

OFFSETTING OPERATORS

Marathon Oil Company  
Post Office Box 552  
Midland, Texas 79702  
Atten: Mr. Steve Daniels

Hondo Oil & Gas Company  
Post Office Box 2208  
Roswell, New Mexico 88202

Amoco Production Company  
Post Office Box 68  
Hobbs, New Mexico 88240

**SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.**  
 Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1.  Show to whom delivered, date, and addressee's address. 2.  Restricted Delivery.

3. Article Addressed to:  
 Marathon Oil Company  
 Atten: Steve Daniels  
 P.O. Box 552  
 Midland, TX 79702

4. Article Number  
 P-484 032 737

Type of Service:  
 Registered  Insured  
 Certified  COD  
 Express Mail

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature - Addressee  
 X

6. Signature - Agent  
*Don Marston*

7. Date of Delivery  
 10 FEB 89 CEN

8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Feb. 1986

DOMESTIC RETURN RECEIPT

**SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.**  
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1.  Show to whom delivered, date, and addressee's address. 2.  Restricted Delivery.

3. Article Addressed to:  
 Amoco Production Company  
 Post Office Box 68  
 Hobbs, NM 88240

4. Article Number  
 P-484 032 735

Type of Service:  
 Registered  Insured  
 Certified  COD  
 Express Mail

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature - Addressee  
 X

6. Signature - Agent  
 X *John Fair*

7. Date of Delivery  
 2-9-89

8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Feb. 1986

DOMESTIC RETURN RECEIPT

DOMESTIC RETURN RECEIPT

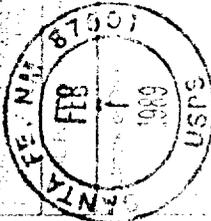
P-484 032 735

FOR CERTIFIED MAIL  
FIRST CLASS PERMIT NO. 100  
SANTA FE, N.M.

Amoco Prod. Co.

P.O. Box 68

Hobbs, NM 88240



U.S.G.P.O. 153-506

Form 3800, June 1985

P-484 032 736

FOR CERTIFIED MAIL  
FIRST CLASS PERMIT NO. 100  
SANTA FE, N.M.

(See Reverse)

Hondo Oil & Gas Co.

P.O. Box 2208

Roswell, NM 88202



U.S.G.P.O. 153-506

Form 3800, June 1985

P-484 032 737

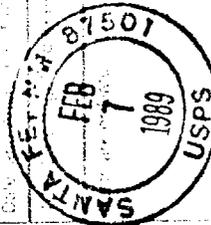
FOR CERTIFIED MAIL  
FIRST CLASS PERMIT NO. 100  
SANTA FE, N.M.

(See Reverse)

Marathon Oil Co.

Steve Daniels

P.O. Box 552  
Midland, TX 79702



U.S.G.P.O. 153-506

Form 3800, June 1985

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

GARREY CARRUTHERS  
GOVERNOR

March 14, 1989

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE NEW MEX CO 87501  
(505) 827-5800

Mr. Ernest L. Padilla  
Padilla & Snyder  
Attorneys at Law  
Post Office Box 2523  
Santa Fe, New Mexico

Re: CASE NO. 9618  
ORDER NO. R-8890

Applicant:

Bill Fenn, Inc.

Dear Sir:

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

Sincerely,

*Florene Davidson*

FLORENE DAVIDSON  
OC Staff Specialist

Copy of order also sent to:

Hobbs OCD           x            
Artesia OCD           x            
Aztec OCD                           

Other Thomas Kellahin

---

Roaring Springs Fed #1

Applicant	Opposition: <i>To Marathon</i>
Attorney: <i>Ernie Padilla</i>	Attorney: <i>Tom Kellahan</i>
Witness(es): (1) <i>Jack Morgan</i> <sup>US Res. Inc.</sup>	Witness(es): (1)
(2) <i>Jim Branigan</i>	(2)
(3)	(3)

Open - 2 offered *Hondo-Marathon* - *Marathon*  
 990 agree to 40% penalty based on dist to lease line.  
 1250

US Res. Inc. in structure

*Jack Morgan* ES Pet Eng. O.H. PE in *Marathon*  
 32 years exp *Marathon* 9 yrs US Res. Inc. also dual compl.  
 agrees to 40% penalty having waiting  
*Hondo-Marathon*

*Jim Branigan* consult *Marathon*

REMARKS:

ORDER ISSUED:
CONTINUED TO:
DISMISSED:
ORDER FINALIZED:
ORDER NO.:
CASE NO.:

1 STATE OF NEW MEXICO  
2 ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
3 OIL CONSERVATION DIVISION  
4 STATE LAND OFFICE BUILDING  
5 SANTA FE, NEW MEXICO

6 1 March 1989

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Bill Fenn, Inc. for an CASE  
10 unorthodox gas well location and dual 9618  
11 completion, Eddy County, New Mexico.

