

CASE 6115: MERRION AND BAYLESS FOR  
DOWNSTATE CORNINGLENG, SANDOVAL COUNTY, ,  
NEW MEXICO

Case Number

6115

Application

Transcripts.

Small Exhibits

ETC.

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
January 4, 1978

EXAMINER HEARING

IN THE MATTER OF:

Application of Merrion and Bayless for  
downhole commingling, Sandoval County,  
New Mexico.

CASE  
6115

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:

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

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1 MR. NUTTER: At this time we will go ahead and call  
2 Case Number 6115.

3 MS. TESCHENDORF: Case 6115, application of Merrion  
4 and Bayless for downhole commingling, Sandoval County,  
5 New Mexico.

6 MR. MERRION: Mr. Examiner, I'm J. Gregory Merrion  
7 representing Merrion and Bayless in this Case Number 6115.

8 I've previously testified before the Commission and  
9 request that my qualifications be accepted.

10 MR. NUTTER: You are going to testify on your own  
11 behalf here without benefit of counsel today?

12 MR. MERRION: Yes, sir.

13 (THEREUPON, the witness was duly sworn.)  
14

15 J. GREGORY MERRION

16 having been first duly sworn, testified as follows:  
17

18 MR. NUTTER: Will you proceed, Mr. Merrion?

19 MR. MERRION: Mr. Examiner, we request in this  
20 Case Number 6115 permission for area-wide commingling of the  
21 Pictured Cliffs and Chacra zones in a block of acreage which  
22 we own in Sandoval County, eleven sections on the Jicarilla  
23 Reservation.

24 I would like to offer into evidence a plat of the  
25 area which I have labeled Exhibit Number One.

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1 (THEREUPON, a discussion was held

2 off the record.)

3 MR. MERRION: The purpose of this exhibit is to show  
4 the location of the block of acreage in question on which we  
5 wish to receive permission to commingle in the wellbore of the  
6 Chacra and Pictured Cliffs horizons. Shown on this block of  
7 acreage are wells and dry holes which have previously been  
8 drilled on the acreage.

9 The No. 1 location is the Jicarilla 428-2 on which  
10 we have previously received permission to commingle the Chacra  
11 and Pictured Cliffs on a one-well basis pursuant to Order  
12 No. R-5214, which was issued on May 20th, 1976.

13 MR. NUTTER: 5214?

14 MR. MERRION: That is correct.

15 MR. NUTTER: And what well is that again, please?

16 MR. MERRION: That's the Jicarilla 428-2 Well.

17 MR. NUTTER: And where is that well?

18 MR. MERRION: That's in the northeast quarter of  
19 Section 31.

20 MR. NUTTER: Is that the one with the triangle  
21 around it?

22 MR. MERRION: It is.

23 MR. NUTTER: Okay.

24 MR. MERRION: Subsequent to that well, we have  
25 drilled the Jicarilla 428-3, 428-4, and 428-5 Wells to the

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1 Chacra zone in an attempted completion in both the Pictured  
2 Cliffs and Chacra wellbores. In each case the Chacra has  
3 proved gas productive but on a very marginal basis.

4 Any questions regarding that exhibit?

5 MR. NUTTER: Well, you said the Chacra was marginal  
6 as far as gas production is concerned, how about the Pictured  
7 Cliffs?

8 MR. MERRION: The Pictured Cliffs on the No. 4 Well  
9 appears to be pretty good. The Pictured Cliffs on the No. 5  
10 Well appears to be essentially a dry hole. The Pictured Cliffs  
11 on the No. 3 Well, we do not feel that we got our frac into  
12 the zone and we contemplate re-fracing it. We don't anticipate  
13 that it's a real good well but we don't feel like we have  
14 effectively completed it as of this date.

15 MR. NUTTER: Will you have another exhibit, Mr.  
16 Merrion, showing the productivity from each of these zones?

17 MR. MERRION: I will.

18 MR. NUTTER: Go ahead.

19 MR. MERRION: Mr. Examiner, I would like to offer  
20 into evidence an exhibit which I have labeled Number Two. On  
21 this exhibit I have tabulated certain facts pertaining to the  
22 completion, drilling and productivity of the wells on the  
23 block in question.

24 First of all the Chacra zone is extremely marginal  
25 and unable to flow steady. Production tests on existing wells

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1 are as follows: On the Jicarilla 428-2 Well fifteen MCF per  
2 day with a spray of water, less than five barrels a day after  
3 frac. The Jicarilla 428-3 ten MCF per day with a spray of  
4 water after frac. The Jicarilla 428-4, we have not tested that  
5 after frac individually because we haven't been able to get a  
6 pulling unit in two months. It was tested, a small amount of  
7 gas, too small to measure, after perforating and breaking down  
8 with acid and pore fracturing. The Jicarilla 428-5 Well ten to  
9 fifteen MCF per day estimated on swab test after the frac, a  
10 small amount of water evidenced.

11 Secondly the Pictured Cliffs zone is the primary  
12 zone of interest and produces commercial quantities in the  
13 following wells: The Jicarilla 392-1 Well which is No. 3 on  
14 your Exhibit One. The Jicarilla 428-1 Well which is No. 2  
15 on Exhibit One. The Jicarilla 428-2 Well which is No. 1 on  
16 Exhibit One and the Jicarilla 428-4 Well which is No. 10 on  
17 Exhibit One.

18 Apparently neither the Chacra nor Pictured Cliffs  
19 waters exhibit any scaling tendencies in this area.

20 The fourth item has been tabulated by our engineer  
21 and I don't think it is pertinent. It has to do with shut in  
22 standing pressures on frac. I think that the shut in pressure  
23 in the zones is more pertinent and we measured eight hundred  
24 and thirty-seven pounds shut in pressure on the Jicarilla  
25 428-2 Well from the Chacra zone and our average shut in

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1 pressures from the Pictured Cliffs in the area has been in  
2 the range of six hundred and sixty to seven hundred, slightly  
3 over seven hundred pounds. There appears to be about a  
4 hundred and fifty pound differential in the shut in pressures.

5 Fifthly, the Chacra zone will not produce into the  
6 line but may contribute a little production if commingled  
7 with the Pictured Cliffs whose gas would keep the wellbore  
8 unloaded.

9 Sixthly, the ownership of both zones is common,  
10 except for a three and a third percent override owned by  
11 Elliott Riggs to the base of the Pictured Cliffs on contract  
12 428 Lease and I do have a letter of waiver from Mr. Riggs  
13 which I will present later as an exhibit in which he waives  
14 any objection to this in return for our assigning to him  
15 three and a third percent override on the Chacra zone so that  
16 his interest will be common in both zones.

17 Seventhly, the Oil Commission previously approved  
18 a similar application for commingling on Order R-5214 dated  
19 May 18, 1976, for the Merrion and Bayless Jicarilla 428-2  
20 Well in Section 31, Township 23 North, Range 4 West, Sandoval  
21 County, New Mexico.

