

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 26 April 1989

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Hixon Development Company for an unorthodox oil well location and simultaneous dedication, Rio Arriba County, New Mexico. CASE 9661

10 BEFORE: David R. Catanach, Examiner

11 TRANSCRIPT OF HEARING

12 A P P E A R A N C E S

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

18 For Hixon Development Company: W. Thomas Kellahin
19 Attorney at Law
20 KELLAHIN, KELLAHIN & AUBREY
P. O. Box 2265
Santa Fe, New Mexico 87504

21 For Mobil Exploration and Production USA: William F. Carr
22 Attorney at Law
23 CAMPBELL & BLACK, P. A.
P. O. Box 2208
24 Santa Fe, New Mexico 87501
25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

I N D E X

STATEMENT BY MR. KELLAHIN	4
JOHN CORBETT	
Direct Examination by Mr. Kellahin	6
Cross Examination by Mr. Carr	45
MARK S. CRAIG	
Direct Examination by Mr. Carr	62
Cross Examination by Mr. Kellahin	69
ERNIE BUSH	
Direct Examination by Mr. Kellahin	83
Cross Examination by Mr. Carr	91
Redirect Examination by Mr. Kellahin	97
MARK S. CRAIG RECALLED	
Cross Examination by Mr. Stovall	104
Redirect Examination by Mr. Carr	112
STATEMENT BY MR. CARR	112
STATEMENT BY MR. KELLAHIN	116

E X H I B I T S

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25

Hixon Development Exhibit One, Booklet	5
Hixon Development Exhibit Two, Plat	7
Mobil Exhibit One, Proposal	67
Mobil Exhibit Two, Map	64

1 MR. CATANACH: At this time
2 we will call Case 9661.

3 MR. STOVALL: The applica-
4 tion of Hixon Development Company for an unorthodox oil
5 well location and simultaneous dedication, Rio Arriba
6 County, New Mexico.

7 MR. CATANACH: Appearances in
8 this case?

9 MR. KELLAHIN: Mr. Examiner,
10 I'm Tom Kellahin of the Santa Fe law firm of Kellahin,
11 Kellahin & Aubrey, appearing on behalf of the applicant.

12 MR. CARR: May it please the
13 Examiner, my name is William F. Carr, with the law firm
14 Campbell & Black, P. A., of Santa Fe. We represent Mobil
15 Exploration and Producing U.S., Inc., in opposition to the
16 well location.

17 MR. CATANACH: Any other ap-
18 pearances?

19 Will all the witnesses please
20 stand and be sworn in at this time?

21

22

(Witnesses sworn.)

23

24

25

MR. KELLAHIN: Mr. Examiner,
I've given you a package of exhibits that Mr. Corbett has

1 prepared on behalf of his company. He has marked this gray
2 covered booklet as Exhibit Number One and within the book
3 there is an index at the front showing the various indivi-
4 dual displays or documents and those are numbered by page
5 number.

6 I'd like to refer to that as
7 Exhibit One and then we'll refer to each individual page by
8 its page number.

9 Second of all, there is an
10 Exhibit Number Two, which is a general plat of the area to
11 help refresh your memory about the relationship of the pool
12 rules and the well locations in this particular portion of
13 San Juan Basin.

14 Those will be our principal
15 exhibits. Our witness is Mr. John Corbett of Hixon Deve-
16 lopment Company.

17 I'd call Mr. Corbett at this
18 time and qualify him as an expert and then ask him to tes-
19 tify about his company's position in this matter.

20 If you're ready to proceed,
21 Mr. Examiner.

22

23

JOHN CORBETT,

24

25

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

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Will you please state your name and occupation?

A My name is John Corbett. I'm a petroleum geologist and Vice President of Exploration with Hixon Development Company of Farmington, New Mexico.

Q Mr. Corbett, when and where did you obtain your degree in geology?

A I obtained my degree in geology in 1982 from the University of Wyoming. I've worked the (unclear) years for Hixon Development.

Q And how long have you been employed as a geologist for Hixon?

A Six years with Hixon Development.

Q Describe generally for the Examiner, Mr. Corbett, what is it that you do for your company?

A I'm in charge of preparing a drilling program, evaluating our leases, evaluating leases for purchase and for drilling, and seeing to it that all of our projects are economic.

Q With regards to your responsibilities and duties are you involved with your company in the preparation of well locations for drilling of wells in the

1 west Lindrith Gallup-Dakota Pool in northeastern New Mexico
2 -- northwestern New Mexico?

3 A Yes, I am.

4 Q Pursuant to that employment were you
5 involved in the permitting process for the drilling of the
6 Missy No. 3 Well in Section 35 described on the docket
7 today as Case 9661?

8 A Yes, I was.

9 MR. KELLAHIN: At this time,
10 Mr. Examiner, we tender Mr. Corbett as an expert petroleum
11 geologist.

12 MR. CATANACH: He is so qual-
13 ified.

14 Q Mr. Corbett, before we begin going
15 through the major portion of your testimony and Exhibit
16 One, let me ask you to take Exhibit Number Two, which is
17 the large plat showing a portion of the Lindrith Quad-
18 rangle. Let's take a moment and orient the examiner as to
19 what are some of the specifics about the case.

20 First of all, identify for us Exhibit
21 Number Two.

22 A There are two pools outlined on Exhibit
23 Number Two. The pink marks the border of the Gavilan
24 Mancos Pool in Rio Arriba County. The green marks the
25 border of the West Lindrith Gallup-Dakota Pool.

1 You'll also see noted on there in red
2 the location of the well that's in question and its pro-
3 ration unit.

4 Q When we look at the -- when we look at
5 the exhibit, Mr. Corbett, I -- I helped you prepare this
6 yesterday and I think I've told you some of the wrong ac-
7 reage, but let me correct that for you.

8 Section 6, see that little window down
9 there?

10 A Yeah.

11 Q You leave it to a lawyer to do it and
12 he's got trouble. My understanding is that is not a por-
13 tion of Gavilan but the boundary that you've identified for
14 West Lindrith is in fact correct.

15 MR. KELLAHIN: So if you'll
16 take a moment and simply note, Mr. Examiner, that Section 6
17 is the outer boundary of Gavilan rather than the inner
18 boundary on that corner.

19 Q All right, subject to that correction,
20 Mr. Corbett, you have shown us the location, particularly,
21 that that buffer are between Gavilan and West Lindrith,
22 between the two townships on the east side of West Lindrith
23 and then on the west side of Gavilan.

24 A That's correct.

25 Q Okay. Now, on the southern portion of

1 the display you've identified in what appears to be Sec-
2 tion 35, a quarter of that section outlined by a red
3 square. What is that, sir?

4 A That's the proration unit that's shared
5 by the Lessees Wells Nos. 2 and No. 3.

6 Q Within the West Lindrith Pool, describe
7 generally what is your understanding of the spacing re-
8 quirements for wells drilled to the Dakota formation in
9 that pool within the pool boundary itself?

10 A Within the West Lindrith it's a commun-
11 itized commingled pool. The spacing there is 160 acres per
12 well and you're allowed one infill well.

13 Q When we look at this portion of the
14 southeast corner of the West Lindrith Pool, what is the
15 predominant formation in which those wells produce?

16 A In this portion our records indicate
17 that this is predominantly the Dakota formation.

18 Q The pool rules that establish the number
19 of wells that an operator can drill in the West Lindrith
20 Pool for the Gallup and Dakota within 160-acre spacing
21 pattern provide for what in your understanding? How many
22 wells can you have in 160-acre spacing.

23 A Two wells. You're allowed one well and
24 then one infill well within each proration unit.

25 Q Okay. Let's turn now to Exhibit Number

1 One. Let's turn to that page that is identified as the
2 West Lindrith Gallup-Dakota Pool. It shows the location of
3 wells in Section 35. I believe it will be page 5 in the
4 exhibit book. It's the display that looks like this, Mr.
5 Examiner.

6 When we look at page 5 of Exhibit One,
7 what are we seeing at this point, Mr. Corbett?

8 A This is Section 35 of Township 25 North,
9 Range 3 West in Rio Arriba County. It's a portion of the
10 West Lindrith Gallup-Dakota Pool and this particular plat
11 shows the wells producing from the West Lindrith Gallup--
12 Gallup-Dakota Pool and drilled to the West Lindrith Gallup-
13 Dakota Pool within that section, and with each well name is
14 the exact footages for the surface location of each well.

15 Q Within Section 35 what was the first of
16 the West Lindrith wells to be drilled?

17 A It was the Missy No. 1-Y.

18 Q And that's shown there in the southwest
19 quarter of the Section?

20 A That's in the northwest quarter of Sec-
21 tion --

22 Q Oh, I'm sorry, the 1-Y is in the north-
23 west. Approximately when was that well completed?

24 A It was completed in February and March
25 of 1987.

1 Q All right, in terms of sequence of de-
2 velopment, then, what is the next well drilled?

3 A The next well drilled after that would
4 have been the Tesia Kuchara No. 1 in the northwest quarter
5 -- northeast quarter.

6 Q Approximately when was that well com-
7 pleted, Mr. Corbett?

8 A That was completed in approximately
9 November of '87.

10 Q All right, and then what's the third
11 well in the sequence of development?

12 A The next well that was drilled in this
13 section was the Missy Well No. 2.

14 Q All right, sir, and approximately when
15 that was well completed?

16 A That was approximately November of 1988.

17 Q All right, in terms of the relationship
18 between the Lindrith 75 Well and the Missy 3 Well, which of
19 those two wells was spudded first?

20 A The Lindrith No. 75 was spudded before
21 the Missy No. 3.

22 Q So then the final well spudded is the
23 Missy No. 3?

24 A That's correct.

25 Q All right. Currently is there any other

1 current West Lindrith development going on adjacent to
2 Section 35?

3 A Yes, there are. We're currently being
4 offset to the west in Section 34 by Schalk Development.

5 Q Approximately how far off of your
6 western boundary of Section 35 has Schalk spudded his West
7 Lindrith Gallup-Dakota Well?

8 A 330 feet.

9 Q And off of what quarter section is that
10 going to be?

11 A His well is in the southeast of 34, so
12 it offsets the southwest of 35.

13 Q Okay. Let's write down some of the
14 footages now. Do you know what the approximate well loca-
15 tion is for the Missy No. 2, particularly in reference to
16 the eastern boundary of its 160-acre spacing unit?

17 A That would be 1320 feet, let me check
18 from the east line. I'm sorry, 990 feet from the east
19 line.

20 Q When we look at the Lindrith B Unit 75
21 Well, how far is that well from the western boundary of its
22 160-acre spacing unit?

23 A That well is 540 feet the western
24 boundary of its proration unit. line.

25 Q And what is the footage location, then,

1 on the Missy No. 3 from its south and east spacing unit
2 lines?