12 BEFORE: Victor T. Lyon, Examiner

13 TRANSCRIPT OF HEARING

14 A P P E A R A N C E S

15 For the Division: Robert G. Stovall  
16 Attorney at Law  
17 Legal Counsel to the Division  
18 State Land Office Bldg.  
19 Santa Fe, New Mexico

20 For Bill Fenn, Inc.: Ernest L. Padilla  
21 Attorney at Law  
22 PADILLA & SNYDER  
23 P. O. Box 2523  
24 Santa Fe, New Mexico 87504

25 For Marathon Oil Company: W. Thomas Kellahin  
26 Attorney at Law  
27 KELLAHIN, KELLAHIN & AUBREY  
28 P. O. Box 2265  
29 Santa Fe, New Mexico 87504

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1 MR. LYON: Call next Case Num-  
2 ber 9618.

3 MR. STOVALL: Application of  
4 Bill Fenn, Inc., for an unorthodox gas well location and  
5 dual completion, Eddy County, New Mexico.

6 MR. PADILLA: Mr. Examiner, my  
7 name is Ernest L. Padilla for the applicant. I have two  
8 witnesses to be sworn.

9 MR. KELLAHIN: Mr. Examiner,  
10 I'd like to enter my appearance on behalf of Marathon Oil  
11 Company. My name is Tom Kellahin. I'm an attorney with  
12 the Santa Fe law firm of Kellahin, Kellahin & Aubrey.

13 MR. PADILLA: Mr. Examiner, I  
14 have two witnesses to be sworn.

15

16 (Witnesses sworn.)

17

18 MR. PADILLA: Mr. Examiner,  
19 first let me make a slight or a short opening statement.

20 In this case we had two major  
21 offset operators, Marathon and Hondo Oil and Gas.

22 We sent the notice to Amoco  
23 Production Company, as well as Marathon and Hondo Oil and  
24 Gas. We did that out of precaution.

25 We sent the notice to Amoco

1 out of precaution but the operator of the property owned by  
2 Amoco is Marathon.

3                   Prior to this hearing we have  
4 reached an agreement with Marathon and Hondo to allow a 40  
5 percent penalty based strictly on the distance from the  
6 well location to the lease line. We have a -- we will in-  
7 troduce Exhibits relating to that agreement.

8                   We would -- therefore our ap-  
9 plication is subject to that 40 percent penalty based  
10 strictly on the distance to lease line.

11                   My clients do not necessarily  
12 believe that that is the sole method of determining penal-  
13 ties but in the interest of proceeding with drilling the  
14 well and getting on with the drilling program which they  
15 have commitments to do that, we need to -- or simply wanted  
16 to tell you that we didn't want to collaterally attack the  
17 40 percent penalty that we have reached agreement on with  
18 Marathon and Hondo.

19                   There may be other methods of  
20 determining penalty which may be appropriate but for pur-  
21 poses of this hearing we'd like to restrict ourselves to  
22 the distance to lease line, and it computes exactly to 40  
23 percent the way we have determined this as 90 divided by  
24 1650.

25                   With that I'll proceed with my  
first witness, Mr. Lyon.

1 MR. LYON: Proceed.

2  
3 JACK A. MORGAN,

4 being called as a witness and being duly sworn upon his  
5 oath, testified as follows, to-wit:

6  
7 DIRECT EXAMINATION

8 BY MR. PADILLA:

9 Q Mr. Morgan, have you -- for the record  
10 would you please state your full name, please?

11 A Jack, initial A., Morgan.

12 Q Where do you reside, Mr. Morgan?

13 A I reside in Dallas, Texas.

14 Q For whom do you work?

15 A I work for U. S. Resources,  
16 Incorporated.

17 Q What connection does U. S. Resources  
18 have with the applicant, Bill Fenn, Inc.?

19 A This -- the well, this well that we've  
20 applied for the permit for, the Roaring Springs Federal No.  
21 1, is a joint venture between Bill Fenn and U. S. Re-  
22 sources, Inc.

