

CASE 5675: MERRION & BAYLESS FOR
A DUAL COMPLETION AND DOWNHOLE
COMMINGLING, SANDOVAL COUNTY, NM

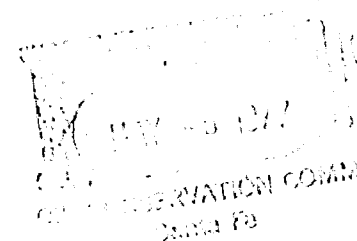
CASE NO.

5675

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,
ETC.

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

April 29, 1977



New Mexico Oil Conservation Commission
1000 Rio Brazos
Aztec, New Mexico 87410

Case 5675

ATTENTION: Mr. Al Kendrick
Supervisor

RE: Merrion & Bayless
Jicarilla #428-2
Commingle Production Allocation

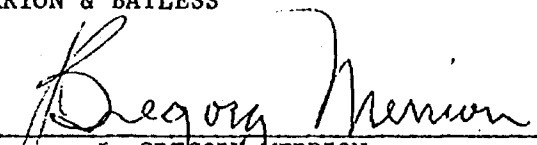
Gentlemen:

Pursuant to Oil Commission Order No. R5214 and our telephone conversation of today, we have agreed to allocate the commingled Pictured Cliffs and Chacra production from subject well 98% to the Pictured Cliffs and 2% to the Chacra, and the commingled production from the Gallup Dakota Mesa Verde side 80% to the Gallup, 10% to the Dakota, and 10% to the Mesa Verde.

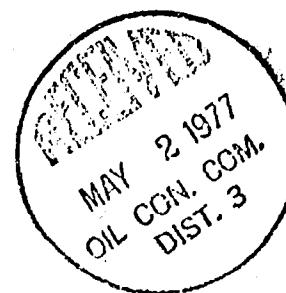
Yours very truly,

MERRION & BAYLESS

By


J. GREGORY MERRION

JGM/eh



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. 5675
Order No. R-5214

APPLICATION OF MERRION & BAYLESS
FOR A DUAL COMPLETION AND DOWNHOLE
COMMINGLING, SANDOVAL COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on April 28, 1976, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 18th day of May, 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, Merrion & Bayless, is the owner and operator of the Jicarilla 428 Well No. 2, located in Unit A of Section 31, Township 23 North, Range 4 West, NMPM, Sandoval County, New Mexico.
- (3) That said well is completed with a short string of 2 7/8-inch casing and a long string of 4 1/2-inch casing cemented in a common well bore at depths of 2746 feet and 6631 feet respectively.
- (4) That the applicant seeks authority to complete said well as a dual completion (combination) in such a manner as to produce undesignated Pictured Cliffs Gas and undesignated Chacon (Chacra) gas through the 2 7/8-inch casing and oil and gas production from undesignated Mesaverde, Mancos, Gallup, Carlisle and Graneros stringers through tubing set in the 4 1/2-inch casing.
- (5) That the applicant seeks authority to commingle the Pictured Cliffs and Chacra gas production within the 2 7/8-inch casing of the above-described well.

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Case No. 5675
Order No. R-5214

(6) That from the Pictured Cliffs zone, the subject well is capable of low rates of production only.

(7) That from the Chacra zone, the subject well is capable of low rates of production only.

(8) That the applicant further seeks authority to commingle Mesaverde, Gallup (Mancos, Gallup, and Carlisle) and Dakota (Graneros) production within the 4 1/2-inch casing of the above-described well.

(9) That from each of the zones described in Finding No. (8) above, the subject well is capable of low rates of production only.

(10) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

(11) 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.

(12) 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.

(13) 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.

(14) That the allocation of the production to the various commingled zones should be in accordance with a formula agreed to by the applicant and the Supervisor of the Commission's Aztec district office.

(15) That the application for dual completion and downhole commingling should be approved.

IT IS THEREFORE ORDERED:

(1) That the applicant, Merrion and Bayless, is hereby authorized to complete its Jicarilla 428 Well No. 2, located in Unit A of Section 31, Township 23 North, Range 4 West, NMPM, Sandoval County, New Mexico, as a dual completion (combination) with a string of 2 7/8-inch casing and a string of 4 1/2-inch casing cemented within a common wellbore.

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Case No. 5675
Order No. R-5214

PROVIDED HOWEVER, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Commission Rules and Regulations insofar as said rule is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take zone segregation tests upon completion and annually thereafter.

(2) That the applicant further is authorized to commingle Pictured Cliffs and Chacra gas production within the 2 7/8-inch casing in said well and to commingle Mesaverde, Gallup, and Dakota oil production within the 4 1/2-inch casing in said well.

(3) That the allocation of production to the various commingled zones shall be based upon percentages or a formula agreed upon by the applicant and the Supervisor of the Commission's Aztec district office.

(4) 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.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

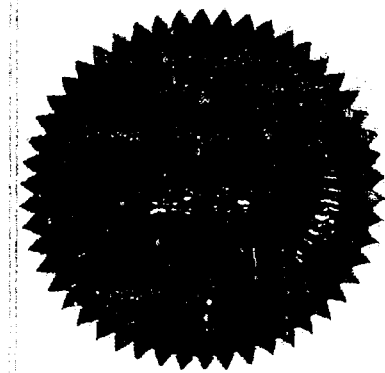
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Phil R. Lucero
PHIL R. LUCERO, Chairman

Emery C. Arnold
EMERY C. ARNOLD, Member

Joe D. Ramey
JOE D. RAMEY, Member & Secretary



S E A L

dr/

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
April 28, 1976

EXAMINER HEARING

IN THE MATTER OF:

Application of Merrion & Bayless for a) CASE
dual completion and downhole commingling) 5675
Sandoval County, New Mexico.)

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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

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J. GREGORY MERRION

Cross Examination by Mr. Stamets

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Applicant's Exhibit No. Seven, Form C-116

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Applicant's Exhibit No. Eight, Facts Pert. to Comm.

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Applicant's Exhibit No. Nine, Allocating Comm. Prod.

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Applicant's Exhibit No. Ten, Letter

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1 MR. STAMETS: We will call next Case 5675.

2 MR. CARR: Case 5675, application of Merrion &
3 Bayless for a dual completion and downhole commingling,
4 Sandoval County, New Mexico.

5 MR. STAMETS: Call for appearances in this case.

6 MR. MERRION: J. Gregory Merrion.

7 MR. STAMETS: Will you stand and be sworn, please.

8 (THEREUPON, the witness was duly sworn.)

9 MR. STAMETS: You may proceed.

10 MR. MERRION: Mr. Examiner, I am J. Gregory Merrion,
11 I have appeared before the Commission before. I'm co-owner
12 and operator of the Jicarilla 428-2 Well and wish to represent
13 myself in this case.

14 I would like to present to the Commission an
15 exhibit which we have labeled Exhibit Number One which is a
16 plat of the acreage in question and the wells adjacent to
17 the well in question.

18 Mr. Examiner, the acreage shaded in yellow is
19 acreage held by Merrion & Bayless. The well around which a
20 triangle is drawn is the well in question, the Jicarilla
21 Contract 428-2 Well. This well was drilled to the Dakota and
22 a mud logger was used during the drilling. The Dakota was
23 found to be wet and several zones of the hole in the Graneros
24 the Carlisle, different sections of the Gallup and the
25 Mancos, as well as the Mesaverde had shows of oil or gas in

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1 them. The Pictured Cliff was gas productive and there was a
2 zone five hundred feet below the Pictured Cliff which our
3 geologist calls the Chacon zone which was also found to have
4 gas shows in it. We set four-and-a-half casing to total depth,
5 cemented the bottom part of the casing, ran a stage collar
6 below the Mesaverde and cemented that. We ran two-and-seven-
7 eighths casing along beside the four-and-a-half casing and
8 cemented that and proceeded to open and perforate and frac
9 several intervals. We will get into the details of that
10 later.

11 Of course, the nature of our application is for
12 permission to commingle the Pictured Cliff and Chacon zone
13 in the two-and-seven-eighths casing and to commingle the
14 Graneros, several sections of the Gallup and the Mesaverde
15 inside the four-and-a-half casing and also to dual complete
16 with the two-and-seven-eighths on one side and four-and-a-half
17 on the other. I don't know quite how to state that but we
18 are dual completing and commingling both sides of the dual.

19 The plat is intended to give a bird's-eye view
20 of the acreage and the surrounding wells that have been
21 drilled, some of which have been plugged. The wells 2 and 3
22 are wells which we have drilled to the Pictured Cliff and
23 are completed and ready to produce, waiting pipeline connection.

24 Wells 4 and 5 are wells which were drilled in the
25 early fifties by Fred Turner and completed and produced from

1 the Point Lookout zone of the Mesaverde in a field which was
2 known as the Otero Point Lookout Field.

3 Well 6 was a well completed by Humble Oil and Gas
4 Company in what was called the Otero-Sanostee zone, which our
5 geologist calls the Carlisle and is generally included within
6 the Gallup interval.

7 To the north of our block Conoco has two Pictured
8 Cliff wells, Number 8 and 9 on the plat.

9 I'm through with that exhibit if you have any
10 questions.

11 I would like to present an exhibit, a diagrammatic
12 sketch of the present status of the well.

13 MR. STAMETS: This will be your Exhibit Number Two?

14 MR. MERRION: Yes, sir.

15 MR. STAMETS: Do you have anymore exhibits?

16 MR. MERRION: I have several, sir. Let's see, two,
17 three, four, five, six, seven, eight, nine and ten total. It
18 really doesn't take that much time to go over, I don't think.

19 MR. STAMETS: Why don't you pass those up here and
20 we will mark them?

21 MR. MERRION: This is a C-116 on the deep side there.
22 I don't know whether you want to label that an exhibit or no.

23 (THEREUPON, the applicant's exhibits
24 were marked for identification.)

25 MR. STAMETS: You may proceed.

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1 MR. MERRION: Mr. Examiner, Exhibit Number Two tends
2 to show the present status of the well, the Graneros, Carlisle
3 Gallup and Mancos perforations have been perforated and fraced
4 are presently commingled and producing on test allowable with
5 a pumping unit and sucker rod pump through the four-and-a-half
6 casing. On the shallow gas side the Pictured Cliff and Chacon
7 zone have been perforated and fraced, there is presently inch-
8 and-a-quarter tubing with an Arrow Tension Packer set between
9 them.

10 The diagram gives further details as to the cement
11 bond tops and the setting depths of the pipe and so forth.

12 We will go on to Exhibit Number Three. It is a
13 diagrammatic sketch showing the proposed status of the well
14 if our application is approved. On the deep side we will open
15 the Mesaverde perms from forty-two, fifty-six to sixty, forty-
16 four, oh, eight to sixteen; forty-four, twenty-four to twenty-
17 eight, commingle them with the rest of the zones now open and
18 put the well back on a pump.

19 We will squeeze cement the top of the Pictured Cliff
20 to repair a cement channel, restimulate if neccessary and
21 remove the packer and run one-inch tubing to commingle the
22 Pictured Cliff and Chacon zones on the shallow side.