22 Are there any questions on that exhibit?

23 MR. NUTTER: Yes. Now you mentioned that the  
24 average Pictured Cliffs shut in pressure ranges from six  
25 hundred and sixty to seven hundred pounds per square inch?

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1 MR. MERRION: That is correct.

2 MR. NUTTER: Now that's the average for all of the  
3 wells that you have in here to date?

4 MR. MERRION: Yes, sir.

5 MR. NUTTER: And what is the average pressure for  
6 all of the Chacra zones?

7 MR. MERRION: We only have one pressure measured  
8 shut in pressure which we consider valid and that was on the  
9 428-2 Well and that was eight hundred and thirty-seven  
10 pounds.

11 MR. NUTTER: And what is this pressure that was  
12 prepared by your engineer, did you say seven thirty-five?

13 MR. MERRION: Okay, this shut in standing pressure  
14 after acidizing or fracing. You break the formation down  
15 and then let it stand and this is a standing pressure of  
16 seven hundred and thirty-five pounds on the Chacra and five  
17 fifty on the Pictured Cliffs.

18 MR. NUTTER: And this eight hundred and thirty-  
19 seven is a shut in pressure?

20 MR. MERRION: That is a shut in gas pressure at  
21 the surface, yes, sir.

22 MR. NUTTER: Now you mentioned here on Item Number  
23 One, the amount of water that each of these wells makes in  
24 the Chacra, what about the water from the PC zone?

25 MR. MERRION: Okay, we have a very minimum amount of

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1 water from the No. 2 and the No. 4 Wells. The No. 1 Well,  
2 the 428 No. 1 Well which is No 2 on the plat, makes four or  
3 five barrels of water from the Pictured Cliffs. That is not  
4 commingled. We have had that water analyzed and it varies  
5 some and seems fresher than Pictured Cliffs water and we don't  
6 know what to think about it. We've run a tubing and a packer  
7 in the whole thing and it might be a leak from up above but  
8 that does not seem to be the case. So it does make some  
9 water and we think it is a freak.

10 MR. NUTTER: That's the only Pictured Cliffs well  
11 that makes any water?

12 MR. MERRION: It's the only Pictured Cliffs Well  
13 that makes more than a very small amount of water, a few  
14 gallons a day on most of them, and that one a few barrels a  
15 day.

16 MR. NUTTER: Do you feel that by commingling the  
17 PC and the Chacra in these wells that this mostly dry PC gas  
18 will lift the water out of the Chacra, is that it?

19 MR. MERRION: Yes, sir, I don't think that the  
20 Chacra by itself will buck line pressure. It doesn't make  
21 much gas and it makes enough water with gas to where it will  
22 all go.

23 MR. NUTTER: It will hold it down and keep it from  
24 flowing?

25 MR. MERRION: Yes, sir.

1 MR. NUTTER: Now on your Exhibit Number One you  
2 mentioned Well No. 1 which is the 428-2 is Gallup-Dakota. I  
3 thought that was authorized for commingling of PC and Chacra?

4 MR. MERRION: That's a dual completed well which  
5 is--on the shallow side we have the Chacra and Pictured Cliffs  
6 commingled and on the deep side we have the Mesaverde, Gallup  
7 and Dakota commingled.

8 MR. NUTTER: I see, so it is a dual completion and  
9 one zone has two formations and the other zone has three  
10 formations?

11 MR. MERRION: Yes, sir.

12 MR. NUTTER: And now the basic lease here on the  
13 429 and the 430, the ownership of all of the zones is  
14 common?

15 MR. MERRION: That is correct.

16 MR. NUTTER: And on the 428 lease the basic lease  
17 is common with the exception that Elliott Riggs has a three  
18 and a third percent overriding royalty to the base of the  
19 Pictured Cliffs, which would exclude the Chacra?

20 MR. MERRION: That is correct.

21 MR. NUTTER: But in order to obtain his consent  
22 to this you are assigning him three and a third percent  
23 interest in the Chacra also?

24 MR. MERRION: That is correct.

25 MR. NUTTER: So then the ownership of the two zones

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1 will be identical?

2 MR. MERRION: That is correct.

3 Mr. Examiner, I'm going to throw in my original  
4 Exhibit Three and am offering as Exhibit Three an exhibit  
5 which I originally labeled Exhibit Four.

6 MR. NUTTER: We will identify this then as Exhibit  
7 Number Three and mark out the four.

8 MR. MERRION: Exhibit Number Three, Mr. Examiner,  
9 is a tabulation of completion data on the wells which we have  
10 not yet received permission to commingle, the Jicarilla 428-3,  
11 428-4 and 428-5 Wells.

12 Would you like me to read this?

13 MR. NUTTER: Yes, please.

14 MR. MERRION: Okay. The Jicarilla 428-3 Well,  
15 perforations twenty-six fourteen to twenty-six sixty-eight  
16 in the Chacra, twenty-one fifty to twenty-one sixty-two in  
17 the Pictured Cliffs. Acidize the Chacra to breakdown perfs  
18 with two hundred gallons of seven and one-half percent  
19 hydrochloric acid. Fraced well with seventy-five thousand  
20 five hundred pounds of twenty/forty sand and thirteen thousand  
21 four hundred and twenty gallons of water with four hundred  
22 and seventy-two point eight MCF of nitrogen.

23 Initial potential flowing, ten MCF per day on swab  
24 test, logged off after twenty minutes. Production is  
25 attributed to the Chacra because a pump-in test on the

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1 isolated Pictured Cliffs indicated that it was not fraced.

2 We have been trying to get a pulling unit to pull  
3 our tubing out of the hole so we can frac the Pictured Cliffs  
4 there and have not been able to get that accomplished.

5 MR. NUTTER: You think all of the frac went into the  
6 Chacra because they were worked on?

7 MR. MERRION: We set a packer between the two zones  
8 and pressured up on the back side and it pressured up well  
9 above the standing pressure, indicating no frac. We depended  
10 upon ball sealers to divert and they failed.

11 On the Jicarilla 428-4 Well the perforations twenty-  
12 one forty-six to eighty in the Pictured Cliffs and twenty-six  
13 oh six to thirty-six in the Chacra. Acidized both perms to  
14 breakdown. Fraced with seventy-five thousand five hundred  
15 pounds of twenty/forty sand, thirteen thousand four hundred  
16 and twenty gallons of water, four hundred and seventy-two  
17 point eight MCF of nitrogen. The initial potential two point  
18 oh seven six MMCF per day AOF with light mist of water. After  
19 breakdown Chacra made no gas and Pictured Cliffs made forty  
20 MCF per day. That was before frac, those tests. Now we  
21 again have not been able to get our pulling unit to get in  
22 there and run a string of tubing to test the two zones  
23 separately there but we anticipate, based on the tests on  
24 these other three wells in the area and the fact that the  
25 Chacra made no gas before frac that the Chacra is similar in

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1 nature in this well to the other wells and they contribute  
2 very little.