23 Q Mr. Morgan, have you previously testi-  
24 fied before the Oil Conservation Division and had your cre-  
25 dentials accepted as a matter of record?

1           A           No, sir, I have not.

2           Q           Can you tell us where you received your  
3 degree, please?

4           A           Yes, sir, from the University of  
5 Oklahoma.

6           Q           In what?

7           A           In petroleum engineering.

8           Q           And what has been your experience since  
9 that time in the oil and gas industry?

10          A           I've spent around 32 years with Sun Oil  
11 Company in all phases of engineering and all phases of man-  
12 agement and production and drilling operations, regulatory  
13 affairs.

14                   I've spent right at nine years now with  
15 U. S. Resources, Inc. in all phases of management and en-  
16 gineering, regulatory affairs, production and drilling  
17 operations.

18          Q           Mr. Morgan, can you briefly tell us what  
19 the nature of the application is today?

20          A           Yes, sir, it's for an unorthodox loca-  
21 tion in Eddy County, New Mexico. It's -- the regular loca-  
22 tion, this is in the Indian Basin area, Indian Basin Morrow  
23 Pool and Indian Basin Upper Penn Gas Pool, the regular  
24 location would be 1650/1650 from the two lines, whereas  
25 we're asking for 1650 from the north line and 990 from the

1 west line, which is an unorthodox location, and also a dual  
2 completion for the Upper Pennsylvanian and the lower -- and  
3 the Morrow.

4 Q And have you made a study of how you're  
5 going to complete this well?

6 A Yes, we have, as a dual completion, a  
7 two string, two tubing string dual completion.

8 MR. PADILLA: Mr. Examiner, we  
9 tender Mr. Morgan as an expert petroleum engineer.

10 MR. LYON: Mr. Morgan, are you  
11 a registered professional engineer?

12 A I am in Texas but not in New Mexico, Mr.  
13 Examiner.

14 MR. LYON: Mr. Morgan is con-  
15 sidered qualified.

16 Q Mr. Morgan, let's go on to what we have  
17 marked as Exhibit Number One and have you identify that for  
18 the Examiner and tell us what that contains.

19 A Yes. Our Exhibit Number One is a letter  
20 to all offset operators on the page number two, which show  
21 that there are three of them, Marathon Oil Company, Hondo  
22 Oil & Gas Company, and Amoco Production Company.

23 This is a notice of our application for  
24 the unorthodox location for this Roaring Springs Federal  
25 No. 1 Well in Eddy County, New Mexico.

1           Q           As a result of that notice, Mr. Morgan,  
2 have you received any communications from any of the offset  
3 operators?

4           A           Yes, sir, we have. Exhibit Number Two  
5 is a letter from Marathon Oil Company in which we agreed,  
6 or they agreed with us that they would let us drill the  
7 well at 1650 feet from the north line, 990 feet from the  
8 west line of Section 14, Township 21 South, Range 23 East,  
9 Eddy County, New Mexico, if we provide for a 40 percent  
10 penalty to be imposed on the allowable for this well.

11          Q           Are you in agreement with that 40 per-  
12 cent?

13          A           In this special case, we are. As you  
14 mentioned earlier, we realize that there are other methods  
15 for determining allowables for wells and they would also  
16 include the two Indian Basin formations, the Upper Penn and  
17 the Morrow; however, we have a time constraint on this well  
18 and in order to meet those time constraints we already have  
19 a rig, we have investors lined up, we wanted to do this  
20 right away, and in order to do this we just -- this -- this  
21 40 percent penalty is within the limits of our economic  
22 parameters and we have agreed with Marathon to do this to  
23 preclude a protest so we could go ahead and get on with the  
24 well.

25          Q           Let's go on to what we've marked as

1 Exhibit Number Three, Mr. Morgan, and have you tell the  
2 Examiner what that is.

3 A It is a letter that was sent to Hondo  
4 Oil & Gas Company, which is another one of the offset oper-  
5 ators, advising them that we have reached a 40 percent pen-  
6 alty, production penalty on the allowable for this well at  
7 the unorthodox location, and asked them, if they concurred,  
8 to sign and send it back, which they have.

9 Q Okay. Let's go on now to Exhibit Number  
10 Four and have you tell us what that is.

11 A Exhibit Number Four is a completion  
12 guide for the dual completion of this well. It encompasses  
13 setting 9-5/8ths inch casing through the fresh water zone  
14 with cementing back to the surface.