23 Going on to Exhibit Number Four, I have listed
24 several facts pertaining to the dual completions, following the
25 format in the Oil Commission Rules.

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1 Number one, the Commission has previously authorized
2 similar type dual completions, using four-and-a-half casing
3 for deep oil production and cemented in the same wellbore with
4 four-and-a-half casing, two-and-seven-eighths casing for
5 shallow gas production. An example of that is my J. Gregory
6 Merrion Edna No. 2 Well in Section 7 of Township 24 North,
7 Range 6 West, Rio Arriba County with the Devils Fork-Gallup
8 zone being produced through four-and-a-half casing and the
9 Ballard-Pictured Cliff zone being produced through two-and-
10 seven-eighths casing. This well was completed in 1961 and
11 we have never had any problems with it.

12 Number two, sufficient cement was used to cover far
13 in excess of all pays. Subsequent Bond Log indicated cement
14 three hundred and sixty-two feet above the Gallup-Mancos-
15 Dakota pay, nine hundred and twenty-six feet above the Mesa-
16 verde pay, three hundred and eighty-four feet above the
17 Chacon pay and in spite of the fact that enough cement had
18 been used to cover to a level of four hundred and seventy
19 feet above the Pictured Cliffs, the Bond Log indicated that
20 the Pictured Cliff was uncovered. The two-and-seven-eighths
21 was perforated directionally and squeezed with fifty sacks of
22 cement. A second Bond Log was run indicating good bond from
23 thirty-six feet below the Pictured Cliff to twenty-four feet
24 above the Pictured Cliff.

25 During the frac treatment we had a slight pressure

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1 break halfway through and minor communication out of the
2 braden head. The well was flow tested and made a heavy
3 spray of water during the test. The well drowned out after
4 shut in and we propose to repair the cement channel.

5 Three turbolizers were run on the two-and-seven-
6 eighths casing opposite the Chacon Zone and three more turbo-
7 lizers were run on the two-and-seven-eighths opposite the
8 Pictured Cliff.

9 Directional perforating equipment was used for all
10 perforating inside the two-and-seven-eighths casing.

11 Referring, sir, to Exhibit Number Five, our facts
12 pertaining to the commingling of oil production inside the
13 four-and-a-half casing, again following the format in the
14 Oil Commission Rules and Regulations.

15 Number one, production from all zones presently
16 open is oil. Anticipated production from the Mesaverde interval
17 to be opened is oil. This is based upon production history
18 from the nearby Fred Turner wells completed from the
19 Otero Point Lookout zone.

20 Two, current production is twenty-two barrels of
21 oil per day with bottom perforation at sixty-three, seventy-
22 five feet. Anticipated additional production from the
23 Mesaverde is anticipated to be on the order of ten to twenty
24 barrels of oil per day for a total stream of about forty
25 barrels of oil per day.

1 Three, zones currently completed require artificial
2 lift, sucker rod pumping equipment is used. It is anticipated
3 that the Mesaverde will also require artificial lift.

4 Four, current water production is only three barrels
5 of water per day. The Mesaverde could make water but any
6 excessive amount will be squeezed.

7 Five, current water is slightly salty and has given
8 no evidence of scaling problems. Mesaverde water, if any, could
9 cause scale problems in the wellbore, but it is anticipated
10 that no permanent damage will result and for the most part any
11 temporary damage can either be prevented with scale inhibitor
12 or repaired with an occasional acid wash.

13 Six, it is anticipated that all crude will command
14 top market price for the area. There is a typographical error
15 on that exhibit. She wrote "to" instead of "top". Please
16 excuse the mistake.

17 Number seven, the ownership of all zones is the
18 same. The Jicarilla Tribe being the lessor and owning
19 a one-sixth royalty interest. The lease is owned jointly
20 by my partner and myself, each with one-half working interest,
21 forty-one point six, six seven percent revenue interest each.

22 Number eight, all zones are essentially marginal and
23 it is doubtful that secondary recovery could be applied to any
24 of them.

25 Number nine, bottom-hole pressures have not been

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1 measured but are thought to be virgin pressures ranging from
2 eighteen hundred psi in the Point Lookout to twenty-seven
3 hundred psi in the Graneros.

4 The next exhibit is the proposed method of allocating
5 commingled production from the deep side of the dual.

6 One, take final GOR test of commingled production
7 measuring oil (O, One, gas (G, One) and water (W, One).

8 Two, pull rods and swab test well through treater
9 four hours or until stabilized. Use last hour rate for oil
10 (O, One), water (W, One), and gas (G, Two) measurement.

11 Three, trip tubing and run packer to sixty-three
12 hundred. Swab test Graneros perforations sixty-three, thirty-
13 nine to sixty-three, seventy-five through the treater for four
14 hours or until stabilized. Use the last hour rate for oil
15 (O, Three), water (W, Three), and gas (G, Three) measurement.

16 Four, set bridge plug and perforate, test and
17 stimulate as necessary the Mesaverde zone forty-two, fifty-six
18 to sixty; forty-four, oh, eight to sixteen; forty-four,
19 twenty-four to twenty-eight. Again there is a typographical
20 error. My secretary put down a decimal point instead of a
21 hyphen between each of the sets of perforations. If you will
22 correct that I will appreciate it.

23 Five, run tubing and rods and pump test all zones
24 commingled until recovery of all load oil plus thirty days.

25 Six, take a twenty-four hour GOR test measuring

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1 oil (O, Four), water (W, Four), and gas (G, Four).

2 Seven, allocate production as follows: Dakota oil
3 fraction would be (O, Three) divided by (O, Two), times
4 (O, One), divided by (O, Four).

5 Gas fraction would be (G, Three) over (G, Two), times
6 (G, One) over (G, Four).

7 Water fraction would be (W, Three) over (W, Two)
8 times (W, One) over (W, Four).

9 The Gallup and for this presentation I am assuming
10 that the Commission would consider everything from the top
11 of the Greenhorn to the base of the Mesaverde as Gallup.

12 Oil fraction would be (O, Two) minus (O, Three),
13 divided by (O, Two) quantity times (O, One) over (O, Four).

14 Gas fraction would be (G, Two) minus (G, Three)
15 divided by (G, Two) quantity times (G, One) over (G, Four).

16 Water fraction would be (G, Two) minus (W, Three)
17 divided by (W, Two) quantity times (W, One) over (W, Four).

18 The Mesaverde oil fraction would be (O, Four) minus
19 (O, One) divided by (O, Four).

20 The gas fraction would be (G, Four) minus (G, One)
21 divided by (G, Four).

22 The water fraction would be (W, Four) minus (W, One)
23 divided by (W, Four).

24 The next exhibit is probably a little bit out of
25 place, it should have been presented before this and is a

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1 C-116 showing a recent test on the deep side of the dual
2 completion as required in the Rules of the Oil Commission when
3 applying for commingling.

4 The following exhibit is facts pertaining to
5 commingling of production of the Chacon gas with the Pictured
6 Cliff gas inside two-and-seven-eighths casing.

7 Number one, the Chacon zone is extremely marginal
8 and will not flow steady, making an estimated fifteen MCF of
9 gas per day, plus some water, estimated to be less than five
10 barrels a day.

11 Number two, it is estimated that after the repair
12 of a cement channel the Pictured Cliff will IP for fifteen
13 hundred MCF per day with very little water.

14 Number three, neither water exhibits scaling
15 tendencies.

16 Number four, shut-in pressure for the Chacon zone is
17 eight hundred and thirty-five pounds per square inch gauge
18 and for the Pictured Cliff is six hundred and sixty-seven
19 pounds per square inch gauge. The Pictured Cliff pressure
20 is based upon an adjacent well since the well did drown out
21 and not give a shut-in surface pressure which was representa-
22 tive.

23 Number five, the Chacon zone will not produce
24 into the line but may contribute a little production if the
25 commingled Pictured Cliff gas is allowed to keep it unloaded.

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Number six, ownership of both zones is common except for a three-and-a-third override owned by Elliott A. Riggs to the base of the Pictured Cliff. As per the attached letter, Merrion & Bayless have agreed to pay Riggs the same override on the Chacon gas from this well. The result will be that all interests are common.

The following exhibit is a proposed method of allocating commingled production from the shallow side of the dual.

One, take a twenty-four hour test of the Chacon zone following through inch-and-a-quarter tubing. Measure gas rate or as an alternative if the well will not flow, swab test four hours and measure instantaneous gas rate. Gas rate equals (G, One).

Two, pull inch-and-a-quarter tubing. Squeeze cement to repair channeled cement above Pictured Cliff. Restimulate if necessary. Flow test well to clean up. When well is on line, use flow period data during initial deliverability test to calculate (G, Two) at zero deliverability pressure.

Number three, allocate, Chacon fraction is equal to (G, One) over (G, Two). Pictured Cliff fraction is equal to (G, Two) minus (G, One) divided by (G, Two).

Four, as an alternative, in the event (G, One) is less than five percent of stream, allocate all gas to Pictured Cliff.

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1 The last exhibit is a letter from Elliott Riggs
2 waiving any objections to commingling the Pictured Cliff and
3 Chacon zone, since Mr. Riggs represents the only diversity of
4 interest.

5 I have no further presentation, sir.

6

7

CROSS EXAMINATION

8 BY MR. STAMETS:

9 Q Mr. Merrion, is this an isolated pool?

10 A We have recently completed two Pictured Cliff
11 wells, neither one of which are offsetting, there is one
12 location between this well in question and the well, the
13 Jicarilla 428-1. To that extent it is not isolated as to
14 Pictured Cliff. The other zone, the Chacon, has never
15 produced anywhere in the basin to my knowledge. The Mesa-
16 verde had produced on wells on this lease about a mile away
17 but these wells have long since been plugged. The Carlisle
18 or Sanostee has produced on the south end of this same block
19 but is not now producing.

20 Q What I was getting at, I was wondering if the
21 simplest way to handle this would be to establish a pool
22 in the vertical limits sufficient to cover the zones you
23 propose to commingle.

24 A I think that would be a good possibility for the
25 future and whether this would be the time to do it or not I

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1 don't know. This is our first commingling in this particular
2 area. We were looking mainly for Dakota gas and we still have
3 hopes to find Dakota gas on this block. We are hoping we
4 can find enough marginal zones to back us up and bail us out
5 in the event we don't find our Dakota gas in future drilling
6 and so, in that event, there would be a possibility that we
7 would be coming back for additional commingling applications.
8 Your judgment would be better than mine as to whether now
9 would be the time to establish these longer vertical limits.

10 Q I suggest that regardless of the outcome of this
11 hearing that you should contact our District Supervisor and
12 see if he would be willing to propose a pool in there with
13 vertical limits that would cover this entire area. That
14 certainly would simplify matters.

15 A All right.

16 Q Is there any potential for loss of oil or gas in the
17 ground as a result of this commingling?

18 A In my opinion, no, all zones are quite tight and I
19 just don't feel that under these circumstances there would
20 be any potential for loss.