3 The Jicarilla 428-5 Well, perforations two thousand  
4 and ninety to twenty-one twenty-four in the Pictured Cliffs,  
5 twenty-five fifty-eight to twenty-five eighty-four in the  
6 Chacra. Acidized the Chacra with four hundred gallons of  
7 seven and a half percent hydrochloric acid to breakdown.  
8 Fraced with thirteen thousand four hundred and twenty gallons  
9 of water, seventy-five thousand five hundred pounds of twenty/  
10 forty sand, four hundred and seventy-two point eight MCF of  
11 nitrogen.

12 Initial potential flowing ten to fifteen MCF a day  
13 with heavy spray logging off in Chacra. (Swab test under  
14 packer.)

15 Initial potential flowing too small to measure gas  
16 and salt water in Pictured Cliffs (logged off). Both zones  
17 exhibit marginal production.

18 The Pictured Cliffs here I think is essentially a  
19 dry hole. We didn't get the frac into it based on a pump-in  
20 test and we didn't feel like we had much there but I don't  
21 know whether we will be able to do any good even with com-  
22 mingling. I don't think that will buck the line pressure  
23 unless we gas lift it or something like that.

24 Are there any questions on Exhibit Three?

25 MR. NUTTER: Yes. On this Jicarilla 428-4 after

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1 breakdown the Chacra made no gas and the Pictured Cliffs made  
2 forty MCF per day, estimated. I don't understand why you  
3 would have an initial potential of over two million calculated  
4 absolute open flow.

5 MR. MERRION: Okay, we broke it down with acid,  
6 as stated above there, and tested it after acid and before  
7 fracing and then we fraced it and the initial potential after  
8 frac was two million.

9 MR. NUTTER: Well, but after the breakdown the  
10 Chacra made nothing and the PC only forty.

11 MR. MERRION: That's correct.

12 MR. NUTTER: What happened to our two million?

13 MR. MERRION: Well, our sequence was to perforate,  
14 breakdown with acid, test zero from the Chacra, forty from  
15 the Pictured Cliffs and then frac and then IP for two million  
16 seventy-six.

17 MR. NUTTER: Okay, in other words, the sequence here,  
18 this initial potential comes after the breakdown of the Chacra  
19 and the PC here?

20 MR. MERRION: Yes, sir.

21 MR. NUTTER: Okay, I had them out of sequence. Now  
22 what will the well deliver into the line do you think?

23 MR. MERRION: We have a deliverability, the  
24 Northwest Pipeline ran a four point test and I don't have it  
25 with me but I suspect it will deliver into the line probably

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1 three or four hundred MCF a day.

2 MR. NUTTER: But you think it is all coming from the  
3 Pictured Cliffs in this particular well?

4 MR. MERRION: For the most part, yes, sir, all but  
5 ten or fifteen MCF based on our tests on the other wells.

6 MR. NUTTER: Okay, do you have anything further  
7 then?

8 MR. MERRION: No, sir.

9  
10 CROSS EXAMINATION

11 BY MR. NUTTER:

12 Q All right now, Mr. Merrion, how are we going to  
13 allocate production to these two formations in these three  
14 wells in the event that downhole commingling is approved?

15 A That was Exhibit Three that I withdrew, sir, and  
16 the reason, it occurred to me that on area-wide commingling  
17 like this you generally allocate just to the two zones  
18 together undifferentiated without having a breakdown between  
19 zones. This is what we had hoped to propose unless you would  
20 prefer to have --

21 Q Well, we will have to have some scheme for alloca-  
22 tion on an area-wide basis then.

23 A Okay.

24 Q Based on estimated reserves in the two formations  
25 or average potential or would you go ahead and on individual

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1 wells as you complete them, get an estimate rather than an  
2 area-wide estimate.

3 A We could do about anything. We have --

4 Q It appears that in the limited number of wells that  
5 you have got here you have quite varying production, particu-  
6 larly in the Pictured Cliffs.

7 A Yes, sir.

8 Q You run from good wells to dry holes in the PC?

9 A Yes, but in the Chacra it's about the same every  
10 time, about ten or fifteen MCF a day with a spray of water  
11 and we have given them pretty good fracs and that seems to be  
12 about it. I think that might be the clue to the whole thing,  
13 just allocate maybe five MCF a day to the Chacra and the rest  
14 to the Pictured Cliffs.

15 Q In each case, whether you've got a good well or a  
16 bad well then it is immaterial as far as the Chacra is con-  
17 cerned, it's all PC that makes the difference?

18 A Yes, sir.

19 Q What was your Exhibit Number Three going to show?

20 A Well, Steve prepared this thing as though it was  
21 a single well commingling and it occurred to me that it was  
22 my impression that most of these area-wide commingling deals  
23 we just allocated them to the two zones together without  
24 trying to break them apart.

25 Q This was based on one well here?

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1 A This was based--the way we have done it on one well  
2 where you test one zone, test the two commingled and allocate  
3 it accordingly so if you would like me to present this I  
4 would.

5 Q Well, if you just want to put it in the record, it  
6 won't be identified as an exhibit but it will be something  
7 for us to look at.

8 A Okay.

9 Q Scratch off the part that says Exhibit Number  
10 Three on it then.

11 The Commission may want to ask you to do this. In  
12 other words, you wouldn't propose to test the Chacra in each  
13 case as you complete the well?

14 A Well, we probably would.

15 Q Well, if you had a flow on the Chacra this formula  
16 could be applied, couldn't it?

17 A Yes, sir.

18 Q It's  $G_2$  minus  $G_1$  over  $G_2$ ?

19 A Right.

20 Q And if you had your test on the Chacra --

21 A It just occurred to me that on the area-wide  
22 commingling, and perhaps I'm wrong on that regard, but I was  
23 under the impression that when you approved an area-wide  
24 commingling you didn't really allocate it between the two  
25 zones, you just reported the production from the two zones

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1 together.

2 Q Well, we have done it a number of different ways. We  
3 have had individual orders that required a breakdown between  
4 the two zones and where we have gone in and created a pool  
5 that involved both zones or included both zones, then there  
6 wouldn't be any breakdown but you are not asking us here to  
7 create a pool called PC-Chacra. We are still going to have  
8 individual pools and simply be commingling the two pools and  
9 we probably would have a breakdown then.

10 A This might be the thing to do.

11 Q This is something for us to look at anyway in con-  
12 sidering the case.

13 A My final exhibit, sir, if there are no more questions  
14 on these other things is a core analysis which --

15 Q This will be Exhibit Number Four then?

16 A Exhibit Number Four then is a conventional core  
17 analysis which was run on a core taken from the Jicarilla  
18 428-5 Well in what we would call the La Vetanna zone but  
19 which the Oil Commission has sufficiently called the Chacra  
20 zone and it is the zone which we wish to have permission to  
21 commingle the Pictured Cliffs with in the area in question.

