

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 October 2, 1974, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter

NOW, on this _____ day of October, 1974, 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 NCRA State Wells Nos. 1 and 4, located in Units E and J, respectively, of Section 16, Township 24 North, Range 6 West, NMPM, Rio Arriba County, New Mexico.

(3) That the applicant seeks authority to commingle Devils Fork-~~Mesaverde~~^{Mesoverde} and Devils Fork-Gallup production within the wellbore of the above-described wells.

(4) That ^{in each well,} ~~from the~~ Mesoverde formation, ~~zone, the subject well~~ is capable of low marginal production only.

(5) That ^{in each well} ~~from the~~ Gallup formation, ~~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} ~~and~~ will not violate correlative rights.

(7) That the reservoir characteristics of each of the subject zones ^{in each of the subject wells} 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 ^{either of} the subject wells is shut-in for 7 consecutive days.

(9) That in order to allocate the commingled production to each of the commingled zones in ~~the~~ ^{each of} the subject wells, ^{certain tests} ~~both prior to and after commingling the two formations~~ ~~percent of the commingled production should be allocated to~~ ~~should be conducted on the well~~ ~~each of the subject wells,~~ ~~the~~ ~~zone, and~~ ~~percent of the~~ ~~commingled production to the~~ ~~zone.~~

IT IS THEREFORE ORDERED:

(1) That the applicant, J. Gregory Merrion, is hereby authorized to commingle Devils Fork-Mesaverde and Devils Fork-Gallup production within the wellbore of the NCRA State Wells Nos. 1 and 4, located in Units E and J, respectively, of Section 16, Township 24 North, Range 6 West, NMPM, Rio Arriba County, New Mexico.

~~(2) That _____ percent of the commingled _____ production shall be allocated to the _____ zone and _____ percent of the commingled _____ production shall be allocated to the _____ zone.~~

(3) That the operator of the subject wells shall immediately notify the Commission's Aztec district office any time ^{either of} the wells 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.

(2) That the following procedure ^{shall} ~~should~~ be used for determining production from each of the commingled zones in each of the subject wells:

(a) Conduct a 24-hour test of the Mesaverde formation to determine the rate of production of oil, gas, and water from said formation while pumping. This test shall be used to determine Oil Rate No. 1 and the Mesaverde GOR.

(b) Remove bridge plugs, re-run tubing, ~~and~~ rods, and pump, ^{and produce both zones} ~~and test~~ for two weeks, ~~then~~ then conduct a 24-hour test to determine the rate of production of oil, gas, and water from both zones. This test shall be used to determine Oil Rate No. 2 and the commingled gas production.

(c) Determine Mesaverde allocation factor as follows:

$$MV_f = \text{Oil Rate No. 1} / \text{Oil Rate No. 2}$$

(d) ^{Allocate} ~~Determine~~ Monthly Production Allocation as follows:

1. Mesaverde Oil Production = $MV_f (\text{Total Oil Production})$
2. Gallup Oil Production = Total oil production minus Mesaverde oil production
3. Mesaverde Gas Production = (Mesaverde oil production) (Mesaverde GOR)
4. Gallup Gas Production = Total gas production minus Mesaverde gas production

(e) GOR Tests shall be run annually in accordance with Devils Fork Gallup Associated Pool Rules.