21 Q Do you expect these rates of production to hold up
22 or will they drop off pretty quick?

23 A Well, of course, initially after a frac job you get
24 a rather steep decline. We have fond hopes that beyond that
25 we will have a pretty level, very low rate of decline in

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1 production, if we are talking about the deep oil zone. We have
2 many, many feet of rather marginal stuff open and fraced with
3 lots of sand. I think we used pretty close to half million
4 pounds of sand total fracing these various zones.

5 Q Would it be economical to develop any of these
6 zones independently?

7 A It's not really very economical all together, I
8 don't think. The Pictured Cliff, I think, is the exception
9 and we have developed in the area independently. We are
10 really trying to evaluate and we have spent a lot of money
11 on different logs to evaluate the different possibilities in
12 there and it is possible that some of these may clean up and
13 become better elsewhere in the block. Based on this well, I
14 would say the only zone which would stand commercially by
15 itself would be the Pictured Cliff.

16 Q Just one more question here. I'm looking at the
17 long string now and you are identifying three zones in there,
18 the Mesaverde and then the Gallup which would include what
19 you call the Mancos perforations, the Gallup perforations and
20 the Carlisle perforations?

21 A Right, in other words, I think I stated somewhere
22 in the presentation that I assumed that the Commission would
23 classify all of those as Gallup. I think there are
24 precedences but I'm not entirely sure.

25 Q The Graneros would be your Dakota zone?

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1 A. Yes, sir.
2 MR. STAMETS: Any other questions of the witness?
3 Would you like to offer your exhibits into evidence,
4 Mr. Merrion?
5 MR. MERRION: Yes, sir, I would like to offer
6 Exhibits One through Ten in evidence, sir.
7 MR. STAMETS: These exhibits will be admitted.
8 (THEREUPON, Applicant's Exhibits One through
9 Ten were admitted into evidence.)
10 MR. STAMETS: Anything further? Any questions of
11 the witness? He may be excused.
12 (THEREUPON, the witness was excused.)
13 MR. STAMETS: The case will be taken under advisement.
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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
Sidney F. Morrish, C.S.R.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 5675
heard by me on 4-28-76, 1976.
Richard H. Hamt, Examiner
New Mexico Oil Conservation Commission

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
April 28, 1976

EXAMINER HEARING

IN THE MATTER OF:

Application of Merrion & Bayless for a
dual completion and downhole commingling)
Sandoval County, New Mexico.

CASE
5675

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil
Conservation Commission:

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

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1 MR. STAMETS: We will call next Case 5675.

2 MR. CARR: Case 5675, application of Merrion &
3 Bayless for a dual completion and downhole commingling,
4 Sandoval County, New Mexico.

5 MR. STAMETS: Call for appearances in this case.

6 MR. MERRION: J. Gregory Merrion.

7 MR. STAMETS: Will you stand and be sworn, please.

8 (THEREUPON, the witness was duly sworn.)

9 MR. STAMETS: You may proceed.

10 MR. MERRION: Mr. Examiner, I am J. Gregory Merrion,
11 I have appeared before the Commission before. I'm co-owner
12 and operator of the Jicarilla 428-2 Well and wish to represent
13 myself in this case.

14 I would like to present to the Commission an
15 exhibit which we have labeled Exhibit Number One which is a
16 plat of the acreage in question and the wells adjacent to
17 the well in question.

18 Mr. Examiner, the acreage shaded in yellow is
19 acreage held by Merrion & Bayless. The well around which a
20 triangle is drawn is the well in question, the Jicarilla
21 Contract 428-2 Well. This well was drilled to the Dakota and
22 a mud logger was used during the drilling. The Dakota was
23 found to be wet and several zones of the hole in the Graneros
24 the Carlisle, different sections of the Gallup and the
25 Mancos, as well as the Mesaverde had shows of oil or gas in

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1 them. The Pictured Cliff was gas productive and there was a
2 zone five hundred feet below the Pictured Cliff which our
3 geologist calls the Chacon zone which was also found to have
4 gas shows in it. We set four-and-a-half casing to total depth
5 cemented the bottom part of the casing, ran a stage collar
6 below the Mesaverde and cemented that. We ran two-and-seven-
7 eighths casing along beside the four-and-a-half casing and
8 cemented that and proceeded to open and perforate and frac
9 several intervals. We will get into the details of that
10 later.

11 Of course, the nature of our application is for
12 permission to commingle the Pictured Cliff and Chacon zone
13 in the two-and-seven-eighths casing and to commingle the
14 Graneros, several sections of the Gallup and the Mesaverde
15 inside the four-and-a-half casing and also to dual complete
16 with the two-and-seven-eighths on one side and four-and-a-half
17 on the other. I don't know quite how to state that but we
18 are dual completing and commingling both sides of the dual.

19 The plat is intended to give a bird's-eye view
20 of the acreage and the surrounding wells that have been
21 drilled, some of which have been plugged. The wells 2 and 3
22 are wells which we have drilled to the Pictured Cliff and
23 are completed and ready to produce, waiting pipeline connection.

24 Wells 4 and 5 are wells which were drilled in the
25 early fifties by Fred Turner and completed and produced from

1 the Point Lookout zone of the Mesaverde in a field which was
2 known as the Otero Point Lookout Field.

3 Well 6 was a well completed by Humble Oil and Gas
4 Company in what was called the Otero-Sanostee zone, which our
5 geologist calls the Carlisle and is generally included within
6 the Gallup interval.

7 To the north of our block Conoco has two Pictured
8 Cliff wells, Number 8 and 9 on the plat.

9 I'm through with that exhibit if you have any
10 questions.

11 I would like to present an exhibit, a diagrammatic
12 sketch of the present status of the well.

13 MR. STAMETS: This will be your Exhibit Number Two?

14 MR. MERRION: Yes, sir.

15 MR. STAMETS: Do you have anymore exhibits?

16 MR. MERRION: I have several, sir. Let's see, two,
17 three, four, five, six, seven, eight, nine and ten total. It
18 really doesn't take that much time to go over, I don't think.

19 MR. STAMETS: Why don't you pass those up here and
20 we will mark them?

21 MR. MERRION: This is a C-116 on the deep side there,
22 I don't know whether you want to label that an exhibit or no.

23 (THEREUPON, the applicant's exhibits
24 were marked for identification.)

25 MR. STAMETS: You may proceed.

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1 MR. MERRION: Mr. Examiner, Exhibit Number Two tends
2 to show the present status of the well, the Graneros, Carlisle
3 Gallup and Mancos perforations have been perforated and fraced
4 are presently commingled and producing on test allowable with
5 a pumping unit and sucker rod pump through the four-and-a-half
6 casing. On the shallow gas side the Pictured Cliff and Chacon
7 zone have been perforated and fraced, there is presently inch-
8 and-a-quarter tubing with an Arrow Tension Packer set between
9 them.

10 The diagram gives further details as to the cement
11 bond tops and the setting depths of the pipe and so forth.

12 We will go on to Exhibit Number Three. It is a
13 diagrammatic sketch showing the proposed status of the well
14 if our application is approved. On the deep side we will open
15 the Mesaverde perfs from forty-two, fifty-six to sixty, forty-
16 four, oh, eight to sixteen; forty-four, twenty-four to twenty-
17 eight, commingle them with the rest of the zones now open and
18 put the well back on a pump.

19 We will squeeze cement the top of the Pictured Cliff
20 to repair a cement channel, restimulate if neccessary and
21 remove the packer and run one-inch tubing to commingle the
22 Pictured Cliff and Chacon zones on the shallow side.

23 Going on to Exhibit Number Four, I have listed
24 several facts pertaining to the dual completions, following the
25 format in the Oil Commission Rules.

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1 Number one, the Commission has previously authorized
2 similar type dual completions, using four-and-a-half casing
3 for deep oil production and cemented in the same wellbore with
4 four-and-a-half casing, two-and-seven-eighths casing for
5 shallow gas production. An example of that is my J. Gregory
6 Merrion Edna No. 2 Well in Section 7 of Township 24 North,
7 Range 6 West, Rio Arriba County with the Devils Fork-Gallup
8 zone being produced through four-and-a-half casing and the
9 Ballard-Pictured Cliff zone being produced through two-and-
10 seven-eighths casing. This well was completed in 1961 and
11 we have never had any problems with it.

12 Number two, sufficient cement was used to cover far
13 in excess of all pays. Subsequent Bond Log indicated cement
14 three hundred and sixty-two feet above the Gallup-Mancos-
15 Dakota pay, nine hundred and twenty-six feet above the Mesa-
16 verde pay, three hundred and eighty-four feet above the
17 Chacon pay and in spite of the fact that enough cement had
18 been used to cover to a level of four hundred and seventy
19 feet above the Pictured Cliffs, the Bond Log indicated that
20 the Pictured Cliff was uncovered. The two-and-seven-eighths
21 was perforated directionally and squeezed with fifty sacks of
22 cement. A second Bond Log was run indicating good bond from
23 thirty-six feet below the Pictured Cliff to twenty-four feet
24 above the Pictured Cliff.

25 During the frac treatment we had a slight pressure

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1 break halfway through and minor communication out of the
2 braden head. The well was flow tested and made a heavy
3 spray of water during the test. The well drowned out after
4 shut in and we propose to repair the cement channel.

5 Three turbolizers were run on the two-and-seven-
6 eighths casing opposite the Chacon Zone and three more turbo-
7 lizers were run on the two-and-seven-eighths opposite the
8 Pictured Cliff.

9 Directional perforating equipment was used for all
10 perforating inside the two-and-seven-eighths casing.

11 Referring, sir, to Exhibit Number Five, our facts
12 pertaining to the commingling of oil production inside the
13 four-and-a-half casing, again following the format in the
14 Oil Commission Rules and Regulations.

15 Number one, production from all zones presently
16 open is oil. Anticipated production from the Mesaverde interval
17 to be opened is oil. This is based upon production history
18 from the nearby Fred Turner wells completed from the
19 Otero Point Lookout zone.

20 Two, current production is twenty-two barrels of
21 oil per day with bottom perforation at sixty-three, seventy-
22 five feet. Anticipated additional production from the
23 Mesaverde is anticipated to be on the order of ten to twenty
24 barrels of oil per day for a total stream of about forty
25 barrels of oil per day.

1 Three, zones currently completed require artificial
2 lift, sucker rod pumping equipment is used. It is anticipated
3 that the Mesaverde will also require artificial lift.

4 Four, current water production is only three barrels
5 of water per day. The Mesaverde could make water but any
6 excessive amount will be squeezed.

7 Five, current water is slightly salty and has given
8 no evidence of scaling problems. Mesaverde water, if any, could
9 cause scale problems in the wellbore, but it is anticipated
10 that no permanent damage will result and for the most part any
11 temporary damage can either be prevented with scale inhibitor
12 or repaired with an occasional acid wash.

13 Six, it is anticipated that all crude will command
14 top market price for the area. There is a typographical error
15 on that exhibit. She wrote "to" instead of "top". Please
16 excuse the mistake.

17 Number seven, the ownership of all zones is the
18 same. The Jicarilla Tribe being the lessor and owning
19 a one-sixth royalty interest. The lease is owned jointly
20 by my partner and myself, each with one-half working interest,
21 forty-one point six, six seven percent revenue interest each.