3 A 330 feet from both lines.

4 Q Now, to the south of Section 35, when we
5 move into either Section 1 or Section 2 of the southern
6 township, who is the offset operator in that direction?

7 A Mobil is the offset operator in both
8 Sections 1 and Section 2.

9 Q Are there any currently drilling, pro-
10 ducing, completed West Lindrith Gallup-Dakota wells in
11 either Sections 1 or 2?

12 A Not to my knowledge.

13 Q When we look at the southeast quarter of
14 Section 35, that well is operated by Mobil Oil Corporation.
15 Am I correct in understanding your display?

16 A That's correct.

17 Q When we look at the West Lindrith
18 Gallup-Dakota Pool rules as you know them today, what is
19 the well location requirements for wells to be drilled in
20 that pool?

21 A Within the pool, the setback require-
22 ments are 330 feet from the outer boundary of a section and
23 330 feet from the quarter quarter line of the section.

24 Adjacent to the pool boundaries, as we
25 know them today, the setback is 790 feet.

1 Q So within the spacing pattern for the
2 well, the southwest quarter of 35, is the Missy No. 3 Well
3 standard location as to its relationship to the Mobil
4 acreage to the east?

5 A In its relationship to the Mobil acreage
6 to the east it's a standard footage.

7 Q As you know them today, are there any
8 special restrictions on having more than a single well in
9 160-acre spacing unit in the West Lindrith Gallup-Dakota
10 Pool?

11 A The sole restriction that I know of is
12 that the wells are not to be within 660 feet of another
13 well in that same proration unit or another well in the
14 pool.

15 Q What is the top unit allowable on 160
16 acres for the West Lindrith Gallup-Dakota Pool?

17 A 382 barrels per day with a limiting GOR
18 of 2000.

19 Q At the time that you were permitting and
20 spudding and drilling the Missy No. 3 Well, did you know
21 that that well should have been located 790 feet from the
22 southern boundary of Section 35?

23 A At the time we spudded the Missy Well
24 No. 3 we didn't know that the well should be 790 feet from
25 the southern boundary.

1 Q Let's go through with you, Mr. Corbett,
2 the chronology of events about the specific drilling of the
3 Missy Well and to aid you in your discussion, if you'll
4 turn to th chronology you've prepared, the first page after
5 the table of contents in Exhibit No. 1?

6 A All right, the Missy No. 2 Well has been
7 drilled and completed. Mobil has spudded their No. 75
8 Well. At the time you located and spudded the Missy No. 3
9 Well, did you know the results of Mobil's efforts in
10 drilling their 75 Well?

11 A No, we did not.

12 Q You had no knowledge about whether it
13 was going to be successful or not?

14 A No.

15 Q Under the pool rules that you now under-
16 stand are correct, you could have located the Missy No. 3
17 closer to the Lindrith 75 Well and still have been at a
18 standard location, couldn't you?

19 A We could have, yeah, it's closer to the
20 well, no closer to the line.

21 Q In spudding the well at that time based
22 upon that knowledge, was there a material difference to you
23 as a geologist between picking a location 330 out of the
24 southeast corner or moving it back up to 790 from the south
25 line and 330 from the east line of the spacing unit?

1 A No, sir, we had no offset well control
2 to our south when we chose that location. Had we known that
3 it was a nonstandard location at the time we spudded, we
4 surely would have held off and moved back to a standard
5 location and drilled there.

6 Q Was it your intention at the time you
7 spudded the well to gain some advantage over Mobil in any
8 way?

9 A There was no perceived advantage to be
10 gained since there was no well control. We may have very
11 well been exceeding the limit of that isolated Dakota Pool.

12 Q What was the reason to spud a second
13 well on the spacing unit?

14 A Based on the reservoir, what we've seen
15 in (not clearly understood) and in our production, there's
16 a large section in Exhibit One that shows that there's ade-
17 quate reservoir to put two wells within 160-acre proration
18 unit.

19 Q What are the rules that you know now
20 with regards to producing the spacing unit allowable among
21 two wells on that spacing unit?

22 A As we know the rules there -- your top
23 allowable is 382 barrels per day to be produced by one or
24 both of the two wells in there. There's no set formula for
25 breaking out that allowable.

1 Q You can produce that allowable in any
2 combination among or between the two wells?

3 A Yes, sir.

4 Q Did you cause the application for per-
5 mit to drill the No. 3 Missy Well to be filed with the
6 Aztec office of the Oil Conservation Division?

7 A Yes, I did.

8 Q Approximately when did you cause that to
9 happen, Mr. Corbett?

10 A Our application was filed and approved
11 on March 17th, 1989.

12 Q Okay. And what was that APD approved by
13 the Aztec office of the OCD based upon an application for a
14 well 330 out of the south and east corner of the section?

15 A Yes, it was.

16 Q Did that APD contain any restriction
17 with regards to the fact that you were at an unorthodox
18 well location?

19 A No, it didn't.

20 Q At the time you filed that application
21 did you recognize that you were at, in fact, an unorthodox
22 location?

23 A No, we didn't.

24 Q What was your understanding of the rules
25 at that time?

1 A My understanding of the rules was ob-
2 tained in a phone call three days prior to filing that
3 application. I called the Aztec office of the OCD to veri-
4 fy the proration, the allowable for a proration unit, the
5 numbering of the well and the legal locations for a well.
6 At that time I was told that our allowable was to be
7 allowed in any combination from two wells. Our numbering
8 should be consecutive, so that the second well in the Missy
9 No. 2 proration unit should be the Missy No. 3, and that
10 our setbacks of 330 from the outside boundary of the sec-
11 tion were legal.

12 Q Why had you made the telephone call to
13 the Aztec office of the OCD on March 14th?

14 A Actually, most of our concern was about
15 the numbering of the well but as long as we were on the
16 phone I wanted to verify the footages in order to stay up
17 from them.

18 Q Were you aware at that time that the
19 outer boundary of the West Lindrith Gallup-Dakota Pool re-
20 quired that as to the outer boundary the well needed to be
21 spaced no closer than 790 to that boundary?

22 A I was under the impression that the 790
23 setback from the outer boundary of the West Lindrith Pool
24 was strictly a buffer zone to protect the Gavilan Mancos
25 Pool.

1 Q Having received the approved APD, then,
2 on March 17th of '89, what then did you do?

3 A Well, we began building our location and
4 took about a week doing that and then on March 30th we spud
5 the well.

6 Q After you spudded the well how were you
7 first advised that your location for this well was in fact
8 at an unorthodox well location?

9 A About 4:30 that day Frank Chavez called
10 me at our office and advised me that a question had been
11 raised that our well may be in an unorthodox location.

12 Q When you first learned, is that your
13 first knowledge, then, that the well is at an unorthodox
14 location as to one of its boundaries?

15 A Yes, sir.

16 Q And that occurred on -- late in the af-
17 ternoon on March 30th?

18 A Yes. We spud around noon and we got the
19 call about 4:30.

20 Q What day of the week is this, Mr. Cor-
21 bett?

22 A That would have been a Thursday.

23 Q Who is your immediate supervisor in your
24 company with regards to reporting such matters as this?

25 A Dr. Kuchara, Al Kuchara is our company

1 president and my immediate supervisor.

2 Q After discovering that your well was at
3 an unorthodox location and that you had commenced drilling,
4 what did you -- what did you do?

5 A I called my supervisor, he'd gone home
6 for the evening, and informed him that there was some ques-
7 tion as to whether or not our well was in a legal location.
8 We elected at that time, because of we weren't certain
9 whether it was legal or not, to continue our drilling.

10 Q Well, let me go back, then. When you
11 got the phone call from the Aztec office of the OCD, what
12 were you advised?

13 A I was advised that Mobil had called and
14 raised a question about our location and at the time Mr.
15 Chavez called me he said that he wanted to verify with Mr.
16 Bush the order and the fact that it was a nonstandard loca-
17 tion and Mr. Bush wasn't in the office, and the next
18 morning we got together to discuss it.

19 Q Were you advised with the phone call
20 from the OCD office that there was just no question at all
21 that you were in fact at an unorthodox location as of that
22 moment?

23 A No, we were advised that there was a
24 question about our location.

25 Q Were you told to stop drilling at that

1 point?

2 A No, we weren't.

3 Q Why did you continue with the drilling
4 of the well with this uncertainty about the location?

5 A It's an expensive operation to shutdown
6 once you're underway.

7 Q What possible choices did you have at
8 that particular time in how to conduct your operations now
9 knowing that there was some question about the location of
10 your well?

11 A Once we had determined that there was a
12 question, or that there was a nonstandard location problem,
13 we evaluated several possibilities, one of them being to
14 abandon the drilling of the well altogether. Our economics
15 had already showed that it was something we should be doing
16 and also our engineering, we feel that the well is needed
17 to prevent waste and produce the proration unit.

18 So we -- we wrote off the idea of just
19 abandoning the well.

20 Q Well, let's quantify that. If you aban-
21 don the location, unorthodox location, and redrill the
22 closest standard location, is --

23 A To -- to -- well, that was another op-
24 tion that we considered, was to shut down that location and
25 move to an orthodox location. That would cost in the range

1 of \$50-to-\$70,000 in dirt work; in paying the rig to wait
2 seven days while we built a new location; in staking fees;
3 also by the time we verified that we had a nonstandard
4 location we'd set our surface casing and cemented that.
5 All of that would have been a write-off, actually, of 70 --
6 my calculations say \$70,000.

7 Q At this time did you consider the pos-
8 sibility of deviating the wellbore so that the bottom well
9 location is at a standard location, or within the standard
10 location window?

11 A That was another option that we consi-
12 dered and that would have meant \$100-to-\$150,000 of track
13 in deviating the well and then once that's done, we're
14 cursed with problems when the pressure depletes to the
15 point where we have to rod pump the well. It's very expen-
16 sive. The well's too deep and we hadn't planned -- we
17 didn't have casing to drill a large enough wellbore to run
18 a submersible pump.

19 Q The following day, on Friday, then, did
20 you have another conversation with the OCD office in Aztec?

21 A Yes, we did.

22 Q And did you go to that office?

23 A Yes.

24 Q And what -- what occurred?

25 A We looked up the order. I went over it

1 with Mr. Bush and verified that we were in a nonstandard
2 location. We discussed some possibilities for mitigating
3 some of the damage. What we determined, our best option
4 would be -- would be to go to Mobil for a nonstandard loca-
5 tion and we decided we could contact Mobil and hopefully
6 resolve the differences perhaps with either giving them the
7 opportunity to offset our location to the south by 330 feet
8 or with some reduction of our allowable.

9 Q When did you first contact Mobil about
10 the fact that your well was at an unorthodox location as to
11 the south boundary?