15 It includes a 7-inch casing string to be  
16 set below the Indian Basin Morrow Gas Pool. It encompasses  
17 two strings of 2-3/8ths tubing with two packers to isolate  
18 the two zones from each other and from the surface. It  
19 shows the perforations -- it shows basically perforations  
20 from both the Indian Basin Upper Pennsylvanian Gas Pool,  
21 which is underlined in red; it shows the flow pattern. It  
22 would come up through the short string to the surface.

23 It shows the Indian Basin Morrow Gas  
24 Pool, underlined in blue. It shows the perforations with a  
25 blue arrow, showing it would come up through the long

1 string. And it also shows the packers that would isolate  
2 the two zones and also isolate it from the -- from the sur-  
3 face.

4 These two flow streams will be brought  
5 to the surface . They will be produced into separate faci-  
6 lities to -- so that we can keep straight the -- which  
7 volumes come from which pools and then would be metered or  
8 put in separate facilities until such time as they're sold.

9 Q Mr. Morgan, would -- is this method of  
10 completing the well in the best interest of conservation of  
11 oil and gas?

12 A Yes, sir, it is. We're looking at the  
13 possibility of both an Upper Pennsylvanian Gas Pool well  
14 here and also an Indian Basin Morrow Gas Pool. Rather than  
15 drill two separate wells for this, we have adopted a method  
16 of the dual completion. If this dual completion is  
17 approved by the Commission, by the Conservation Division,  
18 we will save around \$500,000 and yet be able to recover the  
19 same amount of oil and gas from the two zones.

20 Q Mr. Morgan, do you have anything further  
21 concerning this exhibit?

22 A No, sir, the exhibit pretty well speaks  
23 for itself unless there are any questions about it.

24 MR. PADILLA: Mr. Examiner, we  
25 pass the witness at this point.

1 MR. LYON: Do you have any  
2 other witnesses?

3 MR. PADILLA: I do, a geolo-  
4 gist.

5 MR. LYON: Yes, and these  
6 other exhibits in your --

7 MR. PADILLA: He will testify  
8 as to those. Those are the main exhibits.

9

10 CROSS EXAMINATION

11 BY MR. LYON:

12 Q Mr. Morgan, I notice on your Exhibit  
13 Four that you have a note that no allowance is made for  
14 blast joints. Is it your plan to use blast joints?

15 A Yes, sir. This -- this was an AFE that  
16 was -- was provided to us by Otis. Of course they want the  
17 job of providing materials. What they mean here is there  
18 was no monetary allowance made for it. Yes, sir, we will  
19 include blast joints opposite the perforations, especially  
20 opposite the Upper Pennsylvanian Pool where -- where we  
21 have strings of tubing going up through, we will, of course  
22 not need a blast joint at the bottom because the end of the  
23 tubing string will be above the perforations for the Morrow  
24 Gas Pool.

25 MR. LYON: I have no further

1 questions.

2 MR. PADILLA: At this time  
3 we'll call Mr. Jim Brannigan.

4  
5 J. P. BRANNIGAN,  
6 being called as a witness and being duly sworn upon his  
7 oath, testified as follows, to-wit:

8  
9 DIRECT EXAMINATION

10 BY MR. PADILLA:

11 Q State your full name, please, and where  
12 you reside.

13 A James Patrick Brannigan, Roswell, New  
14 Mexico.

15 MR. LYON: How do you spell  
16 that?

17 A B-R-A-N-N-I-G-A-N.

18 MR. LYON: Always a surprise.

19 Q Mr. Brannigan, what do you do for a  
20 living?

21 A I'm a petroleum geologist.

22 Q And are you a consultant for Bill Fenn,  
23 Inc.?

24 A I'm consultant for Bill Fenn, Inc., and  
25 U. S. Resources.

1           Q           Mr. Brannigan, have you previously tes-  
2 testified before the Oil Conservation Division as a petroleum  
3 geologist?

4           A           Yes, I have.

5           Q           And have your credentials been accepted  
6 as a matter of record?

7           A           Yes, they have.

8           Q           Did you make a study of the Indian Basin  
9 Pool insofar as the Cisco and the Morrow formations are  
10 concerned and the drill -- this prospect under application  
11 today?