22 Number eight, all zones are essentially marginal and
23 it is doubtful that secondary recovery could be applied to any
24 of them.

25 Number nine, bottom-hole pressures have not been

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1 measured but are thought to be virgin pressures ranging from
2 eighteen hundred psi in the Point Lookout to twenty-seven
3 hundred psi in the Graneros.

4 The next exhibit is the proposed method of allocating
5 commingled production from the deep side of the dual.

6 One, take final GOR test of commingled production
7 measuring oil (O, One, gas (G, One) and water (W, One).

8 Two, pull rods and swab test well through treater
9 four hours or until stabilized. Use last hour rate for oil
10 (O, One), water (W, One), and gas (G, Two) measurement.

11 Three, trip tubing and run packer to sixty-three
12 hundred. Swab test Graneros perforations sixty-three, thirty-
13 nine to sixty-three, seventy-five through the treater for four
14 hours or until stabilized. Use the last hour rate for oil
15 (O, Three), water (W, Three), and gas (G, Three) measurement.

16 Four, set bridge plug and perforate, test and
17 stimulate as necessary the Mesaverde zone forty-two, fifty-six
18 to sixty; forty-four, oh, eight to sixteen; forty-four,
19 twenty-four to twenty-eight. Again there is a typographical
20 error. My secretary put down a decimal point instead of a
21 hyphen between each of the sets of perforations. If you will
22 correct that I will appreciate it.

23 Five, run tubing and rods and pump test all zones
24 commingled until recovery of all load oil plus thirty days.

25 Six, take a twenty-four hour GOR test measuring

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1 oil (O, Four), water (W, Four), and gas (G, Four).

2 Seven, allocate production as follows: Dakota oil
3 fraction would be (O, Three) divided by (O, Two), times
4 (O, One), divided by (O, Four).

5 Gas fraction would be (G, Three) over (G, Two), times
6 (G, One) over (G, Four).

7 Water fraction would be (W, Three) over (W, Two)
8 times (W, One) over (W, Four).

9 The Gallup and for this presentation I am assuming
10 that the Commission would consider everything from the top
11 of the Greenhorn to the base of the Mesaverde as Gallup.

12 Oil fraction would be (O, Two) minus (O, Three),
13 divided by (O, Two) quantity times (O, One) over (O, Four).

14 Gas fraction would be (G, Two) minus (G, Three)
15 divided by (G, Two) quantity times (G, One) over (G, Four).

16 Water fraction would be (G, Two) minus (W, Three)
17 divided by (W, Two) quantity times (W, One) over (W, Four).

18 The Mesaverde oil fraction would be (O, Four) minus
19 (O, One) divided by (O, Four).

20 The gas fraction would be (G, Four) minus (G, One)
21 divided by (G, Four).

22 The water fraction would be (W, Four) minus (W, One)
23 divided by (W, Four).

24 The next exhibit is probably a little bit out of
25 place, it should have been presented before this and is a

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1 C-116 showing a recent test on the deep side of the dual
2 completion as required in the Rules of the Oil Commission when
3 applying for commingling.

4 The following exhibit is facts pertaining to
5 commingling of production of the Chacon gas with the Pictured
6 Cliff gas inside two-and-seven-eighths casing.

7 Number one, the Chacon zone is extremely marginal
8 and will not flow steady, making an estimated fifteen MCF of
9 gas per day, plus some water, estimated to be less than five
10 barrels a day.

11 Number two, it is estimated that after the repair
12 of a cement channel the Pictured Cliff will IP for fifteen
13 hundred MCF per day with very little water.

14 Number three, neither water exhibits scaling
15 tendencies.

16 Number four, shut-in pressure for the Chacon zone is
17 eight hundred and thirty-five pounds per square inch gauge
18 and for the Pictured Cliff is six hundred and sixty-seven
19 pounds per square inch gauge. The Pictured Cliff pressure
20 is based upon an adjacent well since the well did drown out
21 and not give a shut-in surface pressure which was representa-
22 tive.

23 Number five, the Chacon zone will not produce
24 into the line but may contribute a little production if the
25 commingled Pictured Cliff gas is allowed to keep it unloaded.

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Number six, ownership of both zones is common except for a three-and-a-third override owned by Elliott A. Riggs to the base of the Pictured Cliff. As per the attached letter, Merrion & Bayless have agreed to pay Riggs the same override on the Chacon gas from this well. The result will be that all interests are common.

The following exhibit is a proposed method of allocating commingled production from the shallow side of the dual.

One, take a twenty-four hour test of the Chacon zone following through inch-and-a-quarter tubing. Measure gas rate or as an alternative if the well will not flow, swab test four hours and measure instantaneous gas rate. Gas rate equals (G, One).

Two, pull inch-and-a-quarter tubing. Squeeze cement to repair channeled cement above Pictured Cliff. Restimulate if necessary. Flow test well to clean up. When well is on line, use flow period data during initial deliverability test to calculate (G, Two) at zero deliverability pressure.

Number three, allocate, Chacon fraction is equal to (G, One) over (G, Two). Pictured Cliff fraction is equal to (G, Two) minus (G, One) divided by (G, Two).

Four, as an alternative, in the event (G, One) is less than five percent of stream, allocate all gas to Pictured Cliff.

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1 The last exhibit is a letter from Elliott Riggs
2 waiving any objections to commingling the Pictured Cliff and
3 Chacon zone, since Mr. Riggs represents the only diversity of
4 interest.

5 I have no further presentation, sir.

6
7 CROSS EXAMINATION

8 BY MR. STAMETS:

9 Q Mr. Merrion, is this an isolated pool?

10 A We have recently completed two Pictured Cliff
11 wells, neither one of which are offsetting, there is one
12 location between this well in question and the well, the
13 Jicarilla 428-1. To that extent it is not isolated as to
14 Pictured Cliff. The other zone, the Chacon, has never
15 produced anywhere in the basin to my knowledge. The Mesa-
16 verde had produced on wells on this lease about a mile away
17 but these wells have long since been plugged. The Carlisle
18 or Sanostee has produced on the south end of this same block
19 but is not now producing.

20 Q What I was getting at, I was wondering if the
21 simplest way to handle this would be to establish a pool
22 in the vertical limits sufficient to cover the zones you
23 propose to commingle.

24 A I think that would be a good possibility for the
25 future and whether this would be the time to do it or not I

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1 don't know. This is our first commingling in this particular
2 area. We were looking mainly for Dakota gas and we still have
3 hopes to find Dakota gas on this block. We are hoping we
4 can find enough marginal zones to back us up and bail us out
5 in the event we don't find our Dakota gas in future drilling
6 and so, in that event, there would be a possibility that we
7 would be coming back for additional commingling applications.
8 Your judgment would be better than mine as to whether now
9 would be the time to establish these longer vertical limits.

10 Q I suggest that regardless of the outcome of this
11 hearing that you should contact our District Supervisor and
12 see if he would be willing to propose a pool in there with
13 vertical limits that would cover this entire area. That
14 certainly would simplify matters.

15 A. All right.

16 Q Is there any potential for loss of oil or gas in the
17 ground as a result of this commingling?

18 A. In my opinion, no, all zones are quite tight and I
19 just don't feel that under these circumstances there would
20 be any potential for loss.

21 Q Do you expect these rates of production to hold up
22 or will they drop off pretty quick?

23 A. Well, of course, initially after a frac job you get
24 a rather steep decline. We have fond hopes that beyond that
25 we will have a pretty level, very low rate of decline in

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1 production, if we are talking about the deep oil zone. We have
2 many, many feet of rather marginal stuff open and fraced with
3 lots of sand. I think we used pretty close to half million
4 pounds of sand total fracing these various zones.

5 Q Would it be economical to develop any of these
6 zones independently?

7 A It's not really very economical all together, I
8 don't think. The Pictured Cliff, I think, is the exception
9 and we have developed in the area independently. We are
10 really trying to evaluate and we have spent a lot of money
11 on different logs to evaluate the different possibilities in
12 there and it is possible that some of these may clean up and
13 become better elsewhere in the block. Based on this well, I
14 would say the only zone which would stand commercially by
15 itself would be the Pictured Cliff.

16 Q Just one more question here. I'm looking at the
17 long string now and you are identifying three zones in there,
18 the Mesaverde and then the Gallup which would include what
19 you call the Mancos perforations, the Gallup perforations and
20 the Carlisle perforations?

21 A Right, in other words, I think I stated somewhere
22 in the presentation that I assumed that the Commission would
23 classify all of those as Gallup. I think there are
24 precedences but I'm not entirely sure.

25 Q The Graneros would be your Dakota zone?

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A Yes, sir.

MR. STAMETS: Any other questions of the witness?

Would you like to offer your exhibits into evidence,
Mr. Merrion?

MR. MERRION: Yes, sir, I would like to offer
Exhibits One through Ten in evidence, sir.

MR. STAMETS: These exhibits will be admitted.

(THEREUPON, Applicant's Exhibits One through
Ten were admitted into evidence.)

MR. STAMETS: Anything further? Any questions of
the witness? He may be excused.

(THEREUPON, the witness was excused.)

MR. STAMETS: The case will be taken under advisement.

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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
Sidney F. Morrish, C.S.R.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 5675,
heard by me on 4/28/76, 1976.

Richard H. Hamm, Examiner
New Mexico Oil Conservation Commission

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Dockets Nos. 14-76 and 15-76 are tentatively set for hearing on May 12 and May 26, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - APRIL 28, 1976

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 5670: Application of Read & Stevens, Inc. for an unorthodox location and directional drilling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to deviate its Harris-Federal Well No. 3, the surface location of which is 660 feet from the South line and 1980 feet from the East line of Section 27, Township 15 South, Range 28 East, Chaves County, New Mexico, by directionally drilling said well from a kick-off point at approximately 6000 feet and bottoming it at an unorthodox location in the Pennsylvanian formation within 250 feet of a point 990 feet from the South line and 1650 feet from the East line of said Section 27, the S/2 of the Section to be dedicated to the well.

CASE 5671: Application of Ard Drilling Co. for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to deviate its State 10 Well No. 1, the surface location of which is 660 feet from the South and East lines of Section 10, Township 10 South, Range 32 East, North Mescalero-Cisco Pool, Lea County, New Mexico, by directionally drilling said well from a kick-off point at approximately 7800 feet and bottoming it in the Cisco formation within 100 feet of a point 810 feet from the South line and 660 feet from the East line of said Section 10.

CASE 5672: Application of Horace P. McKay, Jr. for downhole commingling and simultaneous dedication, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Aztec-Fruitland and Aztec-Pictured Cliffs gas production in the wellbore of his Beardon "A" Well No. 1, located in Unit C of Section 19, Township 29 North, Range 10 West, San Juan County, New Mexico. Applicant further seeks approval for the simultaneous dedication of the NW/4 of said Section 19 to the above-described well and his Beardon Well No. 1 in Unit E of said Section 19.