12 A We wrote Mobil a letter. I believe they
13 were notified of the hearing on the 3rd of April and then
14 some time in that same week I called and spoke with a rep-
15 resentative of Mobil about our allowable and locations.

16 Q All right, let me make sure I understand
17 the sequence.

18 When we look at the exhibit book you
19 have a copy of your letter to Mobil dated April 3rd and
20 that's on page 3?

21 A That's correct.

22 Q All right, prior to that time had you
23 contacted either by letter or by telephone or anyone to
24 your knowledge on behalf of your company contacted Mobil
25 about this particular issue of the unorthodox well for the

1 Missy No. 3?

2 A No, we hadn't.

3 Q Prior to the April 3rd letter being sent
4 over your signature, had Mobil called you to tell you, hey,
5 guys, you're at an unorthodox location, what are you going
6 to do?

7 A No, they hadn't.

8 Q No conversations, no correspondence?

9 A No contact at all.

10 Q Did you receive any telephone calls or
11 correspondence in response -- from Mobil in response to
12 your April 3rd letter, Mr. Corbett?

13 A I originally called their office and we
14 corresponded then for about two weeks concerning some way
15 of resolving this problem.

16 Q And were you able to resolve the problem
17 outside of a hearing?

18 A No, we weren't.

19 Q What individual or individuals with
20 Mobil have you discussed this issue with?

21 A As far as the -- the subject of our non-
22 standard location, Craig Agerman was their representative
23 that I spoke to.

24 Q You've spoken to no other representa-
25 tives of Mobil about this particular problem?

1 A Not about the location.

2 Q That's what I'm talking about, this
3 location prospect.

4 All right, let's go through the infor-
5 mation then. We've got your letter of April 3rd, you sent
6 that return receipt?

7 A That's correct.

8 Q All right. Subsequent to that display
9 is simply a location plat showing acreage?

10 A That's correct.

11 Q Well, we've discussed that. Let's go
12 to the next one. That's one where you put down the footage
13 locations on the various wells.

14 A That's correct.

15 Q All right, let's go beyond that and the
16 next display, then, is what, sir?

17 A The next display is a plot of Section
18 35, Township 25 North, Range 3 West, showing the legal lo-
19 cations, the drilling windows, if you would, where we can
20 work, we could legally drill a West Lindrith Gallup-Dakota
21 well in a standard location.

22 Q Am I correct in understanding that for
23 the Mobil well in the southeast quarter of 35, that their
24 well is at an unorthodox location?

25 A That's correct.

1 Q In what particular way is that unortho-
2 dox?

3 A It's unorthodox in that it's either too
4 far south of the north window in that proration unit or too
5 far north of the south window.

6 Q A standard location for the southeast
7 quarter of 35 would have been in any one of those four
8 windows, if you will?

9 A That's correct.

10 Q And could a standard well location for
11 that well have been as close as 330 to your common bound-
12 ary?

13 A Yes.

14 Q And where did Mobil choose to put that
15 well in terms of the distance between the two spacing
16 units?

17 A They're 540 feet from our boundary.

18 Q In talking to Mr. Agerman about this
19 issue, did he make any proposals to you as to what he would
20 like to do in order to resolve it?

21 A We traded several proposals back and
22 forth. Generally I made a couple of offers, none that he
23 thought were acceptable. He expressed their concern. He
24 said that mostly they were concerned that we would shut-in
25 the Missy Well No. 2 and maximize production from No. 3 in

1 order to drain them.

2 Q Well, what was your understanding of his
3 principal concern upon -- by his company with regards to
4 your unorthodox locations?

5 MR. CARR: Objection. I don't
6 believe this witness is qualified to testify as to what Mr.
7 Agerman's concern is about Mobil's concern. It requires
8 speculation.

9 MR. KELLAHIN: Mr. Catanach,
10 the question was what Mr. Corbett's understanding from Mr.
11 Agerman of Mobil's position. I think it's a fair question
12 as to what this witness understands.

13 MR. CARR: He can -- he can
14 tell what Mr. Agerman told him.

15 MR. CATANACH: That will be
16 fine.

17 Q What did Mr. Agerman tell you?

18 A He was concerned that we would shut in
19 the Missy Well No. 2 in order to produce our full allowable
20 from the Missy Well No. 3, which would have an affect of
21 draining more of Mobil's lease.

22 Q Which Mobil lease?

23 A Both the --

24 Q The one to the south where you're en-
25 croaching?

1 A Well, he -- I'm guessing that that's
2 what he was concerned about.

3 Q The one to the south or the one to the
4 east?

5 MR. CARR: Objection, the wit-
6 ness has stated he's guessing, and I think that's going far
7 beyond what Mr. Kellahin was trying to do before, he's (un-
8 clear.)

9 Q Well, to avoid the objections, Mr. Cor-
10 bett, what is your understanding of Mobil's specific con-
11 cern with regards to your location?

12 A We're in a legal location regarding
13 their proration unit to the east. The only possible harm
14 that we could have been doing would be to their locations
15 to the south.

16 Q In terms of a solution, what did Mobil
17 propose to you as a solution?

18 A Their final proposal was that we take
19 the allowable of 382 barrels per day from the proration
20 unit, divide it by two wells, and then proportionately re-
21 duce the Missy No. 3 allowable by the distance to the lease
22 boundary or 330 divided by 790.

23 Q The unorthodox lease boundary.

24 A That's correct.

25 Q That's the 790 boundary.

1 A Yeah.

2 Q Giving you an allowable of what?

3 A 79.8 barrels per day.

4 Q Was that acceptable to you?

5 A No, it wasn't.

6 Q Why not?

7 A We feel that the well is capable of pro-
8 ducing much more than that. We feel that based on the re-
9 servoir quality in this area an allowable placed that low
10 won't allow us to, in a timely fashion, drain our proration
11 unit and we've also done some economics that suggest that
12 that's going to curtail the value of our investment by
13 quite a bit.

14 Q Let's turn to -- as we move towards the
15 economics, let's turn to the display subsequent to the plat
16 that shows the drilling windows in 35. What's the next
17 page of the exhibit, Mr. Corbett?

18 A The next page of the exhibit is a copy
19 of our application for permit to drill. It was approved
20 9-17-89 -- no, I'm sorry, 3-17-89, by the OCD.

21 Q This is the APD that you referred to
22 earlier in your testimony?

23 A Yes, sir.

24 Q And this is the one that covers the
25 Missy No. 3 Well.

1 A Yes, it is.

2 Q All right, sir, what's the display af-
3 ter that page?

4 A The next page is the surveyor's plat
5 that's commonly submitted with -- it's required to be sub-
6 mitted with the APD and it shows our surface location to be
7 330 feet from the south line and 2310 feet from the west
8 line in Section 35.

9 Q Was in fact the C-102 survey submitted
10 with the APD for the Missy No. 3 Well to the OCD office in
11 Aztec?

12 A Yes, it was.

13 Q And at any time prior to receiving the
14 approved APD from the OCD office did they call, advise you
15 in writing, or otherwise, that they could not approve your
16 APD because you were at an unorthodox location?

17 A No.

18 Q What's the next display after that, sir?

19 A The next display is a sundry, Form C-103
20 that shows that our well was spudded at 1:10 p.m. and that
21 on that date we cemented our surface casing.

22 Q Does it also show any approvals?

23 A The sundries are generally not approved.
24 They're simply received and this one was received.

25 Q All right, sir, what then is the next

1 information in the exhibit book?

2 A The next information is a copy of our
3 damage release from the surface owner.

4 Q All right, and then what is the next
5 exhibit?

6 A The next page was the first notification
7 we had in writing that we were in a nonstandard location.
8 It's a letter from Mobil and it's directed to Mr. Chavez.
9 It was a copy to Hixon Development Company.

10 Q At the point you received the letter
11 from Mobil objecting to the location, where does this fit
12 into the drilling sequence?

13 A We had set surface casing and had been
14 drilling for approximately five days when we received --
15 excuse me, when we received this letter.

16 Q All right. Let's take a moment and talk
17 about some of the geology that you've put in the exhibit
18 book.

19 Following the Mobil letter in which they
20 registered an objection, what is the next display?

21 A The next display is an isopach of the
22 Dakota C Sand. This is the reservoir that we're producing
23 from in the Missy Well No. 2. It's also commingled in the
24 wellbore of the Missy Well No. 1-Y.

25 This is the reservoir that we had

1 expected to produce in the Missy No. 3, based on -- one
2 thing that this isopach shows is that there's no well
3 control to the south. We simply saw the reservoir im-
4 proving going to the south within the known well control
5 that we had and it stepped out farther to the south.

6 Q When you look at the isopach in rela-
7 tion to what you know now between the unorthodox location
8 and the closest standard location, is there any material
9 geologic difference between those two locations?

10 A There's not a quantifiable difference.
11 The differences between the logs on the Missy No. 2 and the
12 Missy No. 3, as far as recoverable reserves of oil, there's
13 not a difference that I can point my finger to.

14 Q After the well's been spudded and is
15 drilling, you then completed it or during the completion
16 process you ran a suite of logs on the well?

17 A That's correct. At the time we stopped
18 drilling and before we set our casing we ran a suite of
19 logs, open hole logs, in the well.

20 Q When did you first have knowledge or ac-
21 cess, either about the logs or the results of the Mobil
22 Well 75 east of you?

23 A Approximately the 15th of April we
24 traded -- well, no, I'm sorry. We TD'ed our well on the
25 15th of April. It would have been around the 20th of April

1 that we traded logs.

2 Q All right, so the trading of logs be-
3 tween you and Mobil occurred five days after you reached
4 total depth on your well?

5 A That's correct.

6 Q All right, sir, turn to the next dis-
7 play. What is that, sir?

8 A The next display is a cross section A-A.
9 It shows the -- it illustrates the location of my cross
10 section. The cross section is comprised of open hole logs
11 from the Missy 1-Y, the Missy No. 2, and the Missy No. 3.

12 Q All right, let's turn to the cross sec-
13 tion, then.

14 You've got two, two sets of cross sec-
15 tion. One is an induction electric log cross section and
16 the next is your porosity logs?

17 A That's correct.

18 Q All right, let's turn to the induction
19 log cross section and have you identify and describe that.

20 A This is a cross section of the Dakota,
21 what we call the C Zone in the -- our portion of the West
22 Lindrith Gallup-Dakota Pool. It's the main pay zone. It's
23 the only pay zone that's open in the Missy No. 2 and it's
24 currently been perforated in the Messy No. 3. We're de-
25 bating whether or not to open any other pay or not. We

1 probably won't.