22 The average porosity is on the order of six  
23 percent. The average permeability is on the order of a tenth  
24 of a millidarcy. Water saturation is running in the neighbor-  
25 hood of eighty percent.

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1 We had spectrographic analysis run and your x-ray  
2 diffraction analysis and that's also included indicating quite  
3 a bit of clay content. It is kind of a hodgepodge of minerals.  
4 It seems like a very inferior reservoir rock but it does have  
5 gas in it.

6 The first of the exhibit is just to indicate or to  
7 show that it is very poor reservoir which probably explains  
8 why the very low ability to produce on the wells that we  
9 have drilled.

10 Q Now this core analysis is all in the Pictured Cliffs  
11 is it not?

12 A No, sir, this is all in the Chacra zone.

13 Q Okay, yes.

14 A They label it La Vetanna but it is actually what  
15 the Commission calls the Chacra.

16 If there are no questions on that, sir, I have as  
17 a final exhibit a letter signed by Elliott Riggs waiving any  
18 objections to the commingling on contract 428.

19 Q This will be Exhibit Number Five.

20 MR. MERRION: Mr. Examiner, I have no further  
21 presentations on this case.

22 MR. NUTTER: Does anyone have any questions of  
23 Mr. Merrion?

24 We will accept Exhibits One through Five in Case  
25 Number 6115.

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(THEREUPON, Exhibits One through Five  
were admitted into evidence.)

MR. NUTTER: Did you have anything further, Mr.  
Merrion?


MR. MERRION: Just in Case 6116.

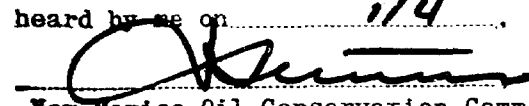
MR. NUTTER: Does anyone have anything to offer in  
Case Number 6115? We will take that case under advisement.

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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, C.S.R.

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 6115  
heard by me on 1/4, 1978.  
 Examiner  
New Mexico Oil Conservation Commission

sid morrish reporting service  
General Court Reporting Service  
825 Calle Maja, No. 122, Santa Fe, New Mexico 87501  
Phone (505) 962-9212



# OIL CONSERVATION COMMISSION

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



DIRECTOR  
JOE D. RAMEY

LAND COMMISSIONER  
PHIL R. LUCERO  
January 17, 1978

STATE GEOLOGIST  
EMERY C. ARNOLD

Mr. J. Gregory Merrion  
P. O. Box 507  
Farmington, New Mexico 87401

Re: CASE NO. 6115  
ORDER NO. R-5622

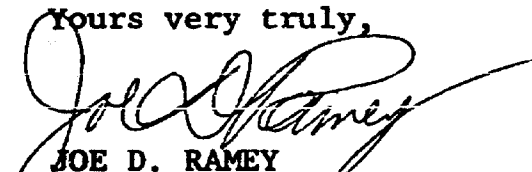
Applicant:

Merrion and Bayless

Dear Sir:

Enclosed herewith are two copies of the above-referenced  
Commission order recently entered in the subject case.

Yours very truly,

  
JOE D. RAMEY  
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC X  
Artesia OCC X  
Aztec OCC X

Other \_\_\_\_\_

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

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

CASE NO. 6115  
Order No. R-5622

APPLICATION OF MERRION & BAYLESS  
FOR DOWNHOLE COMMINGLING, SANDOVAL  
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 4, 1978, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 17th day of January, 1978, 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 Wells Nos. 3, 4, and 5, located, respectively, in Unit M of Section 29, Unit C of Section 32, and Unit D of Section 31, all in Township 23 North, Range 4 West, NMPM, Sandoval County, New Mexico.

(3) That the applicant seeks authority to commingle Pictured Cliffs and Chacra production within the wellbore of each of the above-described wells.

(4) Applicant further seeks blanket approval for downhole commingling of said formations in other wells it proposes to drill in Sections 29 through 32, Township 23 North, Range 4 West, and Sections 22 through 26 and 36, Township 23 North, Range 5 West, NMPM, all in Sandoval County, New Mexico.

(5) That from the Chacra zone, each of the subject wells, as is the case in other wells in the area, is capable of low marginal production only.

(6) That the Pictured Cliffs formation in the subject wells, as in other wells in the area, appears to vary in productivity, there being low marginal, medium quality, and "good" Pictured Cliffs wells in the area.

(7) That there is no great dissimilitude in the pressures encountered in the Pictured Cliffs formation and the pressures encountered in the Chacra formation in the subject wells, or in other wells in the area, and no thiefting of gas from one zone to the other should occur as the result of downhole commingling.

(8) That the Chacra zone in the subject wells, as in other wells in the area, produces water which tends to load up the wells and prevent them from producing, and the commingling of this wet production with the production from the Pictured Cliffs formation in the subject wells may enable the Chacra zone to produce gas which otherwise could not be produced, thereby preventing waste.

(9) That the downhole commingling of Pictured Cliffs and Chacra production in the wellbores of applicant's Jicarilla 428 Wells Nos. 3, 4, and 5, located as described in Finding No. (2) above, will not impair correlative rights and should be approved.

(10) That in order to allocate the commingled production to each of the commingled zones in the aforesaid wells, 15 MCF per day should be attributed to the Chacra zone in Wells Nos. 3 and 5, and the actual Chacra test production after fracture treatment to the Chacra formation in Well No. 4; and that the balance of the production from each well should be attributed to the Pictured Cliffs formation.

(11) That the applicant should be permitted to complete additional wells on its Jicarilla 428, Jicarilla 429, and Jicarilla 430 Leases in Sections 29 through 32, Township 23 North, Range 4 West, NMPM, and Sections 22 through 26, and Sections 35 and 36, Township 23 North, Range 5 West, NMPM, Sandoval County, New Mexico, in such a manner as to commingle Pictured Cliffs and Chacra production in the wellbore of said wells, provided however, that should the pressure in either of the zones in any such well be less than 50 percent of the pressure in the other zone of such well, or in the event that a producing potential of more than 200 MCF/day be established for each zone in any such well, the operator should notify the Secretary-Director of the Commission of such fact, and the Secretary-Director should order such action taken as he deems advisable, including the requirement for separation of the zones by dual completion equipment.

(12) That the actual test production after fracture treatment of the zone should be attributed to the Chacra zone in any commingled well completed on the above-described lands, and the balance of the well's production should be attributed to the Pictured Cliffs zone.

(13) That the downhole commingling of Pictured Cliffs and Chacra production in wells located on the above-described lands and subject to the above conditions will not cause but may prevent waste, and will not impair correlative rights and should be approved.