CASE 5673: Application of David Fasken for approval of an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 1980 feet from the South line and 660 feet from the West line of Section 32, Township 20 South, Range 25 East, Cemetery-Morrow Gas Pool, Eddy County, New Mexico, the S/2 of said Section 32 to be dedicated to the well.

CASE 5674: Application of Agua, Inc. for an extension of time and amendment of Orders Nos. R-4495-A and R-4495-B, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Orders Nos. R-4495-A and R-4495-B to permit disposal, after the current May 7, 1976, deadline, of produced salt water through perforations from 4230 feet to 4320 feet in its SWD Well No. C-2, located in Unit C of Section 2, Township 22 South, Range 37 East, Lea County, New Mexico. Applicant seeks the amendment of said orders to permit such disposal for an additional 90-day period after May 7, 1976, and thereafter until 30 days after the entry of an order favorable to the applicant in Case No. 5644.

CASE 5675: Application of Merrion & Bayless for a dual completion and downhole commingling, Sandoval County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (combination) of its Jicarilla 428 Well No. 2, located in Unit A of Section 31, Township 23 North, Range 4 West, Sandoval County, New Mexico, by cementing parallel strings of 2 7/8-inch casing and 4 1/2-inch casing in a common wellbore, completing said well in such a manner as to commingle undesignated Pictured Cliffs and undesignated Chacon gas production in the 2 7/8-inch casing, and to commingle various undesignated Mesaverde, Mancos, Gallup, Carlisle, and Graneros gas stringers in the 4 1/2-inch casing.

CASE 5443: (Reopened & Continued)

In the matter of Case 5443 being reopened pursuant to the provisions of Order No. R-4994, which order established special rules and regulations for the East Lusk-Bone Spring Oil Pool, Lea County, New Mexico, including a provision for 160-acre spacing and proration units. All interested parties may appear and show cause why said pool should not be developed on less than 160-acre spacing units.

MERRION & BAYLESS

Gallup-Dakota Co-Mingling
Hearing Exhibit #1

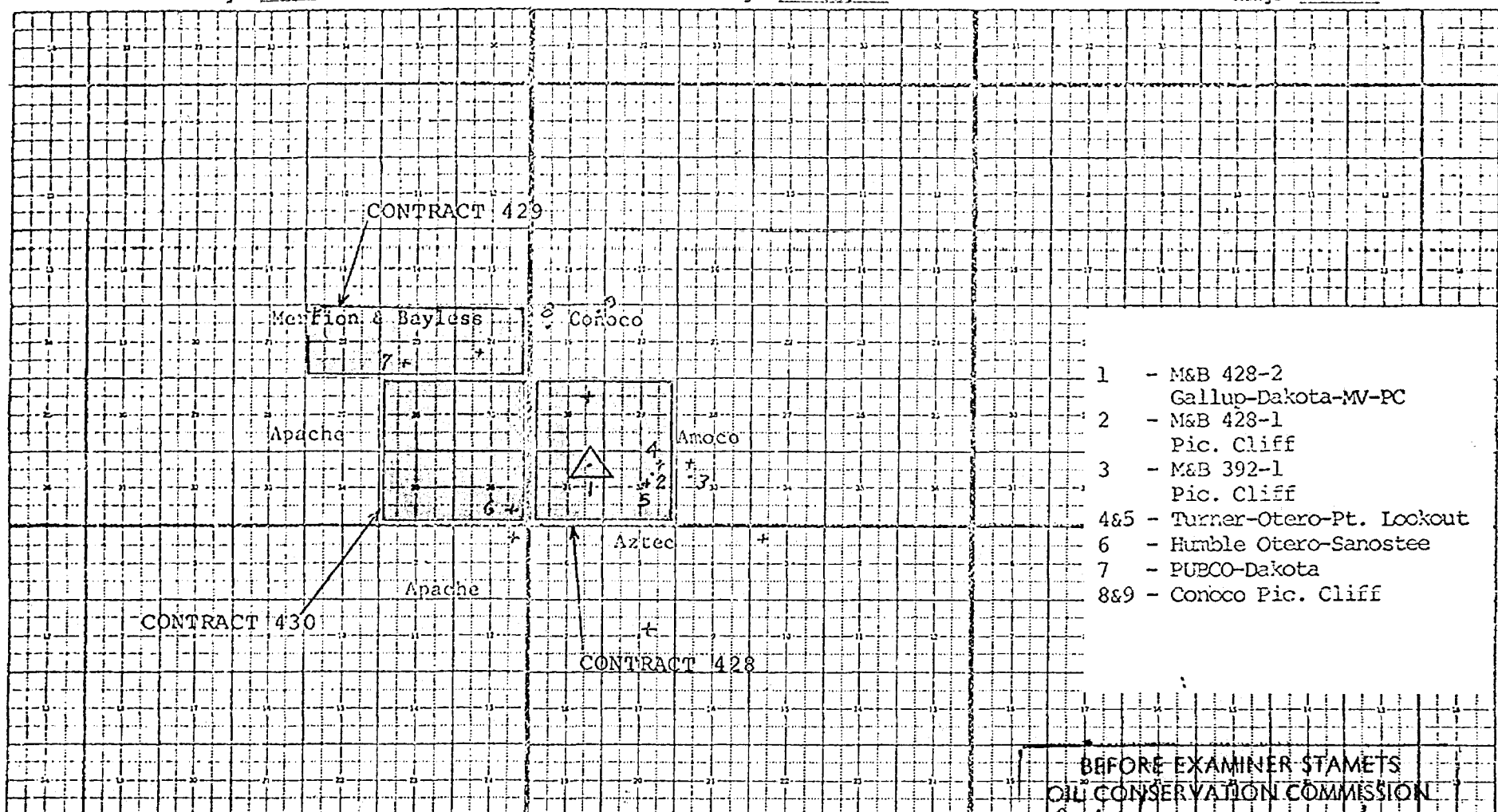
County Sandoval

State New Mexico

Range 5 West

Range 4 West

Range _____



Town

23N

Town

22N

Continental Oil Co., Denver, Colorado
Aztec Oil & Gas, Dallas, Texas
Amoco Production Co., Denver, Colorado
Apache Exploration, P.O. Box 2299
Tulsa, Oklahoma

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION

EXHIBIT NO. 1
CASE NO. 5675

Submitted by 4-28-76
Hearing Date 4-28-76

Jicarilla 428-2
790' FNL and 790' FEL
Section 31, T23N, R4W
Sandoval County, New Mexico
Present Status of Well

10 3/4" casing
@ 230' with
125 sax

Bond Log top of
cement = 2096

Pictured Cliffs
2120-2160

Chacon
2594-2614

2 7/8" casing
@ 2746' with
490 cu. ft.

Bond Log top of
cement = 3330

Stage collar @ 4560'
with 315 cu. ft.

Bond Log top of
cement = 4800

1 1/4" EUE tubing set on Arrow Tension Packer @ 2500'

2 3/8" EUE tubing set at 6350'
1 1/4" pump on 7/8 x 3/4 x 5/8 rods

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
Applicants EXHIBIT NO. 2
CASE NO. 5675
Submitted by Merrion
Hearing Date 4-28-76

Mancos Perfs.
5162, 5172, 5196-5221

Gallup Perfs.
5313-49, 5394-5458, 5544-46, 5564

Carlisle Perfs.
6044-48, 6252-57

Graneros Perfs.
6339, 6358, 6372-75

PBD - 6631

4 1/2" casing @
6631' with 499 cu. ft.

Jicarilla 428-2
790' FNL and 790' FEL
Section 31, T23N, R4W
Sandoval County, New Mexico
Proposed Status of Well

10 3/4" casing
@ 230' with
125 sac

Cement channel
to be squeezed

Pictured Cliffs
2120-2160

1" tubing set @ 2500'

2 3/8" EUE tubing set at 6350'
1 1/4" pump on 7/8 x 3/4 x 5/8 rods

Chacon
2594-2614

2 7/8" casing
@ 2746' with
490 cu. ft.

Bond Log top
of cement 3330

Stage collar @ 4560'
with 315 cu. ft.

Bond Log top
of cement 4800

Mesaverde Perfs.
4256-60, 4408-16, 4424-28

Mancos Perfs.
5162, 5172, 5196-5221

Gallup Perfs.
5313-49, 5394-5458, 5544-46, 5564

Carlisle Perfs.
6044-48, 6252-57

Graneros Perfs.
6339, 6358, 6372-75

PBD - 6631

1/2" casing @
6631' with 499 cu. ft.

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION

Applicant's EXHIBIT NO. 3

CASE NO. 5675

Submitted by *Merrion*

Hearing Date 4-28-76

EXHIBIT NO.
Merrion & Bayless
Case 5675
Jicarilla 428-2

Facts Pertaining to Dual Completion.

1. Commission has previously authorized similar type dual completion utilizing 4-1/2" casing for deep oil production and cemented in same well bore with 4-1/2" casing, 2-7/8" casing for shallow gas production.

Example:

J. Gregory Merrion Edna #2
4-1/2" casing - Devils Fork Gallup
2-7/8" casing - Ballard Pictured Cliffs

2. Sufficient cement was used to cover far in excess of all pays. Subsequent Bond Log indicated cement 362 feet above Gallup - Mancos-Dakota pay, 926 feet above Mesaverde pay, 384 feet above Chacon pay, and in spite of the fact that enough cement had been used to cover to a level of 470 feet above the Pictured Cliffs, the Bond Log indicated the Pictured Cliffs uncovered. The 2-7/8" was perforated (directionally) and squeezed with 50 sac cement. A second Bond Log was run indicating good bond from 36 feet below Pictured Cliffs to 24 feet above Pictured Cliffs.

During frac treatment had slight pressure break halfway through and minor communication out braden head. Well was flow tested and made heavy spray of water during test. Well drowned out after shut in.

Propose to repair cement channel.

3. Three turbolizers were run on the 2-7/8" casing opposite the Chacon Zone and three more turbolizers were run on the 2-7/8" opposite the Pictured Cliffs.
4. Directional perforating equipment was used for all perforating inside the 2-7/8" casing.

BEFORE EXAMINER STAMETS	
OIL CONSERVATION COMMISSION	
Applicant's	EXHIBIT NO. 4
CASE NO.	5675
Submitted by	Merrion
Hearing Date	4-28-76

EXHIBIT NO.
Merrion & Bayless
Case 5675
Jicarilla 428-2

Facts Pertaining to Co-mingling of Oil Production Inside 4-1/2" Casing:

1. Production from all zones presently open is oil. Anticipated production from Mesaverde interval to be opened is oil (based upon production history from nearby Fred Turner wells completed from Otero Pt. Lookout zone).
2. Current production is 22 BOPD with bottom perforation at 6375 feet. Anticipated additional production from the Mesaverde is anticipated to be on the order of 10-20 BOPD - for a total stream of about 40 BOPD.
3. Zones currently completed require artificial lift. (Sucker rod pumping equipment.) It is anticipated that the Mesaverde will also require artificial lift.
4. Current water production is only 3 bbls. water per day. Mesaverde could make water but any excessive amount will be squeezed.
5. Current water is slightly salty and has given no evidence of scaling problems. Mesaverde water, if any, could cause scale problems in the well bore, but it is anticipated that no permanent damage will result and for the most part any temporary damage can either be prevented with scale inhibitor or repaired with an occasional acid wash.
6. It is anticipated that all crude will command to market price for the area.
7. Ownership of all zones is the same.