2 Q Okay. From the induction logs you do
3 what, or the engineering staff does what for you, sir?

4 A From these logs we can calculate our oil
5 saturations to determine what percentage of the pore space
6 is filled with oil, and then we use the porosity logs to
7 calculate what kind of a volume we have in the reservoir.

8 Q All right, let's turn to the cross sec-
9 tion showing the porosity logs. What do those show you,
10 Mr. Corbett?

11 A These are neutron density logs. They
12 show the porosity development in our pay zone in the Dakota
13 C.

14 Q What's the purpose of making that geolo-
15 gic study to determine those bits of information?

16 A Well, we map these and determine our
17 next locations based on what we have in our other wells.
18 We had some porosity in the Missy No. 1-Y. We had improved
19 porosity in the Missy No. 2. We decided then to take the
20 gamble and step out and drill the Missy No. 3.

21 Q Let's turn to the AFE that's shown for
22 the Missy No. 3. What's your estimated total completed
23 cost for that well?

24 A This was prepared prior to drilling. We
25 estimated \$455,278 to drill and complete the well.

1 Q All right, approximately what is going
2 to be the actual cost for the well in relation to the AFE?

3 A We're coming in pretty close to budget.
4 It's about -- it was a good estimate.

5 Q In analyzing Mr. Agerman's proposed
6 penalty on behalf of Mobil to assess against the Missy 3
7 Well, the 80 barrel a day allowable, have you run some
8 economic projections as to what is the economic impact on
9 your company of that magnitude of a penalty?

10 A Yes, I have. Those are the next four
11 pages of the Exhibit One.

12 Q All right.

13 A The economics pages with the calculation
14 of present value of the well, given that the well will eco-
15 nomically produce 171,000 barrels of oil, the well will
16 have a present value of \$1.1-million if we were allowed to
17 produce beginning at a rate of half of the allowable for
18 that proration unit, or 191 barrels per day, and that gives
19 an exponential decline -- given an exponential decline of
20 32 percent, that would be the value of those reserves in
21 that well.

22 The next page is my input data for your
23 edification so that you can see that the only factor that
24 was changed was the decline curve for the well. It was --
25 IP'd on the -- the initial rate was shown at 191 barrels

1 per day, half of our allowable, and reserves on the well,
2 172,000 barrels of oil.

3 Q All right, let's go to the first page of
4 that display for the Missy 3.

5 Without a penalty, using the cost
6 factors, the volumetric analysis of the reserves in place,
7 the recoveries, the declines, doing the conventional ana-
8 lysis for economics, it shows a present worth profile, if
9 we look in that bottom right corner, it says ultimate oil
10 1. -- 171.8 --

11 A Thousand barrels of oil.

12 Q All right.

13 A So that would be 170 -- approximately
14 172,000 barrels of oil.

15 Q All right, we read across that column
16 and we get to 1.244-million.

17 A That's the cash flow from that well dis-
18 counted at 5 percent annually.

19 Q All right, now if we factor in the
20 80-barrel a day as the producing rate subject to the Mobil
21 penalty, and we turn then to page 3 of the economic
22 profile, you have kept the ultimate recovery at 172,000
23 barrels of oil?

24 A That's correct.

25 Q All right, and as we read across, then,

1 on the profile, what's that number?

2 A The present worth of that would be
3 \$1,094,000.

4 Q And if you subtract the two, approxi-
5 mately what do you get?

6 A That would be approximately 1.5-million.
7 Generally the industry uses a 10 percent discount -- or I'm
8 sorry, not 1.5-million -- 150,000. The industry generally
9 uses a 10 percent discount factor. The difference there
10 would be 1.1-million versus .9-million, or a difference of
11 \$200,000 in the life of the well.

12 Q What's your point?

13 A The point here is that if we're allowed
14 to produce the well at half of the proration unit's allow-
15 able, we start out at 191 barrels per day and give it a
16 normal decline, it will be worth \$200,000 more than if we
17 produce it at 80 barrels a day for three years and then
18 assume that at that point the well's only capable of making
19 80 barrels a day and start's a normal decline.

20 Q Is that the basis for your opinion
21 awhile ago that the penalty would cost you some \$200,000?

22 A That's correct.

23 Q Look back on that same page where you
24 look at the ultimate recovery of 172,000 barrels of oil. Do
25 you see that? You didn't change that, did you?

1 A No, I didn't.

2 Q Why not?

3 A Well, this -- this was an attempt to
4 take an unbiased look. I feel as though producing 80 bar-
5 rels a day until the well's capable of only producing 80
6 barrels a day may allow Mobil some time to use this -- the
7 setback to reduce our allowable and produce some reserves
8 that might otherwise be produced at our well.

9 Q All right, let's go back to any one of
10 your plats showing the relationship of wells to another.
11 The one I utilized, I think, was on page 5.

12 The Missy No. 2 Well, Mr. Corbett, what
13 is currently capable of producing?

14 A It makes between 200 and 300 barrels of
15 oil a day.

16 Q And what -- have you completed the Missy
17 No. 3 yet?

18 A We haven't begun to produce it.

19 Q Do you have any potentials on it yet?

20 A No.

21 Q So we don't know what it's going to
22 make.

23 A No.

24 Q Okay. When we look at the Lindrith 75
25 Well, what does it -- your understanding of what it's cur-

1 rently capable of producing?

2 A We're not sure about that; either the
3 well's tight hole -- well --

4 Q You don't know. When we look at your
5 cross sections, either the induction logs or the porosity
6 logs, where are we in the West Lindrith Gallup-Dakota Pool
7 with regards to the best production in this interval in
8 this particular area?

9 Is this Gallup? Is it Dakota? Is it
10 called something else?

11 A This -- this is the Dakota formation.
12 As far as I know these are the best producing wells in the
13 pool. I'm sure Mobil's well will join these as the best
14 wells in the pool.

15 Q Now where is this Dakota formation pro-
16 duction that's being produced in West Lindrith? Where is
17 that in relation to the Gallup-Mancos interval?

18 A The Gallup-Mancos interval occurs like a
19 blanket across the pool. We're approximately 700 feet
20 below the top of the Gallup.

21 Q Within Section 35 or within any of the
22 immediate sections to that spacing unit for your Missy No.
23 3 Well, is the Mancos or Gallup currently being produced?

24 A The Gallup is currently open in the
25 Missy No. 1-Y. A production log run on that well indicated

1 that the bulk of the production was from the Dakota. That
2 was all that we opened in the Missy Well No. 2.

3 Q Can you quantify for us the amount of
4 Gallup-Mancos production out of the 1-Y Well in the north-
5 west of 35?

6 A I couldn't do that except to say the
7 bulk -- I can qualify it, the bulk of the production is
8 Dakota production.

9 Q What is that well currently producing?

10 A Around 170-to-200 barrels per day.

11 Q Did you participate with the Division or
12 with any other operators concerning the past hearings the
13 Commission had that established the buffer between Gavilan
14 and West Lindrith Gallup-Dakota?

15 A Yes, I did.

16 Q And to what extent did you participate
17 in that activity?

18 A We attended a number of OCD operators
19 meetings that were held in Farmington, generally in 1987,
20 where they discussed allowables for the Gavilan Pool and
21 also a buffer zone to be established between the West
22 Lindrith Gallup-Dakota and the Gavilan Pool.

23 Q What is your understanding of the basis
24 of the 790 setback between the buffer on West Lindrith and
25 Gavilan Mancos?

1 A That was originally proposed at a
2 meeting at San Juan College in Farmington to protect Gavi-
3 lan Mancos Pool from drainage by wells in the West Lindrith
4 Gallup-Dakota Pool.

5 Q Are there currently any Gavilan Mancos
6 wells located in either Section 1 or 2 to the south of you?

7 A No, there are not.

8 Q Do you, as a participant in this effort,
9 Mr. Corbett, see any reasonable basis upon which to uti-
10 lize as part of the penalty formula the 790 as a factor in
11 arriving at that penalty?

12 A No, I don't.

13 Q Why not?

14 A The 790, even as it's spelled out in the
15 pool rules for the West Lindrith Gallup-Dakota Pool is to
16 protect a common source of supply in the Mancos and the
17 North East Ojito Gallup Pools.

18 In the Missy 2, and our intention is for
19 the Missy 3 not produce from the Gavilan Mancos, we
20 wouldn't be interfering with pressured source of supply.

21 Q No question that you're opposed to
22 Mobil's penalty that would give you 80 barrels of oil a day
23 on your well.

24 A We are opposed.

25 Q Have you examined other possible alter-

1 native solutions to this circumstance to, in your opinion,
2 justify or balance the equities among the parties?

3 A Yes, we have.

4 Q What kinds of things have you consid-
5 ered, Mr. Corbett?

6 A One of the things that we considered was
7 reducing our allowable based on 330, which is what we are
8 from their lease line, over 540, which is what they are
9 from our lease line. We ruled this out because their 540
10 isn't in question here. It's not our intent to question
11 the setbacks throughout the pool, so we set that aside.

12 Q Well, let me understand, within the West
13 Lindrith Gallup-Dakota, if you're not adjacent to an outer
14 boundary, then wells are entitled to be as close as 330 to
15 the common line?

16 A That's correct.

17 Q And is that a common occurrence within
18 the pool?

19 A Yes, it is.

20 Q All right, what else did you consider?

21 A Another thing that we considered was 330
22 feet, which is what we are from their lease line, over 790
23 feet. We tended to discount this. Again, the source of
24 supply that we're producing from isn't the Mancos that was
25 cited in the rule. We think that that would be punitive to

1 use that kind of a formula.

2 We also considered, although we found it
3 unacceptable, their proposal of 330 over 790 times half of
4 our allowable. The pool rules don't state that a second
5 well should be given half the allowable. They allow that
6 allowable from any combination of the two wells in the pro-
7 ration unit. So for that reason we wrote off both their
8 proposal and the concept of producing half of our allow-
9 able from each well.

10 What we finally arrived at as our favor-
11 ite resolution for this problem is simply we erred in off-
12 setting Mobil by 330 feet where we should have been 790
13 feet back. Mobil has a section to the south of us, in fact
14 both sections to the south of us. Our recommendation would
15 be that in one of those sections allow Mobil to offset us
16 by 330 feet rather than the 790 that's called for in the
17 pool rules.

18 Q What is accomplished by that, Mr. Cor-
19 bett?

20 A That wouldn't force us to live with both
21 an allowable restriction and the possibility of them off-
22 setting us, which had been proposed. It would give Mobil
23 their full allowable. It would give us our full allowable.
24 Our intention isn't to produce the entire allowable from
25 the Missy No. 3. We -- we feel that we have reserves at

1 the Missy No. 2 that need to be produced, but it would give
2 Mobil the opportunity to avoid being drained by our well.