12          A           Yes, I did. This is my prospect that  
13 we're getting ready to drill.

14                           MR. PADILLA: Mr. Examiner, we  
15 tender Mr. Brannigan as an expert petroleum geologist.

16                           MR. LYON: Mr. Brannigan is so  
17 qualified.

18          Q           Mr. Brannigan, let's turn to what we  
19 have marked as Exhibit Number Five and have you identify  
20 that for the Examiner, please.

21          A           Exhibit Number Five is the Indian Basin  
22 Upper Penn unorthodox locations. Out of the 61 wells that  
23 either are or have produced in the Indian Basin, 25, or 41  
24 percent, were drilled on unorthodox locations and 13 of  
25 those 25 were drilled on non-topographic or geological

1 reasons, or 21 percent were drilled for geological reasons.  
2 They were unorthodox.

3 Q What's the general basis for saying that  
4 they were drilled for geologic reasons?

5 A Well, the generally to get the best  
6 reservoir in the Cisco we try to be as far up dip and get  
7 into the porosities in the Cisco, the (unclear) in the pro-  
8 ration unit.

9 Q Is this an indication that the reservoir  
10 may not be homogeneous?

11 A That is correct.

12 Q It's homogeneous or non-homogeneous?

13 A It's not homogeneous, no. There's  
14 different -- there's different porosities within the Cisco.

15 Q And how about the Morrow formation?

16 A The Morrow formation is three or four  
17 different channel sands that run through the Morrow in this  
18 particular area, so they cover -- they tend to come with  
19 regional dips northwest to southeast; they're running  
20 southeast dip at the time.

21 Q Mr. Brannigan, would you briefly go  
22 through the offset operators. Well, first of all, let me  
23 ask, are you familiar with who the offset operators are to  
24 the proposed proration unit?

25 A Yes, I am. All the -- every -- every

1 section surrounding Section 14, except for Section 13, is  
2 operated by -- by Marathon. Section 13 is operated by Bill  
3 Fenn, owned by Bill Fenn, so except for -- except for 13,  
4 Marathon is the operator of record.

5 Q Okay. Do you have anything further con-  
6 cerning this exhibit, Mr. Brannigan?

7 A No, I don't.

8 Q Let's go on now to the next exhibit,  
9 which would be Exhibit Number Six, and have you tell us  
10 what that is.

11 A Exhibit Number Six is a structure map  
12 contoured on the top of the Cisco Reef. We have Cisco and  
13 Morrow production along with Cisco and Morrow combination  
14 wells, dual completions, in the general area of the Roaring  
15 Springs.

16 Q Mr. Brannigan, I notice the structure  
17 line that you have running through Section 14 transects the  
18 dry hole that you have that was previously drilled in the  
19 -- in Section 14. Can you tell us how your well, your pro-  
20 posed well location and that structure line relate to each  
21 other?

22 A Well, we feel with the drilling of the  
23 No. 1 Roaring Springs that we should be approximately 50  
24 feet up dip from the well in the southwest quarter of Sec-  
25 tion 14 that has produced 5.3 BCF out of the Cisco and 5.7

1 out of the Morrow.

2 So we should be structurally up dip from  
3 that well.

4 Q What does dip have to do with regard to  
5 where you place your location?

6 A Well, in this case, especially in the  
7 Cisco formation, we feel that we need to be as up dip as we  
8 can to -- in our location, because we feel the majority of  
9 the -- of the production is going to be flowing up dip into  
10 our bore hole.

11 Q Are -- do you feel you're going to drain  
12 -- what's the drainage pattern going to be for the well?

13 A The drainage pattern will be to the west  
14 out of Section -- out of -- from Section 14 it will be to  
15 the west. We feel the majority is -- we feel it's in the  
16 best interest of the State of New Mexico to drill a 990  
17 location because it will be draining -- we'll be completely  
18 draining Section 14 with our -- with our location, where if  
19 we were a standard location we may not be able to drain  
20 some of our acreage on the west, west side of Section 14.

21 Q Do you feel that there exists reserves  
22 in Section 14 even though there's been another well drilled  
23 and produced in that section?

24 A Yes, I do; a couple reasons. The Indian  
25 Basin Upper Penn Field has made to date approximately 1.2-

1 trillion cubic feet of gas with a per well average of 18.3  
2 to 18.4 BCF per well.

3 The well in Section 14 was -- only pro-  
4 duced 5.3 BCF out of that well, and we feel that just if  
5 you took a field average, you'd still have significant re-  
6 serves left in Section 14.