Jicarilla Tribe ----- 16.666% R.I.
J. Gregory Merrion---- 41.667% W.I.
Robert L. Bayless---- 41.667% W.I.
8. All zones are essentially marginal and it is doubtful that secondary recovery could be applied to any of them.
9. Bottom hole pressures have not been measured but are thought to be virgin pressures ranging from 1800 psi in the Pt. Lookout to 2700 psi in the Granceros.

BEFORE EXAMINER STAMETS	
OIL CONSERVATION COMMISSION	
Applicants	EXHIBIT NO. <u>5</u>
CASE NO.	<u>5675</u>
Submitted by	<u>Merrion</u>
Hearing Date	<u>4-28-76</u>

EXHIBIT NO.
Case 5675
Merrion & Bayless
Jicarilla 428-2

Proposed Method of Allocating Co-mingled Production from Deep Side of Dual.

1. Take final GOR test of co-mingled production measuring oil (O_1), gas (G_1), and water (W_1).
2. Pull rods and swab test well through treater 4 hours or until stabilized. Use last hour rate for oil (O_2), water (W_2), and gas (G_2) measurement.
3. Trip tubing and run packer to 6300. Swab test Graneros perforations 6339-6375 through treater for 4 hours or until stabilized. Use last hour rate for oil (O_3), water (W_3), and gas (G_3) measurement.
4. Set bridge plug and perforate, test and stimulate as necessary the Mesaverde zone 4256.60, 4408.16, 4424.28.
5. Run tubing and rods and pump test all zones co-mingled until recovery of all load oil plus 30 days.
6. Take 24 hour GOR test measuring oil (O_4), water (W_4), and gas (G_4).
7. Allocate production as follows:

Dakota

$$\text{Oil Fraction} = \frac{O_3}{O_2} \times O_1/O_4$$

$$\text{Gas Fraction} = \frac{G_3}{G_2} \times G_1/G_4$$

$$\text{Water Fraction} = \frac{W_3}{W_2} \times W_1/W_4$$

Gallup

$$\text{Oil Fraction} = \left(\frac{O_2 - O_3}{O_2} \right) \times O_1/O_4$$

$$\text{Gas Fraction} = \left(\frac{G_2 - G_3}{G_2} \right) \times G_1/G_4$$

$$\text{Water Fraction} = \left(\frac{W_2 - W_3}{W_2} \right) \times W_1/W_4$$

BEFORE EXAMINER STAMETS	
OIL CONSERVATION COMMISSION	
Applicants	EXHIBIT NO. 6
CASE NO. 5675	
Submitted by Merrion	
Hearing Date 4-28-76	

Mesaverde

$$\text{Oil Fraction} = \frac{O_4 - O_1}{O_4}$$

$$\text{Gas Fraction} = \frac{G_4 - G_1}{G_4}$$

$$\text{Water Fraction} = \frac{W_4 - W_1}{W_4}$$

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator J. Gregory Merrion & Robert L. Bayless		Pool Undesignated		County Sandoval	
Address P.O. Box 507, Farmington, New Mexico		TYPE OF TEST - (X)		Scheduled <input type="checkbox"/>	Completion <input type="checkbox"/>
				Special <input checked="" type="checkbox"/>	

LEASE NAME	WELL NO.	LOCATION				DATE OF TEST	STATUS	CHOKE SIZE	T.B.G. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST				GAS - OIL RATIO CU. FT. / BBL.
		U	S	T	R							WATER BBL.	GRAV. OIL	OIL BBL.	GAS M.C.F.	
Jicarilla Contract 428 (Graneros, Gallup, Mancos)	2	A	31	23N	4W	4-20-76	P	-	20	Test	24	3	47	22	63	2864

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION

Appoints EXHIBIT NO. 7

CASE NO. 5275

Submitted by Merrion

Hearing Date 4-28-76

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Gregory Merrion
(Signature)
Owner
(Title)
4-25-76
(Date)

EXHIBIT NO.
Merrion & Bayless
Case 5675
Jicarilla 428-2

Facts pertaining to co-mingling of production of Chacon gas with Pictured Cliffs gas inside 2-7/8" casing:

1. The Chacon Zone is extremely marginal and will not flow steady, making an estimated 15 MCF/da plus some water (less than 5 B/D).
2. It is estimated that after repair of a cement channel the Pictured Cliffs will I.P. for 1500 MCF/da with very little water.
3. Neither water exhibits scaling tendencies.
4. Shut in pressure for the Chacon Zone is 835 psig and for the Pictured Cliffs is 667 psig (based upon an adjacent well).
5. The Chacon Zone will not produce into the line but may contribute a little production if the co-mingled Pictured Cliffs gas is allowed to keep it unloaded.
6. Ownership of both zones is common except for a 3-1/3% ORR owned by Elliott A. Riggs to the base of the Pictured Cliffs. As per attached letter, Merrion & Bayless have agreed to pay Riggs the same ORR on the Chacon gas from this well. The result will be that all interests are common.

BEFORE EXAMINER STAMETS	
OIL CONSERVATION COMMISSION	
Applicants	EXHIBIT NO. 8
CASE NO.	5675
Submitted by	Merrion
Hearing Date	4-28-74

EXHIBIT NO.
Case 5675
Merrion & Bayless
Jicarilla 428-2

Proposed Method of Allocating Co-mingled Production from Shallow Side
of Dual.

1. Take 24 hour test of Chacon Zone flowing through 1-1/4" tubing. Measure gas rate (or as an alternative if well will not flow, swab test 4 hours and measure instantaneous gas rate). Gas Rate = G_1
2. Pull 1-1/4" tubing. Squeeze cement to repair channeled cement above Pictured Cliffs. Re-stimulate if necessary. Flow test well to clean up. When well is on line, use flow period data during initial deliverability test to calculate G_2 at zero deliverability pressure.

3. Allocate.

$$\text{Chacon fraction} = \frac{G_1}{G_2}$$

$$\text{Pictured Cliffs fraction} = \frac{G_2 - G_1}{G_2}$$

4. As an alternative, in the event G_1 is less than 5% of stream, allocate all gas to Pictured Cliffs.

BEFORE EXAMINER STAMETS	
OIL CONSERVATION COMMISSION	
<i>Deharts</i>	EXHIBIT NO. <u>9</u>
CASE NO. <u>5675</u>	
Submitted by <u>Merrion</u>	
Hearing Date <u>4-28-76</u>	

ELLIOTT A. RIGGS

Petroleum Geologist

P.O. BOX 711

FARMINGTON, NEW MEXICO 87401

April 27, 1976

New Mexico Oil Conservation Commission
Santa Fe, New Mexico 87501

RE: Case No. 5675

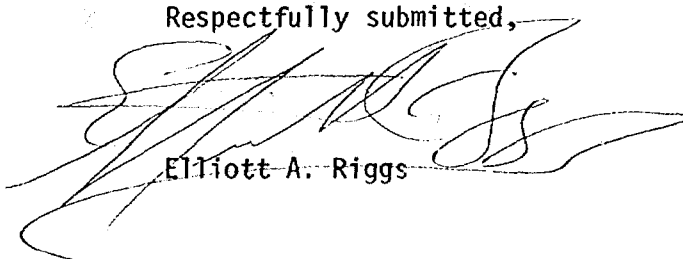
Gentlemen:

I own a 3 1/3% of 8/8 ORR interest in the Merrion & Bayless Jicarilla lease contract #428 covering from surface to base of the Pictured Cliffs formation for all Sec's 29, 30, 31 & 32 in T23N, R4W NMPM, Sandoval Co., New Mexico

Merrion & Bayless have agreed to assign to me and extend the same 3 1/3% ORR to the base of the Chacon zone encountered in the Merrion & Bayless #428-2 Jicarilla well, located in NE 1/4 Sec 31, T23N, R4W for the pro-ration unit assigned to this well.

I waive any objections to co-mingling the Pictured Cliffs and the Chacon zone in subject well.

Respectfully submitted,


Elliott A. Riggs

EAR/mr

BEFORE EXAMINER STAMETS	
OIL CONSERVATION COMMISSION	
<i>Applicants</i>	EXHIBIT NO. <u>10</u>
CASE NO. <u>5675</u>	
Submitted by <u>Merrion</u>	
Hearing Date <u>4-28-76</u>	