3 Q How long has Hixon had its interest in
4 Section 35, Mr. Corbett?

5 A Approximately 2-1/2 years.

6 Q Under what circumstances did you acquire
7 that interest?

8 A It was a lease that we bought from an
9 independent operator.

10 Q What was the history of Section 35 as
11 you understand it prior to the time that you acquired the
12 lease?

13 A At the time that we acquired it, it was
14 undrilled and prior to drilling it we had to resolve some
15 title problems. The well was supposedly a portion of
16 Mobil's Lindrith B Unit.

17 Q Have it ever been developed at any time
18 by Mobil in any portion of this section other than the
19 southeast quarter, before the Lindrith 75 Well? Had it
20 been developed as part of the unit operations for the
21 Gallup-Dakota formation?

22 A No, prior to our drilling none of this
23 section had been drilled.

24 Q Do you know how long Mobil held that
25 acreage without developing it in the Dakota or the Gallup?

1 A I don't know how long it's been in
2 Mobil's possession, although I believe the unit was formed
3 in 19 -- late 1940's or early '50.

4 Q And how long did you have that acreage
5 before you started developing it in the Gallup and Dakota?

6 A Probably about two months.

7 MR. KELLAHIN: That concludes
8 my examination of Mr. Corbett, Mr. Catanach.

9 We would move the introduction
10 of his Exhibits One and Two.

11 MR. CATANACH: Exhibits One
12 and Two will be admitted as evidence.

13 Mr. Carr?

14

15 CROSS EXAMINATION

16 BY MR. CARR:

17 Q Mr. Corbett, I believe you testified
18 that your understanding was the purpose of the buffer zone
19 rules was to protect from -- against drainage from Gavilan,
20 is that what you stated?

21 A To protect Gavilan from drainage from
22 West Lindrith.

23 Q The buffer zone rules, however, do go
24 around the North Lindrith. They're not just confined to
25 that boundary area, isn't that correct?

1 A I'm painfully aware of that fact.

2 Q Now, we talked about why the well is
3 where it is. The rules that are applicable here, as you
4 understand it, do require a 790-foot setback from that
5 south line at your 160, isn't that correct?

6 A That is correct.

7 Q You have a set of the field rules in
8 your office?

9 A We do now.

10 Q Did you at that time?

11 A According to our office manager they
12 were in her office. I sacked her office the night that I
13 got the phone call from Mr. Chavez and couldn't find them.

14 Q Okay. Now, at the time you drilled the
15 well, in your Exhibit Number One you have a chronology and
16 you've indicated that Mobil picked up a copy of the APD on
17 March 28th. How -- how do you know that?

18 A I was told that by the Oil Conservation
19 Division in Aztec.

20 Q And it was on the 30th of March that you
21 spudded the well (unclear), correct?

22 A That's correct.

23 Q And 3 hours and 20 minutes later you
24 received a call that you might be at a nonstandard
25 location.

- 1 A That's correct.
- 2 Q Mr. Chavez didn't tell you that you
3 were, he just was concerned that you might.
- 4 A That's correct.
- 5 Q Then you went ahead and you verified
6 this yourself by going to the Division office the next day.
- 7 A Yes.
- 8 Q And so you were less than a day into the
9 drilling of the well when you knew you were at a nonstand-
10 ard location.
- 11 A We had by that point set our surface
12 casing.
- 13 Q Did you -- and you didn't consider
14 directionally drilling the well because of increased costs?
- 15 A There are increased costs both up front
16 in having to directionally drill the well and as you pro-
17 duce the well your costs are escalated quite a bit.
- 18 Q And you didn't -- in your cost projec-
19 tion the well wouldn't justify moving a location, that was
20 your testimony?
- 21 A We felt that we would be better off to
22 reach some sort of an amicable resolution with Mobil.
- 23 Q How long does it take you to drill a
24 well to total depth in this area?
- 25 A Around two weeks, 14 days.

1 Q You stated that the proposals concern-
2 ing allowables that were made by Mobil were unacceptable to
3 you. I think you also indicated that the No. 2 Well, the
4 Missy No. 2, is producing between 200 and 300 a day, cor-
5 rect?

6 A That's correct.

7 Q If that well was at 300 a day and you
8 had 79.8 assigned to the No. 2, you still would be right at
9 top unit allowable, isn't that correct?

10 A We'd be just 2 barrels under it.

11 Q If the allowable is set as you would
12 propose, you would in effect be able to produce in excess
13 of the depth bracket allowable from the two wells currently
14 on the unit.

15 A No, we're not seeking to produce in ex-
16 cess of the depth bracket allowable. Our concern is not to
17 be curtailed to only 80 barrels per day from the No. 3.

18 Q You have run your calculations concern-
19 ing economics focusing just on the No. 3, isn't that cor-
20 rect?

21 A That's correct.

22 Q You haven't looked at the entire unit
23 and the economics on a unit basis, have you?

24 A No, we haven't.

25 Q Now one of the things you stated that

1
2 you did and one of the things I understood you to say was
3 part of your job, what to see to it that your projects
4 remained economic, is that correct?

5 A That's correct.

6 Q So you've been looking at the investment
7 value of this project as you evaluate the potential for-
8 mulas.

9 A Yes.

10 Q Have you also considered the potential
11 for drainage from offsetting tracts at the same time you're
12 looking at investment values?

13 A We have.

14 Q And have you calculated a drainage area
15 for the No. 2 Well?

16 A No, we haven't.

17 Q And why have you not done that?

18 A There's not much we can do about it.
19 Their well's in a legal -- as far as their setback from our
20 location, they're legal.

21 Q If you -- I guess from your logs you
22 know the thickness of the section in the No. 3, do you not?

23 A Yes.

24 Q Do you know what the porosity is?

25 A Yes.

1 Q What percent porosity did you find, 7
2 percent, or better?

3 A An average of around 8 percent porosity.

4 Q So it's really from a porosity point of
5 view better than the No. 2 Well, isn't that right?

6 A The average, the No. 2 has a higher peak
7 porosity, perhaps a little thinner zone. The average there
8 is going to be very close to 8 percent.

9 So you've got a -- a very comparable
10 figure for the two wells.

11 A Yes, we do.

12 Q You've got a thicker zone down in the
13 Missy No. 2, isn't that right?

14 A As far as --

15 Q I'm sorry, in the Missy No. 3. My ques-
16 tion is wrong.

17 A Slightly thicker in the Missy 3.

18 Q All right, and you have a producing rate
19 now as high as 300 a day from the No. 2 Well?

20 A Between 2-and-300 barrels per day.

21 Q When did that well first start to pro-
22 duce?

23 A It's produced for about 5 months.

24 Q And what is its cumulative production to
25 date?

1 A Probably -- well, it's between 40-and
2 60,000 barrels. I apologize for not having --

3 Q Okay, and that's 40-to-60,000 in a 5-
4 month period of time. Now, if I go back to your economic
5 program, the ultimate oil you've projected here in bar-
6 rels, I've got 171.8. What is that 171.8 figure? That's
7 on the first page, I think, Mr. Corbett, of your economic
8 calculations it says, profitability indicators, it's the
9 third column over, first item, ultimate oil in thousands of
10 barrels, so I guess it's 171. -- or how many barrels of oil
11 --

12 A 171.8-thousand barrels of oil.

13 Q And that is -- what does that represent,
14 the barrels of oil under what?

15 A Those are recoverable barrels of oil at
16 the Missy 3 wellbore.

17 Q Okay, and when you say at that wellbore,
18 what do you mean, at that particular point or how many
19 acres are you looking at that that amount, that volume un-
20 derlies?

21 A Half of our proration unit.

22 Q So you say that that would -- that vol-
23 ume underlies half of your proration unit and then there
24 would be perhaps another comparable volume available to the
25 Missy No. 2?

1 A That's right, for recovery.

2 Q And in the first five months it's al-
3 ready produced as much as 60,000 of 171,000 barrels?

4 A Uh-huh.

5 Q And you want to put another well that
6 from at least porosity figures and thickness of pay looks
7 like it would be comparable certainly, the No. 3 to the No.
8 2, isn't that fair to say?

9 A We -- we have approximately the same pay
10 in the Dakota.

11 Q Don't you think with two wells that have
12 that kind of a well profile in terms of producing capabili-
13 ty, that the two wells on that unit could produce well in
14 excess of twice the 171.8 barrels of oil that would be
15 under that proration unit?

16 A If we were to open up the Mancos pay
17 zone, they'll certainly have increased reserves there.
18 It's a commingled pool (unclear) --

19 Q If I -- if it understood your testimony,
20 the No. 2 is producing primarily from the Dakota, isn't
21 that right?

22 A That's correct.

23 Q So it would be fair to assign most of
24 that volume to the Dakota, and this 171.8 thousand barrel
25 figure is a Dakota figure?

1 A Those are volumetric reserves and
2 there's a formula using our porosity logs, using oil
3 saturations calculated from our logs, we have actually in
4 excess of this from the Dakota pay zone. We used this
5 number because it gives an economic cutoff; at some point
6 you can't economically produce reserves.

7 Q And so these are the economics of re-
8 coverable reserves.

9 So with those two wells there, where I'm
10 trying to go is a penalty is appropriate, isn't it, because
11 of this location.

12 A Well, certainly we can't produce both
13 wells wide open. We're well aware of that. We're -- we're
14 not proposing to shutin the Missy No. 2 and produce the No.
15 3 until we've got our 171,000 barrels of oil.

16 Q And what we're focusing on, though, is
17 some restriction on this No. 3 Well because it is too close
18 to the south line, isn't that right?

19 A It is too close to the south line.

20 Q And I think, even though you haven't put
21 the No. 3 on and have indicated that you don't really know
22 what it makes, it's fair to say that we've looking at a
23 well that is comparable to the No. 2. Don't you think
24 that's a fair --

25 A It should be a good well.

1 Q Now if we go back from your economic
2 calculations and work back to the cross section, I under-
3 stand the first page, maybe you could tell me what the
4 green area on this indicates?

5 A The first page?

6 Q Yeah.

7 A The green area is, I've used to high-
8 light resistivity where it exceeds 100 ohms (sic).

9 Q And what does that show? Does that show
10 formation? What does it tell you?

11 A Basically, the reason that this is high-
12 lighted is -- is to show the thickness where it exceeds 100
13 ohms has improved from the 1-Y to the No. 2.

14 Q Okay, and it also improves again to the
15 No. 3.

16 A It does improve, although not as drama-
17 tically.

18 Q But it is a better zone, is it not, in
19 the No. 3 on this cross section as you've depicted it,
20 than it is, say, in the No. 2.