-3-  
Case No. 6115  
Order No. R-5622

IT IS THEREFORE ORDERED:

(1) That the applicant, Herrion & Bayless, is hereby authorized to commingle Pictured Cliffs and Chacra production within the wellbores of its Jicarilla 428 Wells Nos. 3, 4, and 5, located respectively, in Unit M of Section 29, Unit C of Section 32, and Unit D of Section 31, all in Township 23 North, Range 4 West, NMPM, Sandoval County, New Mexico.

(2) That 15 MCF per day shall be attributed to the Chacra zone in Wells Nos. 3 and 5, and the actual test production after fracture treatment of the zones shall be attributed to the Chacra zone in Well No. 4; that the balance of production in each of the aforesaid wells shall be attributed to the Pictured Cliffs zone in each of said wells.

(3) That the applicant is hereby authorized to commingle Pictured Cliffs and Chacra production within the wellbore of any well it completes on its Jicarilla 428, Jicarilla 429, and Jicarilla 430 Leases on the following-described lands in Sandoval County, New Mexico:

TOWNSHIP 23 NORTH, RANGE 4 WEST, NMPM  
Sections 29 through 32: All

TOWNSHIP 23 NORTH, RANGE 5 WEST, NMPM  
Sections 22 through 26: All  
Sections 35 and 36: All

(4) That should the formation pressure in either the Pictured Cliffs zone or the Chacra zone in any well commingled pursuant to Order No. (3) above be less than 50 percent of the formation pressure in the other zone, or should both zones in any such well be calculated to have a producing potential in excess of 200 MCF per day, the operator shall notify the Secretary-Director of the Commission of such fact, and the Secretary-Director shall order such action taken as he may deem advisable, including the requirement for separation of the zones by conventional dual completion equipment.

(5) That the actual test production after fracture treatment of the zone shall be attributed to the Chacra formation in any well commingled pursuant to Order No. (3) above, and that the balance of the well's production shall be attributed to the Pictured Cliffs formation.

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

-4-  
Case No. 6115  
Order No. R-5622

DONE at Santa Fe, New Mexico, on the day and year herein-  
above designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

PHIL R. LUCERO, Chairman



*Emery C. Arnold*  
EMERY C. ARNOLD, Member

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

S E A L

jr/

Case 6115

OFF. 325-8093  
RES. 327-9094

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

3-3 1977

December 2, 1977

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

ATTENTION: Mr. Joe Ramey, Director

RE: Request for Hearing to Commingle

Gentlemen:

We have recently drilled and have either completed or are in the process of completing the following wells in both the Pictured Cliffs and Chacra zones:

- Jicarilla 428-3, located 990 FSL and 990 FWL, Sec. 29, T23N, R4W, Sandoval County, New Mexico;
- Jicarilla 428-4, located 990 FNL and 1650 FWL, Sec. 32, T23N, R4W, Sandoval County, New Mexico;
- Jicarilla 428-5, located 1070 FNL and 1050 FWL, Sec. 31, T23N, R4W, Sandoval County, New Mexico.

Based upon tests of the Chacra zone in these wells it appears that it is of similar quality to the production found in our Jicarilla 428-2 well (10-15 MCF/day with spray of water). In that well you granted permission to commingle the Pictured Cliffs and Chacra zones in Order R-5214.

It is now requested that a hearing be scheduled to consider our request for a blanket commingling order covering the Pictured Cliffs and Chacra horizons on the following described acreage in Sandoval County, New Mexico:

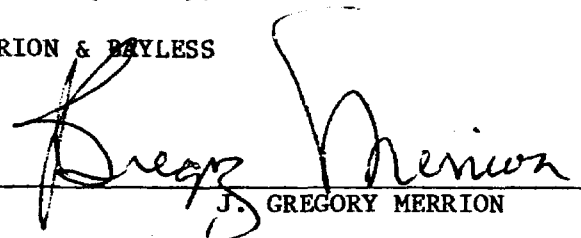
- T23N, R4W  
Sections 29, 30, 31, 32
- T23N, R5W  
Sections 22, 23, 24, 25, 26, 35, 36

Merrion and Bayless are operators on all described acreage.

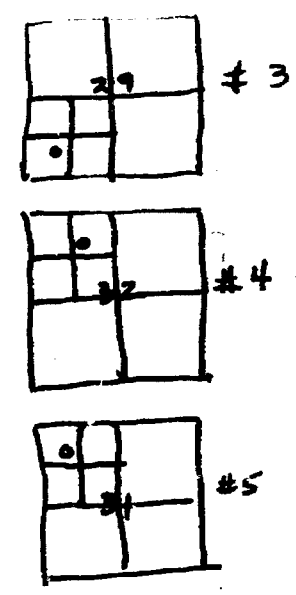
Yours very truly,

MERRION & BAYLESS

By

  
J. GREGORY MERRION

JGM/eh



Dockets Nos. 2-78 and 3-78 are tentatively set for hearing on January 18 and February 8, 1978. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 4, 1978