MERRION & BAYLESS

Gallup-Dakota Co-Mingling

Hearing Exhibit #1

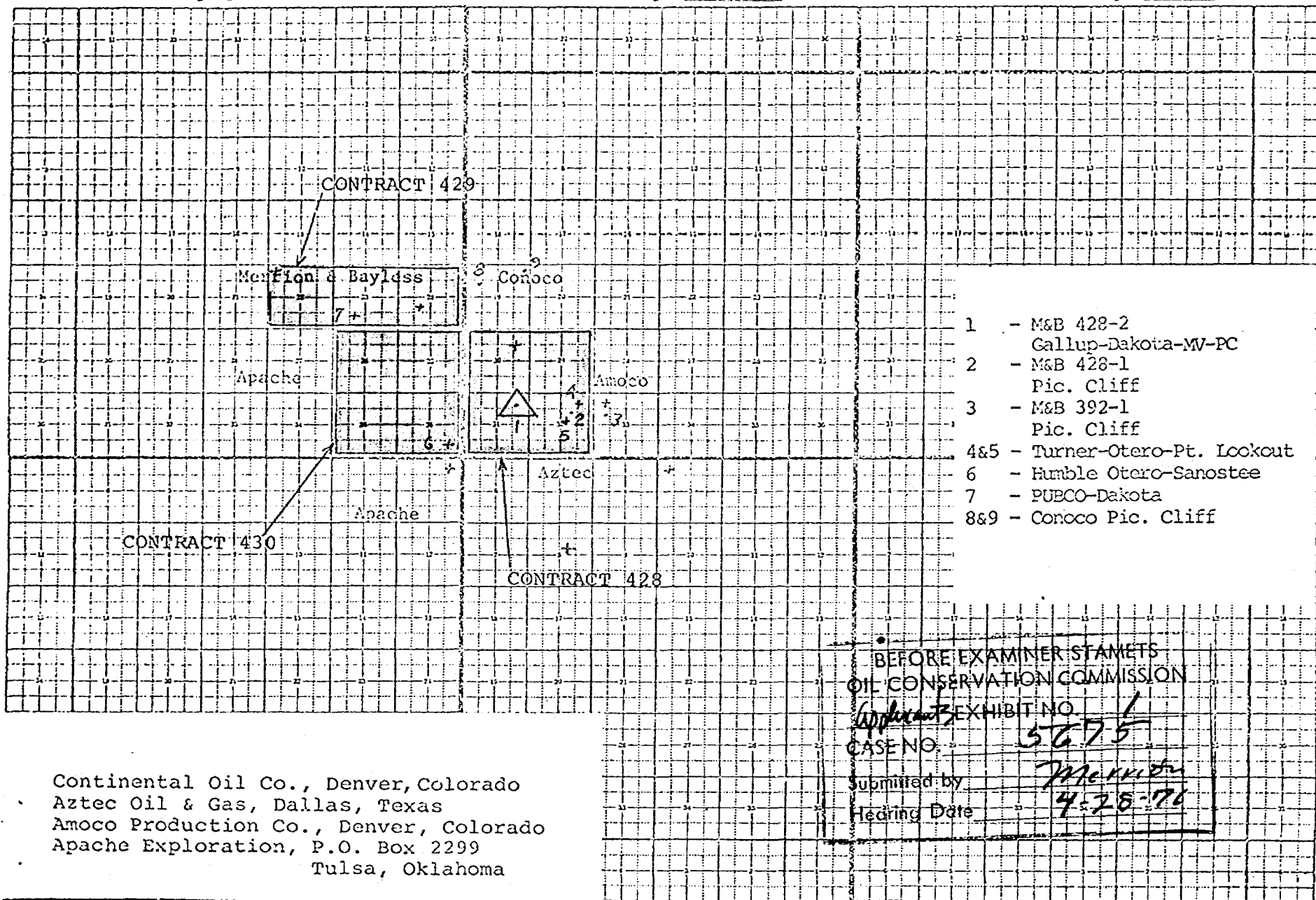
County Sandoval

State New Mexico

Range 5 West

Range 4 West

Range



Continental Oil Co., Denver, Colorado
 Aztec Oil & Gas, Dallas, Texas
 Amoco Production Co., Denver, Colorado
 Apache Exploration, P.O. Box 2299
 Tulsa, Oklahoma

BEFORE EXAMINER STAMETS
 OIL CONSERVATION COMMISSION
 EXHIBIT NO. 5675
 Submitted by Merrion
 Hearing Date 4-28-76

Jicarilla 428-2
790' FNL and 790' FEL
Section 31, T23N, R4W
Sandoval County, New Mexico
Present Status of Well

10 3/4" casing
@ 230' with
125 sax

Bond Log top of
cement = 2096

Pictured Cliffs
2120-2160

Chacon
2594-2614

2 7/8" casing
@ 2746' with
490 cu. ft.

Bond Log top of
cement = 3330

Stage collar @ 4560'
with 315 cu. ft.

Bond Log top of
cement = 4800

4 1/2" casing @
6631' with 499 cu. ft.

1 1/4" EUE tubing set on Arrow Tension Packer @ 2500'

2 3/8" EUE tubing set at 6350'
1 1/4" pump on 7/8 x 3/4 x 5/8 rods

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION

App EXHIBIT NO. 2
CASE NO. 5675
Submitted by App.
Hearing Date 4-28-74

Mancos Perfs.
5162, 5172, 5196-5221

Gallup Perfs.
5313-49, 5394-5458, 5544-46, 5564

Carlisle Perfs.
6044-48, 6252-57

Graneros Perfs.
6339, 6358, 6372-75

PBD - 6631

Jicarilla 428-2
790' FNL and 790' FEL
Section 31, T23N, R4W
Sandoval County, New Mexico
Proposed Status of Well

10 3/4" casing
@ 230' with
125 sax

Cement channel
to be squeezed

Pictured Cliffs
2120-2160

1" tubing set @ 2500'

2 3/8" EUE tubing set at 6350'
1 1/4" pump on 7/8 x 3/4 x 5/8 rods

Chacon
2594-2614

2 7/8" casing
@ 2746' with
490 cu. ft.

Bond Log top
of cement 3330

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
Applicant EXHIBIT NO. 3
CASE NO. 5675
Submitted by Merrion
Hearing Date 4-28-76

Mesaverde Perfs.
4256-60, 4408-16, 4424-28

Stage collar @ 4560'
with 315 cu. ft.

Bond Log top
of cement 4800

Mancos Perfs.
5162, 5172, 5196-5221

Gallup Perfs.
5313-49, 5394-5458, 5544-46, 5564

Carlisle Perfs.
6044-48, 6252-57

Graneros Perfs.
6339, 6358, 6372-75

PBD - 6631

1 1/2" casing @
6631' with 499 cu. ft.

EXHIBIT NO.
Merrion & Bayless
Case 5675
Jicarilla 428-2

Facts Pertaining to Dual Completion.

1. Commission has previously authorized similar type dual completion utilizing 4-1/2" casing for deep oil production and cemented in same well bore with 4-1/2" casing, 2-7/8" casing for shallow gas production.

Example:

J. Gregory Merrion Edna #2
4-1/2" casing - Devils Fork Gallup
2-7/8" casing - Ballard Pictured Cliffs

2. Sufficient cement was used to cover far in excess of all pays. Subsequent Bond Log indicated cement 362 feet above Gallup - Mancos-Dakota pay, 926 feet above Mesaverde pay, 384 feet above Chacon pay, and in spite of the fact that enough cement had been used to cover to a level of 470 feet above the Pictured Cliffs, the Bond Log indicated the Pictured Cliffs uncovered. The 2-7/8" was perforated (directionally) and squeezed with 50 sac cement. A second Bond Log was run indicating good bond from 26 feet below Pictured Cliffs to 24 feet above Pictured Cliffs.

During frac treatment had slight pressure break halfway through and minor communication out braden head. Well was flow tested and made heavy spray of water during test. Well drowned out after shut in.

Propose to repair cement channel.

3. Three turbolizers were run on the 2-7/8" casing opposite the Chacon Zone and three more turbolizers were run on the 2-7/8" opposite the Pictured Cliffs.
4. Directional perforating equipment was used for all perforating inside the 2-7/8" casing.

BEFORE EXAMINER STAMETS	
OIL CONSERVATION COMMISSION	
Applicants	EXHIBIT NO. 4
CASE NO. 5675	
Submitted by Merrion	
Hearing Date 4-28-76	

EXHIBIT NO.
Merrion & Bayless
Case 5675
Jicarilla 428-2

Facts Pertaining to Co-mingling of Oil Production Inside 4-1/2" Casing:

1. Production from all zones presently open is oil. Anticipated production from Mesaverde interval to be opened is oil (based upon production history from nearby Fred Turner wells completed from Otero Pt. Lookout zone).
2. Current production is 22 BOPD with bottom perforation at 6375 feet. Anticipated additional production from the Mesaverde is anticipated to be on the order of 10-20 BOPD - for a total stream of about 40 BOPD.
3. Zones currently completed require artificial lift. (Sucker rod pumping equipment.) It is anticipated that the Mesaverde will also require artificial lift.
4. Current water production is only 3 bbls. water per day. Mesaverde could make water but any excessive amount will be squeezed.
5. Current water is slightly salty and has given no evidence of scaling problems. Mesaverde water, if any, could cause scale problems in the well bore, but it is anticipated that no permanent damage will result and for the most part any temporary damage can either be prevented with scale inhibitor or repaired with an occasional acid wash.
6. It is anticipated that all crude will command ~~top~~ market price for the area.
7. Ownership of all zones is the same.

Jicarilla Tribe ----- 16.666% R.I.
J. Gregory Merrion---- 41.667% W.I.
Robert L. Bayless---- 41.667% W.I.
8. All zones are essentially marginal and it is doubtful that secondary recovery could be applied to any of them.
9. Bottom hole pressures have not been measured but are thought to be virgin pressures ranging from 1800 psi in the Pt. Lookout to 2700 psi in the Graneros.

BEFORE EXAMINER STAMETS	
OIL CONSERVATION COMMISSION	
Applicants	EXHIBIT NO. 5
CASE NO.	5675
Submitted by	Merrion
Hearing Date	4-28-76

EXHIBIT NO.
Case 5675
Merrion & Bayless
Jicarilla 428-2

Proposed Method of Allocating Co-mingled Production from Deep Side of Dual.

1. Take final GOR test of co-mingled production measuring oil (O_1), gas (G_1), and water (W_1).
2. Pull rods and swab test well through treater 4 hours or until stabilized. Use last hour rate for oil (O_2), water (W_2), and gas (G_2) measurement.
3. Trip tubing and run packer to 6300. Swab test Graneros perforations 6339-6375 through treater for 4 hours or until stabilized. Use last hour rate for oil (O_3), water (W_3), and gas (G_3) measurement.
4. Set bridge plug and perforate, test and stimulate as necessary the Mesaverde zone 4256.60, 4408.16, 4424.28.
5. Run tubing and rods and pump test all zones co-mingled until recovery of all load oil plus 30 days.
6. Take 24 hour GOR test measuring oil (O_4), water (W_4), and gas (G_4).
7. Allocate production as follows:

Dakota

$$\text{Oil Fraction} = \frac{O_3}{O_2} \times O_1/O_4$$

$$\text{Gas Fraction} = \frac{G_3}{G_2} \times G_1/G_4$$

$$\text{Water Fraction} = \frac{W_3}{W_2} \times W_1/W_4$$

Gallup

$$\text{Oil Fraction} = \left(\frac{O_2 - O_3}{O_2} \right) \times O_1/O_4$$

$$\text{Gas Fraction} = \left(\frac{G_2 - G_3}{G_2} \right) \times G_1/G_4$$

$$\text{Water Fraction} = \left(\frac{W_2 - W_3}{W_2} \right) \times W_1/W_4$$

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
Applicant's EXHIBIT NO. 6
CASE NO. 5675
Submitted by Merrion
Hearing Date 4-28-76

Mesaverde

$$\text{Oil Fraction} = \frac{O_4 - O_1}{O_4}$$

$$\text{Gas Fraction} = \frac{G_4 - G_1}{G_4}$$

$$\text{Water Fraction} = \frac{W_4 - W_1}{W_4}$$

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator J. Gregory Merrion & Robert L. Bayless		Pool Undesignated		County Sandoval	
Address P.O. Box 507, Farmington, New Mexico		TYPE OF TEST - (X)		Scheduled <input type="checkbox"/>	Completion <input type="checkbox"/>
Special <input checked="" type="checkbox"/>					

LEASE NAME	WELL NO.	LOCATION				DATE OF TEST	STATUS	CHOKE SIZE	T.B.G. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST				GAS - OIL RATIO CU. FT. BBL.
		U	S	T	R							WATER EBL.	GRAV. OIL	OIL BBL.	GAS M.C.F.	
Jicarilla Contract 428 (Graneros, Gallup, Mancos)	2	A	31	23N	4W	4-20-76	P	-	20	Test	24	3	47	22	63	2864

BEFORE EXAMINER STAMETS.
OIL CONSERVATION COMMISSION
Applicant EXHIBIT NO. 7
CASE NO. 5675
Submitted by J. Merrion
Hearing Date 4-28-76

No well will be assigned an allowable greater than the amount of oil produced on the official test.

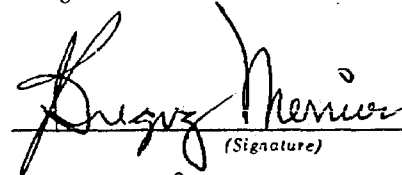
During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.