21 A Yeah, the resistivity increases and the
22 thickness of the zone increases slightly. I'd say it's a
23 better zone.

24 Q Now if we go to the next page, this
25 shows porosity?

1 A That's correct.

2 Q And it also shows the porosity tends to
3 improve, does it not, as you move toward the south?

4 A Yes, it does.

5 Q And based on these two wouldn't it be
6 fair to conclude that the formation improves as you move
7 toward the south?

8 A It has.

9 Q And so it's improved as they moved
10 towards Mobil's acreage south of you.

11 A We've proved up several good locations
12 for Mobil with this well.

13 Q And we're delighted that you did it.
14 Now, if you didn't know this, I think you testified, at the
15 time you spudded, though, isn't that what your testimony
16 was, that you didn't -- you didn't know and you couldn't
17 have known what the quality of the formation was south. It
18 was a risk moving south.

19 A That's correct.

20 Q And so you weren't moving down there
21 just to gain some sort of a geologic benefit that might be
22 shown in these cross sections.

23 A We did -- we thought it was worth a
24 risk.

25 Q At that time was there a trend that

1 would suggest to you that the formation would improve far-
2 ther south?

3 A The only trend that we had was from the
4 Missy 1-Y to the Missy 2. If you'd call two wells a trend,
5 then we had that.

6 Q And was that a factor in your deciding
7 to go that far south?

8 A Yes, it was.

9 Q You did also know that even if you
10 weren't gaining structural position, you were getting away
11 from the No. 2 that was producing or had a potential to
12 produce the substantial reserves under this 160, isn't that
13 right?

14 A I think a second wellbore in a legal
15 location would have been adequately far from the No. 2 to
16 produce all reserves.

17 Q If you drilled at a 790 location from
18 that south line, do you think that would have effectively
19 produced reserves under that tract?

20 A Yes.

21 Q Do you think that you have a better well
22 drainage pattern over all by being this far from the No. 2?

23 A It's possible. We didn't know that at
24 the time that we spudded the well.

25 Q And in a reservoir like this, do you

1 believe that wells located 660 feet apart actually result
2 in an effective drainage pattern?

3 A Well, at no point did we propose to put
4 two wells within 660 feet.

5 Q Do you think that would be an effective
6 drainage pattern in the area?

7 A That would be 20-acre spacing, is that
8 correct? That's -- that's a little tight for an 8000-foot
9 pool.

10 Q And if you're proposing that the way
11 this can be resolved is by coming 330 off the south line
12 and offsetting you equidistance from the boundary, that's
13 exactly where we would have to put our well, isn't it, to
14 offset drainage with counter-drainage?

15 A Well, that's correct.

16 Q Now you have a plat here that shows the
17 boxes that are the approved or orthodox locations in 35.
18 To be sure that there's no confusion here, do you know why
19 the No. 75 Well is located where it was?

20 A I know why it wasn't located within the
21 two approved windows in the west half of the southeast
22 quarter.

23 Q And why is that?

24 A There were cultural -- cultural --
25 arrowheads. There were cultural resources in the west

1 half.

2 Q In any event, that well is not -- does
3 not gain an advantage or is not at an unorthodox location
4 towards any Hixon Development Company properties.

5 A No, it's not.

6 Q Did Mr. Kellahin really make the error
7 on Exhibit Number Two?

8 A I'm sorry.

9 Q Is this acreage down here really Mr.
10 Kellahin's error?

11 MR. KELLAHIN: Objection; at-
12 torney client privilege.

13 Q All right, let me ask you just some
14 questions on the wells and then we can wrap this up.

15 If we look at the Missy No. 1, if I un-
16 derstand your testimony, it is producing from both the
17 Gallup and Dakota?

18 A Yes.

19 Q And did you frac these zones?

20 A Yes, we did.

21 Q Were they done in a single stage or were
22 they separately done?

23 A They were done separately.

24 Q Do you have production logs on these
25 zones?

1 A We have them on the 1-Y.

2 Q Can you from these determine the rela-
3 give contribution to the total production from each of the
4 zones?

5 A That was the number that -- I'm not
6 good enough to quantify those. Qualitatively the bulk of
7 the production is from the Dakota.

8 Q When you say bulk do you mean 80 per-
9 cent or --

10 A Quantify it any way; probably 80 percent
11 (not clearly audible.)

12 Q And you don't have separate zone produc-
13 tion tests on each of these two zones, is that right?

14 A No, we don't.

15 Q As to the No. 2, any kind of pressure
16 data you have on that?

17 A A pressure test was recently taken on
18 that. I apologize for not knowing what is it.

19 Q Could you make that available to the
20 Commission and to us?

21 A We could trade with Mobil on it.

22 Q If I take your 171, I guess it was,
23 .8000 barrels that you've estimated for half of your prora-
24 tion, is it fair to say that twice that is what you would
25 have calculated the reserves to be under your entire prora-

1 tion unit?

2 A That's -- that's correct for our entire
3 proration unit. I don't think we'd have recovered twice
4 that from one well.

5 Q On the No. 3, the -- what sort of com-
6 pletion data do you have at this time?

7 A At this point we've perforated the
8 Dakota C Zone, as shown on the cross sections and its been
9 fraced. I don't have the results of the frac. It was done
10 yesterday after I left town.

11 Q You rejected a penalty based on 330 over
12 790 because you thought that was too punitive.

13 A Well, certainly 330 over 790 over 2 we
14 feel is too punitive.

15 330 over 790, we don't feel that that
16 common source of supply, as it's noted in the pool rules
17 (unclear) the Mancos -- Gallup is not, we know it's not
18 being drained, that it's not perforated.

19 Q But the rules --

20 A If it -- I'm sorry.

21 Q But these rules do apply to the Dakota,
22 do they not?

23 A Yes, they do.

24 Q Is Hixon prepared to run a directional
25 survey to determine the actual bottom hole location of this

1 well?

2 A Our understanding is that if Mobil would
3 like a directional survey run and agrees to pay for it,
4 then one will be run.

5 Q But you're not willing to do that.

6 A We don't make it a part of our normal
7 completion procedure.

8 Q In your experience out here have you
9 drilled generally vertical holes or is there any drift to
10 the formation?

11 A This was a pretty straight hole, within
12 1-1/2 degrees and if it (unclear) it came right back in.

13 Q And how do you know that?

14 A That's from conversations with the
15 driller and toolpusher and they run directional surveys.
16 It doesn't give you a specific direction, only an inclina-
17 tion of --

18 MR. CARR: No further
19 questions.

20 MR. CATANACH: Mr. Kellahin?

21 MR. KELLAHIN: No, sir.

22 MR. CATANACH: I have no ques-
23 tions of the witness.

24 Any other questions? He may
25 be excused.

1 MR. KELLAHIN: That concludes
2 our presentation, Mr. Catanach.

3 MR. CARR: I have a witness.
4 At this time, if you're ready for me, I'd call Mark Craig.

5
6 MARK S. CRAIG,
7 being called as a witness and being duly sworn upon his
8 oath, testified as follows, to-wit:

9
10 DIRECT EXAMINATION

11 BY MR. CARR:

12 Q Will you state your full name and place
13 of residence?

14 A Mark S. Craig. I reside in Castle Rock,
15 Colorado.

16 Q Mr. Craig, by whom are you employed and
17 in what capacity?

18 A Mobil in the capacity as a reservoir en-
19 gineer.

20 Q have you previously testified before the
21 New Mexico Oil Conservation Division?

22 A No, I have not.

23 Q Where did you receive your degree?

24 A University of Missouri at Rolla. I
25 graduated in December of 1978 with a BS in petroleum en-

1 gineering.

2 Q Following graduation for whom did have
3 you worked?

4 A I worked for Exxon as a reservoir en-
5 gineer for approximately six years. After that I came to
6 work for Mobil and I've been working for them for appro-
7 ximatley four years.

8 Q Are you familiar with the application
9 filed in this case on behalf of Hixon?

10 A Yes, I am.

11 Q Have you made a study of the area?

12 A Yes, I have.

13 Q Does this geographic area fall within
14 your area of responsibility?

15 A Yes, it does.

16 Q Are you a registered petroleum engineer
17 in the State of New Mexico?

18 A Yes, I am.

19 MR. CARR: We tender Mr. Craig
20 as an expert witness in petroleum engineering.

21 MR. CATANACH: He is so qual-
22 ified.

23 Q Mr. Craig, would you just briefly state
24 what Mobil seeks by appearing here in this proceeding
25 today?

1 A Well, we're against the unorthodox
2 location that they proposed and subsequently drilled.

3 Q Does Mobil seek the imposition of a
4 penalty on the producing rate of the Missy No. 3?

5 A Yes, we do.

6 Q And this pool is completed in the West
7 Lindrith Gallup-Dakota Pool?

8 A Yes.

9 Q Are you familiar with the pool rules in
10 effect?

11 A Yes, I am. I've read them several
12 times.

13 Q And I think I'd like you, since Mr.
14 Kellahin took Two first, why don't we take Number Two
15 first, and I'd ask you to refer to Mobil Exhibit Number Two
16 and identify this.

17 A This is a map showing kind of the area
18 in question.

19 Q Was this map prepared by you without the
20 assistance of counsel?

21 A Yes.

22 MR. STOVALL: Does that imply
23 that it's therefore an accurate map, Mr. Carr?

24 MR. KELLAHIN: I don't believe
25 it's probative of anything, Mr. Examiner. I object to the

1 question as being irrelevant.

2 MR. CARR: We'll leave it in
3 your hands to decide.

4 Q All right, let's take a look at Exhibit
5 Number Two and I'd ask you to review for Mr. Catanach the
6 information depicted on this exhibit.

7 A The cross hatched area you see is just a
8 portion of the West Lindrith Gallup-Dakota Pool. It ex-
9 tends into the Lindrith B Unit, which Mobil operates, which
10 is denoted also, the boundary is denoted by the heavy black
11 line.

12 Q Now there's a little box in I guess it's
13 Section 34. Is that also a unit tract?

14 A Yes, that's also a portion of the Lind-
15 rith Unit.

16 Q All right. Who operates the Lindrith B
17 Unit?

18 A Mobil.

19 Q Does this exhibit depict the wells that
20 Mr. Corbett discussed in his direct case?

21 A It does.

22 Q Do you have anything to add concerning
23 the location or the sequence of drilling of those particu-
24 lar wells?

25 A I really don't. The only other thing I

1 might bring out ther is we have on our Lindrith B Unit
2 shown our 160-acre proration tract immediately to the south
3 of the Hixon Missy No. 3.

4 Q And in that -- it's labeled affected
5 proration unit, what are the four black boxes?

6 A The four black boxes would be our al-
7 lowable area that we could drill in with -- under the
8 current field rules, pool rules.

9 Q In your opinion if Mobil was permitted
10 to offset the Missy No. 3 with a well 330 feet south of the
11 north boundary of that 160-acre unit, would, in fact, you
12 have an effective drainage pattern for that area?