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

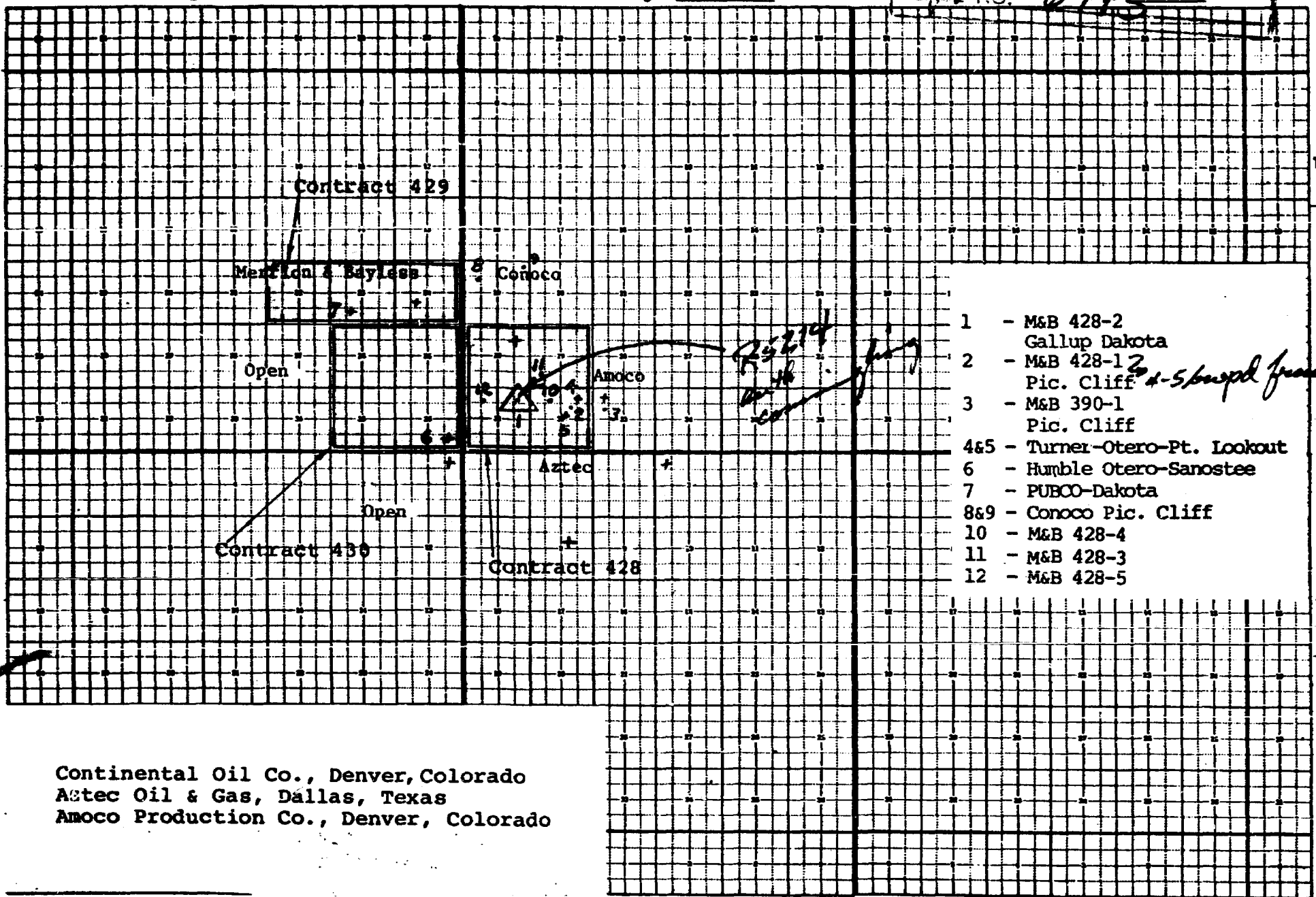
The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

- CASE 6113: Application of Transocean Oil, Inc., for a unit agreement, Catron County, New Mexico. Applicant, in the above-styled cause, seeks approval for its Cibola Unit Area comprising 30,733 acres, more or less, of Federal, State, and fee lands in Townships 1 and 2 North, Ranges 14 and 15 West, Catron County, New Mexico.
- CASE 6114: Application of Texas Oil and Gas Company for special pool rules or a spacing exception, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Shugart-Pennsylvanian Gas Pool, Eddy County, New Mexico, to provide for 320-acre spacing rather than 160 acres. In the absence of objection, this pool will be placed on the standard 320-acre spacing for Wolfcamp and Pennsylvanian gas pools rather than the present 160-acre spacing. In the alternative applicant seeks the assignment of a 320-acre gas spacing and proration unit consisting of the E/2 of Section 33, Township 18 South, Range 31 East, Eddy County, New Mexico, to a well to be drilled to the Pennsylvanian formation at a standard location thereon.
- CASE 6096: (Continued from November 30, 1977, Examiner Hearing)
- Application of Texas Oil & Gas Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp and Pennsylvanian formations underlying the S/2 of Section 14, Township 21 South, Range 34 East, Lea County, New Mexico, to be dedicated to applicant's South Wilson State Well No. 1 to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6115: Application of Merrion and Bayless for downhole commingling, Sandoval County, New Mexico. Applicants, in the above-styled cause, seek approval for the downhole commingling of Pictured Cliffs and Chacra production in their Jicarilla 428 Wells Nos. 3, 4, and 5, located respectively, in Unit M of Section 29 and Unit D of Section 32 and Section 31, Township 23 North, Range 4 West. Applicant further seeks blanket approval for downhole commingling of said formations in Sections 29 thru 32, Township 23 North, Range 4 West, and Sections 22 thru 26 and 35 and 36, Township 23 North, Range 5 West, all in Sandoval County, New Mexico.
- CASE 6116: Application of Merrion and Bayless for salt water disposal, San Juan County, New Mexico. Applicants, in the above-styled cause, seek authority to dispose of produced salt water into the Mesaverde formation thru the perforated interval from 3374 feet to 3395 feet in applicants' Hudson Well No. 1, located in Unit D of Section 26, Township 30 North, Range 12 West, San Juan County, New Mexico.
- CASE 6117: Application of Amoco Production Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for its South Culebra Bluff Unit Area comprising 1280 acres, more or less, of Federal and fee lands in Township 23 South, Range 28 East, Eddy County, New Mexico.
- CASE 6118: Application of Inexco Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for its Long Box Unit Area comprising 3,808 acres, more or less, of Federal and State lands in Townships 20 and 20 1/2 South, Ranges 23 and 24 East, Eddy County, New Mexico.
- CASE 6119: Application of Caulkins Oil Company for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Pictured Cliffs, Chacra and Mesaverde production in the wellbore of its Breech Well No. 228, to be located in Unit A of Section 18, Township 26 North, Range 6 West, Rio Arriba County, New Mexico, and to dually complete the commingled formations and the Dakota formation in said well.
- CASE 6120: Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Chacra and Mesaverde production in the wellbores of its Breech E Wells Nos. 109 in Unit M of Section 3 and 104 in Unit P of Section 5 and its Breech A Wells Nos. 627 in Unit B of Section 8, 677 and 679 in Units I and J, respectively, of Section 9, and 207 in Unit A of Section 10, all in Township 26 North, Range 6 West, Rio Arriba County, New Mexico.
- CASE 6121: Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured

Picture Cliff-Chacra Co-Mingling  
Hearing Exhibit #1

BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
advised by Mr. C. C. New Mexico  
CASE NO. 844

Range 4 West



Continental Oil Co., Denver, Colorado  
 Astec Oil & Gas, Dallas, Texas  
 Amoco Production Co., Denver, Colorado

EXHIBIT NO. 2  
Case 6115  
Merrion & Bayless  
Jicarilla Lease #428, 429, 430

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
<i>Ampl</i> EXHIBIT NO. <u>2</u>
CASE NO. <u>6115</u>

Facts pertaining to down hole commingling of Picture Cliffs and Chacra production in Sections 29 thru 32, T23N, R4W, and Sections 22 thru 26, and 35 and 36, T23N, R5W, Sandoval County, New Mexico.

1. The Chacra zone is extremely marginal and unable to flow steady. Production tests on existing wells are as follows:

Jicarilla 428-2 - 15 MCF/day w/spray water (less than 5 bbl./day) after frac.  
Jicarilla 428-3 - 10 MCF/day w/spray water after frac.  
Jicarilla 428-4 - Gas TSTM natural after perforation breakdown w/acid.  
Jicarilla 428-5 - 10-15 MCF/day estimated on swab test after frac. Small amount of water evident.