7 Another reason I think there's some --  
8 there's some gas left in Section 14 both in the Morrow and  
9 Cisco, the is the last -- the last bottom hole pressure  
10 taken in the well in Section 14, a dry hole in Unit K, had  
11 a bottom hole pressure of 1,903 pounds. So there was sig-  
12 nificant pressure in that well when they plugged it, and  
13 we're finding out now within the last year or two that more  
14 and more operators in the Indian Basin are putting compres-  
15 sors on their wellheads and getting -- getting commercial  
16 gas reserves again.

17 Q Let me ask you now, you said something  
18 relative to drainage, the drainage pattern was to the west.

19 A I feel that because -- because it will  
20 be going up dip towards the west.

21 Q Does that mean that you'll be draining  
22 the eastern part of the section better because of your --

23 A Yes.

24 Q -- well location?

25 A Yes, that's right. That's correct. The

1 east half of Section 20.

2 Q In other words, what you're saying is  
3 that the flow is going to be from east to west.

4 A Correct.

5 Q Do you have anything further concerning  
6 this structure map, Mr. Brannigan?

7 A No, I sure don't.

8 Q Let's go on to Exhibit Number Seven and  
9 tell us what that is.

10 A Exhibit Number Seven is a Morrow poro-  
11 sity isopach map contoured on a 10 foot interval (unclear)  
12 giving an 8 percent when possible cross plot porosity cut-  
13 off; if not, whatever log we have available.

14 What this -- what this map shows, this  
15 is the 36 feet in the well in Section 14, is the 36 feet of  
16 pay that they had in that well that produced a 5.7 BCF out  
17 of the Morrow, and as you can see, the majority of the --  
18 of the porosity extends in Section -- in Section 14; very  
19 little in Section 15.

20 Again, we're drilling (unclear). We  
21 anticipate getting around 22 to 25 feet of porosity and  
22 being up dip in the Morrow.

23 Q Anything further concerning the isopach?

24 A No.

25 Q Now, this is an isopach for the Morrow

1 formation, correct?

2 A Yes, it is.

3 Q Do you have an isopach for the Cisco?

4 A No, I don't. I don't have an isopach for  
5 the Cisco because a lot of the operators out there, what  
6 they did is they just drill into the very top of the Cisco  
7 to get the first porosity and go ahead and produce out of  
8 it. So most of the wells, not most of the wells, but a  
9 large enough percentage of the wells did not penetrate the  
10 complete Cisco Reef, so I'd be -- I didn't have the com-  
11 plete well information to do what I would consider a good  
12 -- a good map with using the well control.

13 Q Okay. Let's go on to Exhibit Number  
14 Eight and tell us what that is.

15 A Exhibit Number Eight is a stratigraphic  
16 cross section going through showing our proposed location  
17 in Section 14 with some offset wells. The datum is the top  
18 of the Cisco Reef.

19 Q Does this cross section show the dip  
20 that you were talking about?

21 A No, it doesn't. It's a stratigraphic  
22 cross section instead of a structural cross section.

23 Q Okay. Would you start explaining what  
24 this cross section contains and proceed from left to right,  
25 if you would, please.

1           A           Okay.  Actually,  it's  a  general  look,  
2  looking  at  all  the  wells.  What  it  is,  is  the  datum  is  hung  
3  on  the  top  of  the  Cisco  formation  or  the  top  of  the  Cisco  
4  Reef.  If  you'll  notice  on  a  few  of  the  logs,  especially  
5  the  well  in  Section  14,  there  was  approximately  5,  4  or  5  
6  drill  stem  tests  taken  and  that's  just  kind  of  indicative  
7  of  the  Cisco  in  that  area,  that  there  isn't  --  it  isn't  a  
8  homogeneous  reservoir.  You  can  have  a  gas/water,  gas/water  
9  reservoir  out  there  so  it's  important  to  go  ahead  and  drill  
10 stem  test  the  individual  zones.

11                        But  what  it  is  showing  you  is  it's  
12 showing  you  the  continuity,  some  continuity  as  far  as  the  
13 reef  itself,  the  datum  on  top  of  the  reef.

14                        It's  also  showing  that  the  well  in  Sec-  
15 tion  --  Section  11  is  a  classic  well  of  why  I  don't  have  a  
16 Cisco  isopach  map.