13 A No, you would not. I do not believe we
14 could economically drill a well 330 feet away from the
15 Hixon Missy No. 3.

16 Q Do you believe that well would be neces-
17 sary to produce the reserves in the reservoir from this
18 location?

19 A At that location?

20 Q Yes.

21 A It would produce the reserves under that
22 area, if that's what you --

23 Q Is it a necessary well for the develop-
24 ment of this reservoir?

25 A No, it's not.

1 Q In your opinion what is the risk posed
2 to Mobil by the Missy No. 3?

3 A As I see it, the Hixon Missy No. 3 will
4 produce out of the Dakota above 160 acres drainage radius
5 from that one well.

6 Q And in your opinion will that drainage
7 radius extend into properties operated by Mobil?

8 A Yes, it will.

9 Q Does that drainage area extend beyond
10 what is permitted by the rules of the Division?

11 A Yes, it would.

12 Q When did Mobil discover that Hixon was
13 drilling a well at this location?

14 A When did Mobil discover that?

15 Q Yes.

16 A I believe it was on March 30th, as they
17 showed in their exhibit.

18 Q And then what action did Mobil take?

19 A Well, to the best of my knowledge, we
20 called Frank Chavez as outlined in their exhibit.

21 Q All right. Let's go to Mobil Exhibit
22 Number One, and I'd ask you to identify this exhibit,
23 please.

24 A This was a proposal we made to Hixon to
25 come up with an allocation formula for the Hixon Missy No.

1 3. I'll run through it very quickly. It would be the
2 depth bracket allowable for the 160-acre proration unit
3 divided by the number of wells in the proration unit, which
4 is 2, times the ratio, the illegal distance to a lease line
5 to a legal distance to the lease line and that calculation
6 is shown on the bottom of the page.

7 Q And this results in approximately an
8 allowable of 80 barrels?

9 A That is correct.

10 Q In your opinion if the well location was
11 approved and this penalty was imposed, would Mobil be pro-
12 tected from drainage to the south?

13 A I believe so.

14 Q What is the status of Mobil's plans for
15 development of the area?

16 A At this point we don't really have any
17 plans until we get some production data on the Lindrith B
18 75. We're recently completed that well and we're waiting
19 to get a pumping unit on it to get an accurate rate. I
20 have no accurate rate at this time.

21 Q In your opinion if the application for
22 unorthodox location for Hixon was granted and this penalty
23 as recommended by Mobil was imposed, would waste be pre-
24 vented and the correlative rights of Mobil be protected?

25 A I believe so.

1 Q And do you recommend that this formula
2 be adopted by the Division?

3 A I do.

4 Q Was -- were your Exhibits One and Two
5 prepared by you?

6 A Exhibit Number One was. Exhibit Number
7 -- excuse me. Exhibit Number Two was prepared by my geo-
8 logist. Exhibit Number One was prepared by myself.

9 Q And have you reviewed Exhibit Number Two
10 and can you testify as to its accuracy?

11 A Yes, I can.

12 MR. CARR: At this time, Mr.
13 Catanach, we would move Mobil Exhibits One and Two.

14 MR. CATANACH: Exhibits One
15 and Two will be admitted as evidence.

16 MR. CARR: That concludes my
17 direct examination of Mr. Craig.

18 MR. CATANACH: Mr. Kellahin?

19 MR. KELLAHIN: Thank you, Mr.
20 Catanach.

21

22

CROSS EXAMINATION

23 BY MR. KELLAHIN:

24 Q Mr. Craig, you reside in Denver, do you,
25 sir?

1 A That is correct.

2 Q And how long have you been a petroleum
3 engineer involved in the West Lindrith area on behalf of
4 your company?

5 A Since November of last year.

6 Q November of '88?

7 A That's right.

8 Q What did you do prior to that?

9 A I worked in southern Oklahoma area.

10 Q When was the 75 unit well spudded?

11 A The approximate spud date was -- I'm not
12 absolutely sure about the exact date. It would be approx-
13 imately a month ago, I'd venture to guess.

14 Q Was it spudded before Hixon spudded the
15 Missy No. 3 Well? Do you know the sequence of the wells?

16 A I'm not sure of that.

17 Q What was the reason that the Lindrith 75
18 Well was spudded in the southeast quarter of Section 35?

19 A Can I get a copy of your exhibit,
20 please, just to look at?

21 Q Sure, here you go.

22 A So we'll be looking at the same thing
23 here. What page is that?

24 Now what was the question, again,
25 please?

1 A The question was whether you have
2 knowledge about why Mobil elected to drill the Lindrith 75
3 Well in the southeast quarter of 35?

4 A It was proposed by geology to effective-
5 ly drain the acreage under our -- you know, the area under
6 our acreage.

7 Q Was it drilled in response to the fact
8 that Hixon had drilled and completed a successful Dakota
9 well, the Missy No. 2?

10 A Possibly. I'm not aware of the exact
11 reason.

12 Q Were in involved in that in any way?

13 A No, I was not. That was prior to my
14 taking over this area.

15 Q The current status of the 75 Well is
16 what, sir?

17 A It is currently shutin. We completed
18 and fraced the well and we're waiting on a pumping order.

19 Q You haven't taken any kind of production
20 tests on the well yet?

21 A No, we haven't. All I've seen is swab
22 reports that say "swabbing" with no rates.

23 Q Okay. Was the well able to flow with-
24 out stimulation?

25 A Off and on; intermittently; that was the

1 problem with taking -- getting rates. It would flow and
2 then they'd have to swab it and it would flow again and it
3 would die, so --

4 Q Okay. Have you taken any of the pro-
5 duction information available from the Missy No. 2 Well and
6 made any drainage calculation?

7 A Well, I made a drainage calculation cal-
8 culation on the Dakota with 160-acre drainage radius.

9 Q For the Missy No. 2?

10 A Yes, I did.

11 Q What was the purpose of doing that?

12 A Just to see in the Dakota how much area
13 you would -- if you produced a certain amount of volume of
14 hydrocarbons, what are that would correlate to.

15 Q You said you were familiar and had read
16 several times the West Lindrith Gallup-Dakota Pool rules?

17 A That's correct.

18 Q And the spacing in that pool is 160
19 acres, is it not?

20 A That's correct.

21 Q And those rules do allow an operator
22 without penalty to drill an infill well on 160 acres,
23 doesn't it?

24 A Within the pool.

25 Q Yes, sir, within the spacing unit.

1 A Yes, on the boundary it's (not clearly
2 understood).

3 Q No, I understand. I haven't located the
4 well yet.

5 A Okay.

6 Q Within the 160 acres you can without
7 penalty drill a second well.

8 A That's correct.

9 Q Notwithstanding whatever drainage you
10 may have calculated for a single well.

11 A That's correct.

12 Q And the rules allow even spacing units
13 with multiple wells to produce not more than 382 barrels a
14 day.

15 A That's correct.

16 Q And you can produce those in any combin-
17 ation among the two wells.

18 A That is correct.

19 Q What are your plans for drilling and
20 development in Section No. 1, which is immediately to the
21 south of 35?

22 A Well, at this point we really haven't
23 made any. Again, until we get some results in the Lindrith
24 B-75, we are hesitant to proceed further.

25 Q Okay. Does Mobil have any plans for any

1 Gallup Mancos type wells in Section 1?

2 A I'm not aware of any at this time.

3 Q You're closest Gallup Mancos well is the
4 Unit Well 73 over in Section 6, is it not?

5 A That's correct. It's not shown on any
6 of the maps that I've got (unclear).

7 Q You're aware of the existence of that
8 well.

9 A Yes, I am.

10 Q And that would be the closest Gavilan
11 Mancos type well to Section 35.

12 A Correct.

13 Q In response to Mr. Carr's question you
14 said that Mr. Corbett was correct in his summary that Mobil
15 first learned of Hixon's proposed location for the Missy
16 No. 3 Well when it picked up a copy of that APD on March
17 28th, is that correct?

18 A I'm not aware of that.

19 Q Do you -- did I misunderstand your
20 answer to Mr. Carr?

21 A I am not directly aware of what went on
22 on the 28th. The first knowledge which I had of it was on
23 the 30th.

24 Q All right. Do you have any knowledge of
25 anyone else within your company knowing about that APD

1 prior to March 30th?

2 A I did not find out about it until the
3 30th and no one told me the sequence of events that led up
4 to that, so --

5 Q How did you find out about it, Mr.
6 Craig?

7 A My geologist called me and sent a memo
8 the same day.

9 Q Who's your geologist?

10 A John Faulhaber.

11 Q What did Mr. Faulhaber tell you?

12 A He told me that a well that was being --
13 a location had been built and our understanding was the
14 well had been spud on that -- around that time in an
15 illegal location. That was the subject of this memo, which
16 I believe was sent -- well, it's not -- I don't have the
17 exhibit.

18 Q All right. And what then did you do?

19 A What did I do --

20 Q Yes, sir. Did you contact the OCD about
21 it?

22 A No, I didn't see that as my responsibil-
23 ity.

24 Q That wasn't you.

25 A I was aware that the OCD was going to be

1 contacted.

2 Q But you didn't do that?

3 A No, it's not my job.

4 Q I understand. I didn't ask you if it
5 was your job, I just wanted to know if you did it.

6 All right, did you contact anyone with
7 Hixon?

8 A No, I did not. I had no contacts at
9 Hixon.

10 Q Have you been involved as an expert
11 witness on behalf of your company or any other company in
12 requesting unorthodox well locations before this Division
13 --

14 A No, I have not.

15 Q -- on prior occasions?

16 A Not before this Commission, no.

17 Q Okay. In making your proposed penalty
18 request to the Examiner, Mr. Craig, did you make a search
19 to determine whether or not any other well in the West
20 Lindrith Gallup-Dakota had been subject to a similar pen-
21 alty as you've suggested today?

22 A No, we didn't. We did a study or a
23 search to try to find if any similar situation had occurred
24 just generally within this state and this ratio of illegal
25 distance to the legal distance was used in another situa-

1 tion when there was only one well within a proration unit.

2 The problem I saw here was that you have
3 two wells with no real accurate method of allocating pro-
4 duction between the two wells. Therefore, my proposal was
5 to take the depth bracket allowable and divide by the num-
6 ber of wells to allocate an allowable to each well.

7 Q Am I correct in understanding then a re-
8 sponse to the question that you were not able to document a
9 prior instance in which the Commission had utilized a
10 penalty formula as you've suggested today?

11 A Not personally, no.

12 Q Are you aware of any other well in the
13 West Lindrith Gallup-Dakota that has been subject to a pen-
14 alty such as this?