2. The Picture Cliff zone is the primary zone of interest and produces commercial quantities in the following wells:

Jicarilla 392-1 - Sec. 33, T23N, R4W, Sandoval County, NM  
Jicarilla 428-1 - Sec. 32, T23N, R4W, Sandoval County, NM  
Jicarilla 428-2 - Sec. 31, T23N, R4W, Sandoval County, NM  
Jicarilla 428-4 - Sec. 32, T23N, R4W, Sandoval County, NM

3. Neither the Chacra nor Picture Cliff waters exhibit any scaling tendencies in this area.
4. Shut-in pressure for the Chacra zone is 735 PSIG, based on breakdown of perforations in the Jicarilla 428-4, and for the Picture Cliff is 550 PSIG.
5. The Chacra zone will not produce into the line, but it may contribute a little production if commingled with the Picture Cliffs whose gas would keep the wellbore 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 Picture Cliffs on the Contract #428 lease. As per attached letter, Merrion & Bayless have agreed to pay Riggs the same ORR on the Chacra gas from this lease. The result will be that all interests are common.
7. The Oil Commission previously approved a similar application for commingling, Order No. R-5214, dated May 18, 1976, for the Merrion & Bayless Jicarilla 428-2 well in Section 31, T23N, R4W, Sandoval County, NM.

*428-2  
837 only  
per  
one PSI  
660-700*

EXHIBIT NO. \*3  
Case 6115  
Merrion & Bayless  
Jicarilla Lease #428, 429

BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 3  
CASE NO. 6115

Completion Data on Wells to be Commingled.

1. Jicarilla 428-3

Perforations - 2614-66' - Chacra

2150-62' - Picture Cliff

Acidized Chacra to breakdown perfs w/200 gallons 7-1/2% HCL.

Fraced well w/75,500 lbs. 20/40 sand and 13,420 gallons H<sub>2</sub>O  
w/472.8 MCF of nitrogen.

IPF 10 MCF/day on swab test logging off after 20 minutes.  
Production is attributed to the Chacra because a pump-in test  
on the isolated Picture Cliffs indicated it was not fraced.

2. Jicarilla 428-4

Perforations - 2146-80' - Picture Cliff

2606-36' - Chacra

Acidized both perfs to breakdown.

Fraced w/75,500 lbs. 20/40 sand, 13,420 gallons H<sub>2</sub>O, 472.8 MCF  
of nitrogen.

IPF 2.076 MMCF AOF w/light mist of water. After breakdown Chacra  
made no gas and Picture Cliff made 40 MCF/day estimated.

3. Jicarilla 428-5

Perforations -2090-2124' - Picture Cliff

2558-84' - Chacra

Acidized Chacra w/400 gallons 7-1/2% HCL to breakdown.

Fraced w/13,420 gallons H<sub>2</sub>O, 75,500 lbs. 20/40 sand, 472.8 MCF of  
nitrogen.

IPF 10-15 MCF/day w/heavy spray logging off in Chacra. (Swab  
test under packer.)

IPF TSTM gas and salt water in Picture Cliff (logged off).

Both zones exhibit marginal production.

*thinks PC  
is dry hole in  
this well*

MERRION & BAYLESS  
JICARILLA 428 NO. 5  
BALLARD PICTURED CLIFFS FIELD  
RIO ARriba COUNTYFORMATION : LA VETANIA  
DRLG. FLUID: WATER BASE MUD  
LOCATION : NE NW SEC. 31-T23N-R4W  
STATE : NEW MEXICODATE : 7-29-77  
FILE NO. : 90-3-2816  
ANALYSTS : RG:GO  
ELEVATION: 6838' GL

## CONVENTIONAL CORE ANALYSIS

SAMP. NO.	DEPTH	PERM. TO AIR (MD) HORZ. VERTICAL	POR. FLO.	FLUID SATS. OIL WATER	GR. DNS.	DESCRIPTION
1	2565-66	0.01	7.5	6.6 76.4	2.71	SD GY VFG CLY CALC SHY
2	2566-67	0.08	5.0	4.0 75.1	2.71	SD GY VFG CLY CALC FOSS CARB
3	2567-68	0.11	8.6	2.2 69.0	2.69	SD GY VFG CLY CALC CARB
4	2568-69	0.19	4.6	4.3 76.9	2.70	SD GY VFG CLY CARB
5	2569-70	0.04	6.8	2.9 81.4	2.70	SD GY VFG CLY CARB
6	2570-71	0.04	6.3	1.6 84.4	2.69	SD GY VFG CLY CARB SL/CALC
7	2571-72	0.18	6.8	3.0 80.0	2.69	SD GY VFG CLY V/CARB SL/CALC FOSS
8	2572-73	0.01	5.2	3.8 72.8	2.68	SD GY VFG CLY V/CARB
9	2573-74	0.01	7.6	1.3 80.2	2.70	SD GY VFG CLY V/CARB SL/CALC
10	2574-75	0.27	5.6	1.8 85.3	2.70	SD GY VFG CLY V/CARB SL/CALC FOSS
11	2575-76	0.40	6.9	1.4 89.2	2.71	SD GY VFG CLY CARB SL/CALC
12	2576-77	0.14	6.9	1.4 83.2	2.70	SD GY VFG CLY CARB SL/CALC
13	2577-78	0.02	7.2	2.7 81.9	2.69	SD GY VFG CLY CARB
14	2578-79	0.03	7.6	2.7 85.8	2.70	SD GY VFG CLY CARB
15	2579-80	0.02	6.5	1.5 82.0	2.70	SD GY VFG CLY CARB SL/CALC
16	2580-81	0.14	5.0	2.0 76.9	2.72	SD GY VFG CLY CARB CALC FOSS
17	2581-82	0.02	7.0	1.4 85.7	2.71	SD GY VFG CLY V/CARB SL/CALC
18	2582-83	0.01	5.4	1.9 81.5	2.70	SD GY VFG CLY V/CARB SL/CALC
	2583-2585					SHALE - NO ANALYSIS

BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
Appl EXHIBIT NO. 4  
CASE NO. 6115

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which this report is used or relied upon.

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
**DALLAS, TEXAS**

Page 1 of 1  
 File SCAL-77270  
 Well Jicarilla 428 No. 5

Mineral Content Determination  
 (by x-ray diffraction)

Sample Depth, Feet:	2565-66				2573-74			
	Whole Sample	Sand	Silt	Clay	Whole Sample	Sand	Silt	Clay
Per Cent of Total Sample		48	25	27		50	28	22
Mineral	Per Cent of Total Sample							
Quartz	58	81	76		62	82	75	
Feldspars	5	7	7		6	8	6	
Calcite					1		3	
Dolomite	3	4	6		4	5	6	
Anhydrite	2	3	2		2	3	2	
Pyrite	2		7		2		6	
Kaolinite	13			47	10			48
Chlorite	8			32	7			31
Illite/Mica	9	5	2	21	6	2	2	21

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

## ELLIOTT A. RIGGS

Petroleum Geologist

P.O. BOX 711

FARMINGTON, NEW MEXICO 87401

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
<i>copy</i>	EXHIBIT NO. <u>5</u>
CASE NO.	<u>6115</u>

January 3, 1978

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

RE: Case No. 6115

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 Sections 29, 30, 31, and 32, in T23N, R4W, NMPM, Sandoval County, 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/4 Section 31, T23N, R4W for the entire Jicarilla lease Contract #428.