17           Q           You're  talking  about,  what,  the  third  
18 well  on  the  cross  section?

19           A           Yes,  the  second  from  the  right,  and  that  
20 well  there  does  not  have  --  did  not  penetrate  all  of  the  --  
21 all  of  the  Cisco  Reef.

22           Q           What  does  this  cross  section  show  in  re-  
23 lation  to  your  proposed  well?

24           A           It  shows  the  proposed  location  should  be  
25 between  two  producing  wells;  actually  should  be  almost  a

1 5-spot or 4-1/2-spot, a producing mode. We should be right  
2 -- we should encounter a real thick Cisco Reef interval and  
3 also be to the northwest of the -- of the well in the south  
4 half of Section 14, which would put us on regional dip with  
5 the Morrow formation as far as deposition.

6 Q Mr. Brannigan, in your opinion is this  
7 the best place to drill this well?

8 A I think it's the best place to drill the  
9 well to adequately drain all the gas reserves out of Sec-  
10 tion 14.

11 Q Anything further on the cross section,  
12 Mr. Brannigan?

13 A No, sir.

14 Q Let's go on to Exhibit Number Nine and  
15 have you tell the Examiner what that is.

16 A Exhibit Number Nine is a production map  
17 in the Indian Basin area around the Roaring Springs loca-  
18 tion, showing Cisco production and also Morrow production,  
19 and where available, water and oil production, also.

20 Q Does this map tell us more about the  
21 production figures that you've talked about earlier in  
22 terms of the averages and that sort of thing?

23 A Yes, it does, but it's not -- you  
24 wouldn't -- this is just part of the field. It's not --  
25 it's not the entire field but, yes, it does. You can see

1 that some of the wells directly to the west of us have  
2 produced 23, 26, 22 BCF and they're fantastic Cisco wells.

3 Q Do you anticipate to have that kind of  
4 production from your well?

5 A We're hoping that we can drain what's  
6 left in Section 14 and get upwards to maybe 13 BCF out of  
7 the Cisco and another 6 or 7-billion out of the Morrow.  
8 It's unusual for -- in southeast New Mexico the majority of  
9 the Morrow fields are on 320-acre spacing and this, the  
10 Morrow -- Indian Basin Morrow Field is on 640, so we feel  
11 that there is -- in the Morrow formation there is signifi-  
12 cant amounts of gas left in the reservoir.

13 Q You're not proposing to change the pool  
14 rules at this time, are you?

15 A Absolutely not.

16 Q What else do you have on this exhibit?

17 A That's -- that's basically it.

18 Q Okay. Let's go on to Exhibits Ten And  
19 Eleven and tell the Examiner what those are.

20 A Okay. Exhibit Ten and Eleven, Exhibit  
21 Ten is the Morrow production out of the Ralph Lowe Well.  
22 Ralph Lowe drilled this well in Section 14 of 21, 23 back  
23 in 1963 and it -- the well was shut in and never produced  
24 until 1966 when Marathon became the operator of the well  
25 and sometime within that period Marathon -- that 3-year

1 period, Marathon took over operations from Ralph Lowe. But  
2 what this shows is that the decline -- the history of both  
3 the Morrow and Cisco formation decline curves and what it  
4 does show is that with compressors, with a compressor put  
5 at the surface, this well could probably still be econo-  
6 mical; that there is gas reserves left in Section 14.

7 Q What does that -- okay. Now, in terms  
8 of what relevance this has to the -- to the proposed loca-  
9 tion, can you tell the Examiner what that is?

10 A Well, I -- that there is significant  
11 amounts of gas left in Section 14 and probably the south  
12 half of Section 14 hasn't been drained and the north half  
13 of 14 is probably -- we're probably looking at somewhere  
14 close to virgin bottom hole pressures.

15 Q Now in terms of the unorthodox location,  
16 and potential for existing reserves, are you -- is it your  
17 testimony that this -- that your proposed location is going  
18 to recover or more efficiently drain Section 14?

19 A Yes, absolutely. I feel that our loca-  
20 tion 1650 from the north line and 990 from the west line is  
21 probably the best location to drain the remaining gas and  
22 condensate in Section 14.

23 Q And this would be subject to the 40 per-  
24 cent penalty?

25 A Yes. Yes.

1           Q           Mr. Brannigan, do you -- is it your  
2 opinion that approval of this application would be in the  
3 best interest of conservation of oil and gas?

4           A           Yes, I do.

5           Q           How about with regard to impairment of  
6 correlative rights, are correlative rights protected  
7 through the penalty in this case?