(Signature)

Owner
(Title)

4-25-76
(Date)

EXHIBIT NO.
Merrion & Bayless
Case 5675
Jicarilla 428-2

Facts pertaining to co-mingling of production of Chacon gas with Pictured Cliffs gas inside 2-7/8" casing:

1. The Chacon Zone is extremely marginal and will not flow steady, making an estimated 15 MCF/day plus some water (less than 5 B/D).
2. It is estimated that after repair of a cement channel the Pictured Cliffs will I.P. for 1500 MCF/day with very little water.
3. Neither water exhibits scaling tendencies.
4. Shut in pressure for the Chacon Zone is 835 psig and for the Pictured Cliffs is 667 psig (based upon an adjacent well).
5. The Chacon Zone will not produce into the line but may contribute a little production if the co-mingled Pictured Cliffs gas is allowed to keep it unloaded.
6. Ownership of both zones is common except for a 3-1/3% ORR owned by Elliott A. Riggs to the base of the Pictured Cliffs. As per attached letter, Merrion & Bayless have agreed to pay Riggs the same ORR on the Chacon gas from this well. The result will be that all interests are common.

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
Applicants EXHIBIT NO. 8
CASE NO. 5675
Submitted by Merrion
Hearing Date 4-28-76

EXHIBIT NO.
Case 5675
Merrion & Bayless
Jicarilla 428-2

Proposed Method of Allocating Co-mingled Production from Shallow Side of Dual.

1. Take 24 hour test of Chacon Zone flowing through 1-1/4" tubing. Measure gas rate (or as an alternative if well will not flow, swab test 4 hours and measure instantaneous gas rate). Gas Rate = G_1
2. Pull 1-1/4" tubing. Squeeze cement to repair channeled cement above Pictured Cliffs. Re-stimulate if necessary. Flow test well to clean up. When well is on line, use flow period data during initial deliverability test to calculate G_2 at zero deliverability pressure.

3. Allocate.

$$\text{Chacon fraction} = \frac{G_1}{G_2}$$

$$\text{Pictured Cliffs fraction} = \frac{G_2 - G_1}{G_2}$$

4. As an alternative, in the event G_1 is less than 5% of stream, allocate all gas to Pictured Cliffs.

BEFORE EXAMINER STAMETS	
OIL CONSERVATION COMMISSION	
Applicants	EXHIBIT NO. <u>9</u>
CASE NO. <u>5675</u>	
Submitted by <u>Merrion</u>	
Hearing Date <u>4-28-76</u>	

ELLIOTT A. RIGGS

Petroleum Geologist

P.O. BOX 711

FARMINGTON, NEW MEXICO 87401

April 27, 1976

New Mexico Oil Conservation Commission
Santa Fe, New Mexico 87501

RE: Case No. 5675

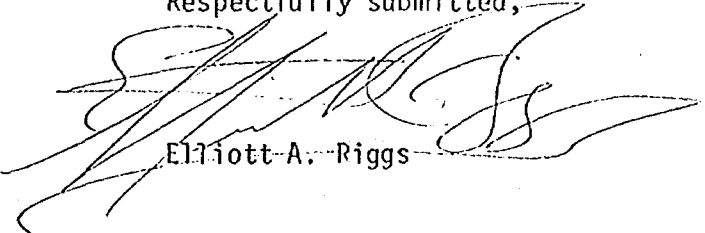
Gentlemen:

I own a 3 1/3% of 8/8 ORR interest in the Merrion & Bayless Jicarilla lease contract #428 covering from surface to base of the Pictured Cliffs formation for all Sec's 29, 30, 31 & 32 in T23N, R4W NMPM, Sandoval Co., New Mexico

Merrion & Bayless have agreed to assign to me and extend the same 3 1/3% ORR to the base of the Chacon zone encountered in the Merrion & Bayless #428-2 Jicarilla well, located in NE 1/4 Sec 31, T23N, R4W for the pro-ration unit assigned to this well.

I waive any objections to co-mingling the Pictured Cliffs and the Chacon zone in subject well.

Respectfully submitted,


Elliott A. Riggs

EAR/mr

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
Applicants EXHIBIT NO. 10
CASE NO. 5675
Submitted by Merrion
Hearing Date 4-28-76

ELLIOTT A. RIGGS

Petroleum Geologist

P.O. BOX 711

FARMINGTON, NEW MEXICO 87401

April 27, 1976

New Mexico Oil Conservation Commission
Santa Fe, New Mexico 87501

RE: Case No. 5675

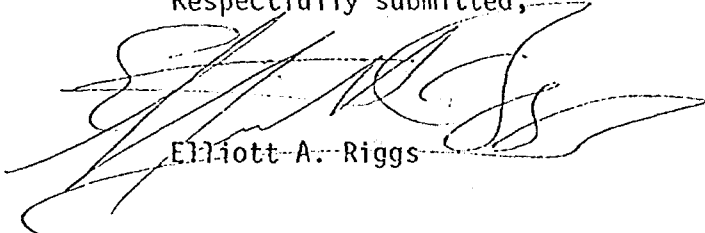
Gentlemen:

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I waive any objections to co-mingling the Pictured Cliffs and the Chacon zone in subject well.

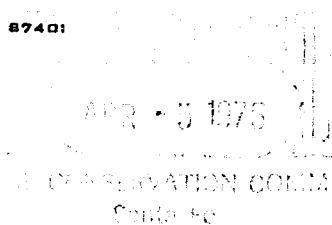
Respectfully submitted,


Elliott A. Riggs

EAR/mr

BEFORE EXAMINER STAMETS	
OIL CONSERVATION COMMISSION	
Applicants	EXHIBIT NO. 10
CASE NO.	5675
Submitted by	Merrion
Hearing Date	4-28-76

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



April 2, 1976

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

ATTENTION: Mr. Joe Ramey
Secretary-Director

Re: Application to Commingle Both
Sides of Dual Completion
Merrion & Bayless 428-2 Well
Section 31 A, T23N, R4W
Sandoval County, New Mexico

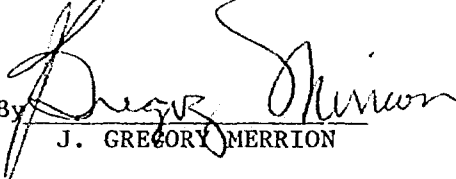
Gentlemen:

Please schedule a hearing to consider our application to:

1. Dual complete subject well through parallel strings of 4 1/2" casing and 2 7/8" tubing.
2. Commingle production in the 4 1/2" casing from Dakota, Gallup and Mesaverde horizons.
3. Commingle production in the 2 7/8" casing from the Chacon and Pictured Cliffs horizons.

Yours very truly,

MERRION & BAYLESS

By 
J. GREGORY MERRION
JGM/su

Enclosure: Diagram of Downhole Installation

cc U.S.G.S. Durango, Colorado
Mr. Jerry Long

HERRION & BAYLESS

Jicarilla 428-2
 790' FNL and 790' FEL
 Section 31, T23N, R4W
 Sandoval County, New Mexico

APR - 5 1976

SURVEYOR GENERAL

10 3/4" casing
 @ 230' with
 125 sax

Pictured Cliffs
 2120-2160

Chacon
 2594-2614

2 7/8" casing
 @ 2746' with
 490 cu. ft.

Stage collar @ 4560'
 with 315 cu. ft.

Proposed Mesaverde Perfs.
 4256-60, 4408-16, 4424-28

Mancos Perfs.
 5162, 5172, 5196-5221

Gallup Perfs.
 5313-49, 5394-5458, 5544-46, 5564

Carlisle Perfs.
 6044-48, 6252-57

Graneros Perfs.
 6339, 6358, 6372-75

PBD 6563

4 1/2" casing @
 6631' with 499 cu. ft.

top
 of
 Pictured Cliffs
 6260



DRAFT

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. 5675

Order No. R- 5214

APPLICATION OF MERRION & BAYLESS FOR A DUAL COMPLETION AND
DOWNHOLE COMMINGLING, SANDOVAL
COUNTY, NEW MEXICO.

JSu
ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on April 28,
19 76, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this day of May, 19 76, 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, Merrion & Bayless, is the
owner and operator of the Jicarilla 428 Well No. 2, located in
Unit A of Section 31, Township 23 North, Range 4
West, NMPM, Sandoval County, New Mexico.

(3) That said well is completed with a shortstring of 2 7/8-
inch casing and a long string of 4 1/2-inch casing cemented in a
common well bore at depths of 2746 feet and 6631 feet respectively.

(4) That the applicant seeks authority to complete said well
as a dual completion (combination) in ^{*such a manner as*} ~~the manner described in~~
~~Finding No. (2) above~~ ^{*undesignated Pictured Cliffs gas and undesignated Chacra (Chacra)*} to produce commingled gas through the 2 7/8-
inch casing and ~~commingled~~ oil through tubing set in the 4 1/2-inch
casing, ~~from zones described in Findings No. (4) and No. (7) below~~
~~respectively.~~

(5) That the applicant seeks authority to commingle ^{*the*} Pictured
Cliffs and Chacra ~~gas~~ gas production within the 2 7/8-inch
casing of the above-described well.

*(and gas production from undesignated Mesquite
Manosoa, Gallup, Carlisle and Graneros strings)*

Case No. 5675

Order No.

(6) That from the Pictured Cliffs zone, the subject well is capable of low rates of production only.

(7) That from the Chacra zone, the subject well is capable of low rates of production only.

(8) That the applicant ^{further} seeks authority to commingle Mesaverde, Gallup (Mancos, Gallup, and Carlisle) and Dakota (Graneros) production within the 4 1/2-inch casing of the above-described well.

(9) That from each of the zones described in Finding No. (8) above, the subject well is capable of low rates of production only.

(10) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

(11) 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.

(12) 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.

(13) 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 Pecos district office of the Commission any time the subject well is shut-in for 7 consecutive days.

(14) That the allocation of the production to the various commingled zones should be in accordance with a formula agreed to by the applicant and the Supervisor of the Commission's Aztec district office.

(15) That the application for dual completion and downhole commingling should be approved.

IT IS THEREFORE ORDERED:

(1) That the applicant, Merrion and Bayless, is hereby authorized to complete its Jicarilla 428 Well No. 2, located in Unit A of Section 31, Township 23 North, Range 4 West, NMPM, Sandoval County, New Mexico, as a dual completion (combination) with a string of 2 7/8-inch casing and a string of 4 1/2-inch casing cemented within a common wellbore.

PROVIDED HOWEVER, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Commission Rules and Regulations insofar as said rule is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take zone segregation tests upon completion and annually thereafter.

(2) That the applicant, further is ~~authorized~~ authorized to commingle Pictured Cliffs and Chacra gas production within the 2 7/8-inch casing in said well and to commingle Mesaverde, Gallup, and Dakota oil production within the 4 1/2-inch casing in said well.

(3) That the allocation of production to the various commingled zones shall be based upon percentages or a formula agreed ^{upon by the} ~~to between the~~ applicant and the Supervisor of the Commission's Aztec district office.

(4) 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.

(5) 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.