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

Respectfully submitted,

  
Elliott A. Riggs

RAR/eh

~~EXHIBIT NO. 1~~

Case 6115

Merrion & Bayless

Jicarilla Lease #428, 429, 430

Proposed Method of Allocating Commingled Production.

1. Take 24 hour test of Chacra zone flowing through 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 tubing. When well is on line, use flow period data during initial deliverability test to calculate  $G_2$  at zero deliverability pressure.

3. Allocate.

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

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

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

BEFORE 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. 6115

Order No. R- 5622

APPLICATION OF MERRION & BAYLESS  
FOR DOWNHOLE COMMINGLING, SANDOVAL  
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 4,  
19 78, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this        day of January, 19 78, 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 Wells Nos. 3, 4, and 5,  
located, respectively, in Unit M of Section 29, and Unit C of  
Section 32, and <sup>Unit D of</sup> ~~all in~~ Section 31, <sup>all in</sup> Township 23 North, Range 4 West, ~~NMPM~~,  
Sandoval County, New Mexico.

(3) That the applicant seeks authority to commingle Pictured  
Cliffs and Chacra production  
within the wellbore of <sup>each</sup> the above-described wells.

(4) Applicant further seek blanket approval for downhole  
commingling of said formations <sup>in other wells it proposes to drill</sup> in Sections 29 through 32,  
Township 23 North, Range 4 West, and Sections 22 through 26 and  
36, Township 23 North, Range 5 West, <sup>all in</sup> Sandoval County, New  
Mexico.

(5) That from the Chacra <sup>each of</sup> zone, the  
<sup>as is the case in other wells in the area,</sup>  
subject wells is capable of low marginal production only.

(6) That the Pictured Cliffs formation in the subject wells,  
as in other wells in the area, appears to vary in productivity,  
there being low marginal, medium quality, and "good"  
Pictured Cliffs wells in the area.

(7) That there is no great dissimilitude in the pressures encountered in the Pictured Cliffs formation and the pressures encountered in the Chacra formation in the subject wells, or in other wells in the area, and no thiefing of gas from one zone to the other should occur as the result of downhole commingling.

(8) That the Chacra zone in the subject wells, as in other wells in the area, produces water which tends to load up the wells and prevent them from producing, and the commingling of this water production with the <sup>production</sup> from the Pictured Cliffs formation <sup>in the subject wells</sup> may enable the Chacra zone to produce gas which otherwise could not be produced, thereby preventing waste.

(9) That the downhole commingling of Pictured Cliffs and Chacra production in the wellbores of applicant's Jicarilla 428 Wells Nos. 3, 4, and 5, located as described in Finding No. (2) above, will not impair correlative rights and should be approved.

(10) That in order to allocate <sup>the commingled</sup> production to each of the commingled zones in the aforesaid wells, 15 mcf per day should be attributed to the Chacra zone in Wells Nos. 3 and 5, and the actual Chacra test production after fracture treatment to the Chacra formation in Well No. 4; and that the balance of the production from each well should be attributed to the Pictured Cliffs formation.

(11) That the applicant should be permitted to complete additional wells on its Jicarilla 428, Jicarilla 429, and Jicarilla 430 Leases in Sections 29 through 32, Township 23 North, Range 4 West, NMPM, and Sections 22 through 26, and Sections 35 and 36, Township 23 North, Range 5 West, NMPM, Sandoval County, New Mexico, in such a manner as to commingle Pictured Cliffs and Chacra production in the wellbores of said wells, provided however, that should the pressure in either of the zones in any such well be less than 50 percent of the pressure in the other zone of such well, or in the event that <sup>a producing potential of</sup> more than 200 MCF/day be established for each zone in any such well, the operator should notify the Secretary-Director of the Commission of such fact, and the Secretary-Director should order such action taken as he deems advisable, including the requirement for separation of the zones by dual completion equipment.

(12) That the actual test production after fracture treatment of the zone should be attributed to the Chacra zone in any commingled well completed on the above-described lands, and the balance of the well's production should be attributed to the Pictured Cliffs zone.

(13) That <sup>the</sup> approval for downhole commingling of Pictured Cliffs and Chacra production in wells located on the above-described lands and subject to the above conditions will not <sup>but may prevent waste, and will not</sup> cause ~~any~~ impairment of correlative rights and should be approved.

IT IS THEREFORE ORDERED:

(1) That the applicant, Merriam & Bayless, is hereby authorized to commingle Pictured Cliffs and Chacra production within the wellbores of its Jicarilla 428 Wells Nos. 3, 4, and 5, located, respectively, in Unit M of Section 29, Unit C of

of Section 32, and Unit D of Section 31, all in Township 23 North, Range 4 West, NMPM, Sandoval County, New Mexico,

(2) That 15 MCF per day shall be attributed to the Chacra zone in Well Nos. 3 and 5, and the actual ~~Chacra~~ test production after fracture treatment ~~above~~ of the zone shall be attributed to the Chacra zone in Well No. 4; that the balance of production in each of the aforesaid wells shall be attributed to the Pictured Cliffs zone in each of said wells.

(3) That the applicant is hereby authorized to commingle Pictured Cliffs and Chacra production within the well bore of any well it completes on its Jicarilla #28, Jicarilla #29, <sup>and</sup> Jicarilla #30 leased on the following-described lands in Sandoval County, New Mexico:

TOWNSHIP 23 North, RANGE 4 WEST, NMPM

Sections 29 through 32: All

TOWNSHIP 23 North, RANGE 5 WEST, NMPM

Sections 22 through 26: All

Sections 35 and 36: All

(A) That should the formation pressure in either the Pictured Cliffs zone or the Chacra zone in any well commingled pursuant to Order No. (3) above be less than 50 percent of the formation pressure in the other zone, or should both zones in any such well be calculated to have a producing potential in excess of 200 MCF per day, the operator shall notify the Secretary Director of the Commission of such fact, and the Secretary Director shall order such action taken as he may deem advisable,

including the requirement for separation of the zones by conventional dual completion equipment.

(5) That the actual test production after fracture treatment of the ~~Chacara~~ zone shall be attributed to the Chacara formation in any well commingled pursuant to Order No. 130 above, and that the balance of the well's production shall be attributed to the Pictured Cliffs formation.

(6) Jurisdiction.

DONE at