8           A           Yes, they are.

9                               MR. PADILLA: Mr. Examiner, we  
10 offer Exhibits One through Eleven and tender this witness  
11 for cross examination.

12                              MR. LYON: Is there objection?  
13                              Exhibits One through Eleven  
14 will be admitted.

15  
16   CROSS EXAMINATION

17 BY MR. LYON:

18           Q           Mr. Brannigan, what is the status of the  
19 Lowe Well, the existing well on the proration unit?

20           A           It was inactive and is now plugged and  
21 abandoned.

22           Q           Is it now?

23           A           Yes, it is. I believe it was plugged in  
24 1988. It was inactive up until about 1985, '85 is the last  
25 date of production, but 1988 is when it was plugged, to the

1 best of my knowledge.

2 Q This may be a little random. I'll just  
3 take the exhibits as I can -- yeah. You've identified at  
4 the top of Exhibit -- your cross -- Eight --

5 A Yes, sir.

6 Q -- what the top line, the top of the  
7 Cisco. Can you identify for me the other correlations that  
8 you've made?

9 A Okay. The other correlations that I've  
10 made, the bottom, the bottom line is the top of the Morrow  
11 formation. The other lines that are in there really are  
12 just -- are just correlative intervals through the field  
13 that I just went ahead and just -- just marked up. Now  
14 they may be -- they may be formation tops but for the pur-  
15 poses of this cross section it was just to show strati-  
16 graphic correlation through the whole area.

17 Q Correlation markers.

18 A That's right.

19 Q Okay, so they don't have any particular  
20 significance.

21 A No, except for possibly the bottom one,  
22 which is the top of the Morrow formation.

23 What I also find out here is that -- oh,  
24 sorry.

25 Q Okay. That Lowe Well, I presume, was --

1 went to water?

2           A           We can't show any production figures  
3 from the State of New Mexico that the well actually did  
4 water out. I think what happened is it just got down, the  
5 pressure got so low that they went ahead and just -- they  
6 just shut the well in and finally plugged it, and we're --  
7 what we're finding -- what we're finding lately, within the  
8 last year or two, Marathon in the meantime just lately have  
9 just completed a well in the southwest quarter of Section  
10 22. BHP has drilled a well in the southwest southwest  
11 quarter of 36 of the same township and range, and a com-  
12 pany, Musselman, Owen & King, has just drilled an unortho-  
13 dox location also in Section 1 of 22, 23, so we're seeing a  
14 lot of infield drilling in the Indian Basin. Nobody's  
15 asking for the proration unit to be changed, but we're --  
16 there is significant amounts of gas left and it doesn't ap-  
17 pear that -- that one bore hole is actually draining 640  
18 acres.

19           Q           And the -- the spots that you've shown  
20 on Exhibit Five are unorthodox locations.

21           A           Yes, they are. Those are all the wells  
22 that were drilled inside of the 1650 location, within the  
23 -- within the Indian Basin Upper Penn Pool.

24                           MR. LYON: I believe that's  
25 all the questions I have.

1 Mr. Padilla?

2 MR. PADILLA: We have nothing  
3 further, Mr. Examiner, and we do request in the interest of  
4 -- if it's possible, to have an expeditious order in this  
5 case because of rig commitments and the commitments that  
6 our clients have with regard to drilling this well and we,  
7 as I indicated before, we went ahead and agreed to the 40  
8 percent penalty based on the recent policy of the Oil Con-  
9 servation Division of basing penalties on distance to lease  
10 line.

11 So in order to prevent any  
12 further delays in drilling the well.

13 MR. LYON: I understand, and  
14 we'll try to get you an order out promptly.

15 MR. PADILLA: In fact, Mr.  
16 Examiner, we would like to have some kind of verbal notice  
17 or something as soon as possible so that we can proceed  
18 with the commencement of the drilling on this well.

19 MR. LYON: Well, I can't pre-  
20 judge the Director's action on it.

21 MR. PADILLA: I understand  
22 that.

23 MR. LYON: But we'll let you  
24 know as soon as possible.

25 Mr. Brannigan may be excused

1 and we'll take this case under advisement.

2

3

(Hearing concluded.)

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C E R T I F I C A T E

I, SALLY W. BOYD, C. S. R. DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) was reported by me; that the said transcript is a full, true and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9618, heard by me on March 1 1989.  
W. Boyd, Examiner  
Oil Conservation Division