15 A I'm not aware of any well that's been
16 subject to any penalty.

17 Q Are you familiar with the history of
18 development of the Mobil West Lindrith Unit?

19 A To some degree, yes.

20 Q Do you know what the history has been
21 with regards to the development and prior ownership in
22 prior ownership of Section 35?

23 A No, I'm not not.

24 Q What is the anticipated ultimate cost of
25 the 75 Well?

1 A B-75?

2 Q Yes, sir.

3 A Oh, goodness, I think it's around the
4 \$900,000 range.

5 Q Okay. That's completed well cost?

6 A Completed with the facilities, I be-
7 lieve. That's approximate.

8 Q Do you have an estimate of what you
9 anticipate to be the ultimate recovery for the well?

10 A No, I have no production test; really no
11 data at this point.

12 Q Is there any way that you can construct
13 a similar calculation that Mr. Corbett made for his well for
14 your 75 Well?

15 A Certainly. Without having any data, we
16 don't have the 300, 200-to-300 barrel a day wells to use as
17 an analogy, you know, within the Lindrith Unit, whereas he
18 has some pretty good -- he's got one well that's been on
19 for a year and a half, the 1-Y.

20 Q In the absence of production by which to
21 make that analogy, then, you could do not other than to
22 utilize a well like he has.

23 A That is correct. I wish we had one like
24 he has.

25 Q Do you have any -- do you have any West

1 Lindrith Gallup-Dakota wells in the immediate area other
2 than the No. 75?

3 A No.

4 Q No other immediate wells within a few
5 miles that we could draw any kind of analogy to?

6 A No.

7 Q Have you examined or studied the pro-
8 ductive characteristics between the Gavilan Mancos and the
9 Dakota wells?

10 A Yes, I have at some length.

11 Q For what purpose did you do that?

12 A To assess Mobil's drilling program in
13 the general area. We have a lot of acreage in the
14 Schmidt's (sic) anticline area.

15 Q Do you have any Gavilan Mancos or Gallup
16 Mancos potential in the 75 Well?

17 A I believe so. It's difficult to tell.
18 It's a fractured reservoir and it's difficult to assess the
19 productive nature prior to completing and fracing a well.

20 Q Is that part of your completion program
21 to go ahead and try to stimulate production out of the
22 Gallup or the Mancos in the 75 Well?

23 A At this point, no.

24 Q The principal objective, then, would be
25 the Dakota formation?

1 A At this point in time, that's correct.
2 We initially plan to complete the zones separately and if
3 we get a good well in the Dakota we (unclear) add the
4 Gallup zone as Hixon has elected to do in the No. 2, Missy
5 No. 2.

6 Q And if you get an inferior Gallup com-
7 pletion, then you would do what, sir, with the 75 Well?

8 A If we didn't make a Dakota or Gallup
9 completion?

10 Q If you didn't make a Dakota completion
11 would you come back up into -- and attempt to make a Gallup
12 completion in that well?

13 A Probably.

14 Q Are there any other wells in the immed-
15 iate vicinity within a mile radius that are currently pro-
16 ducing from that Gallup formation?

17 A Not --

18 Q Other than the 1-Y Well?

19 A Within the Lindrith Unit?

20 Q No, sir, within a mile of the 75 Well.

21 A Well, we have the Hixon Missy 1-Y, yes.

22 Q Other than that one.

23 A No, not that I know of.

24 Q Let me make sure I understand the mech-
25 anics of how you propose to make this penalty work. If the

1 Missy 3 has a maximum of 80 barrels a day --

2 A Yes, sir.

3 Q -- and the spacing unit is allowed a
4 maximum of 382, --

5 A Uh-huh.

6 Q -- how would you produce the spacing
7 unit?

8 A How would I as operator?

9 Q Well, how would anyone be allowed to
10 produce it under this restriction?

11 A I would produce one well at the allowable
12 and the other well at whatever it would make.

13 Q All right, and as the Missy No. 2 then
14 declined in productivity, it's going to reach a point where
15 it can no longer make up that difference, it can no longer
16 make up the 302 barrels, what happens then?

17 A Well, if you take the Missy 1-Y as an
18 analogy, the rates really haven't fallen off that much and
19 that well has been producing for a year and a half. It's
20 cumed 170,000 barrels plus, which is approximately what was
21 said to be the ultimate drainage for an 80-acre proration
22 -- an 80-acre area. So if the Missy No. 2 performs simi-
23 larly to the 1-Y, I would fully expect it to produce its 80
24 acres plus quite a bit more.

25 Q I'm correct in understanding, then, you

1 have built in no change so that once the Missy No. 2 de-
2 clines and is no longer able to produce 300 barrels a day,
3 then the whole spacing unit would not produce the top
4 spacing allowable.

5 A The allocation formula I propose does
6 not take into account productive nature of either well. It
7 merely takes the depth bracket allowable and allocates it
8 evenly between the two wells.

9 Q And if fixes it permanently, then, on a
10 ratio of 302 barrels to the No. 2 and 80 barrels a day to
11 the No. 3.

12 A Or whatever they can produce out of the
13 No. 2 Well, that's correct.

14 Q Do you know what the current producing
15 rate is out of the No. 2 Well?

16 A Well, it was said to be around 200 to
17 300 barrels a day.

18 Q Other than what you heard from Mr. Cor-
19 bett, you don't have any other information?

20 A Oh, I have, you know, information we
21 pulled from other sources which indicated, correlated with
22 what he said.

23 MR. KELLAHIN: I have nothing
24 further.

25 MR. CATANACH: Anything fur-

1 ther, Mr. Carr?

2 MR. CARR: I have a closing
3 but that's all.

4 MR. CATANACH: I have no ques-
5 tions of the witness.

6 MR. KELLAHIN: I'd like to
7 call Mr. Bush as a witness today.

8 Mr. Bush has already been
9 sworn, Mr. Catanach.

10

11

ERNIE BUSH,

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

14

15

DIRECT EXAMINATION

16 BY MR. KELLAHIN:

17 Q For the record, Mr. Bush, would you
18 identify yourself, giving us your name and your occupation,
19 sir?

20 A Ernie Bush, District Geologist for the
21 NMOCD.

22 Q And during the time of March and April
23 of 1989 what was your function and capacity at the OCD
24 office in Aztec, New Mexico?

25 A As a -- as a geologist.

1 Q As a geologist in the District Office of
2 the OCD is one of your responsibilities to answer inquiries
3 by operators with regards to filing paper work procedures
4 and helping them understand and interpret the orders and
5 rules of the Oil Conservation Division?

6 A That's correct.

7 Q Did you have occasion on or about March
8 18th -- March 14th, 1989, to talk to Mr. John Corbett of
9 Hixon Development Corporation with regards to the drilling
10 of a well in Section 35?

11 A I did.

12 Q And did that conversation take place in
13 person or on the telephone?

14 A It was on the telephone.

15 Q Would you describe for us as best you
16 recall it, Mr. Bush, who initiated that phone call?

17 A Mr. John Corbett with Hixon Development.

18 Q And as best you can recall, would you
19 describe for us the content of that telephone conversation
20 and tell us what was discussed?

21 A Yes. He told me that Hixon Development
22 was contemplating drilling a well in the West Lindrith
23 Gallup-Dakota Pool and was concerned about the -- the buf-
24 fer zone that existed between the various pools and auto-
25 matically the Gavilan comes to mind through a misunder-

1 standing in communication there, I assumed that the well
2 that they were proposing was going to be drilled in an-
3 other quarter section, the northeast quarter section.

4 Q As a result of that misunderstanding on
5 your part about what he was doing, what did you advise him?

6 A I advised him that he could drill 330
7 from the drill tract boundary.

8 Q Was that the complete conversation as
9 best you recall it, Mr. Bush?

10 A Yes, it was, Mr. Kellahin, the best that
11 I can recall.

12 Q Mr. Corbett has -- has submitted to us
13 an approved C-101 that was submitted to the District Office
14 for approval on the well. Let me show that to you, sir.
15 It's out of his exhibit book.

16 What is the date of approval that the
17 Oil Conservation Division approved his APD for the drilling
18 of the Missy No. 3 Well?

19 A March 17th, 1989.

20 Q All right, and that shows the approval
21 of a location 330 out of the south and east quarter of
22 Section 35?

23 A That's correct.

24 Q And what is the normal procedure --
25 well, it's 330 out of the south and east of the southwest

1 quarter.

2 A Of the southwest quarter, I understood
3 what you --

4 Q What is the procedure within the OCD
5 District Office for processing APD's such as this to
6 determine whether or not they're in compliance with the
7 rules?

8 A We -- we give advice to the operator and
9 then await the APD to arrive and I generally approve the
10 APD and Mr. Chavez double checks that, that APD.

11 Q Do you have occasion to have APD's filed
12 with your office that in fact unbeknownst to the operator
13 and until you discover it are at locations that cannot be
14 approved until they go through some further hearing process
15 to get their unorthodox location justified by the Division?

16 A That's correct.

17 Q All right.

18 A Yes.

19 Q Did that occur in this case?

20 A No, it did not.

21 Q Why not, sir?

22 A We missed it. The NMOCD District III
23 missed it.

24 Q Doesn't happen very often, does it,
25 Ernie?

1 A No, no, it doesn't, (unclear).

2 Q Am I correct in understanding that for
3 the West Lindrith Gallup-Dakota Pool, that an operator such
4 as Hixon can make a voluntary choice about drilling an in-
5 fill well on 160-acre spacing unit and can do so without
6 having that fact penalized?

7 A Yes, right.

8 Q You can have two wells on a spacing
9 unit.

10 A Yes.

11 Q And you're limited, then, by the depth
12 bracket allowable of 382 barrels for that spacing unit.

13 A That's correct.

14 Q And under the current rules you can pro-
15 duce those wells in any combination?

16 A That's right.

17 Q All right. When -- when did -- when did
18 OCD Aztec first discover that in fact both you and Mr. Cor-
19 bett were mistaken about the location, in fact it was an
20 unorthodox one?

21 A If you will refer to Exhibit One of
22 Hixon's exhibits, this is indeed the proper chronology and
23 we -- we did communicate with Hixon Development on March
24 30th, the day that the well was spud.

25 Q How did OCD Aztec become aware that the

1 APD permit approved was in fact in error and the well was
2 at an unapproved, unorthodox location?

3 A We received a call from Mr. Craig
4 Agerman. Mr. Chavez received a call from Mr. Craig
5 Agerman.

6 Q Have you reviewed your file to deter-
7 mine when, approximately, that call was received by Aztec
8 from the Mobil personnel?

9 A Yes. My recollection, I left on vaca-
10 tion on the Friday that the call was -- was received and
11 that was -- that was the week of the 12th, I believe.

12 Q When did you first, after discovering
13 that the well is at an unapproved, unorthodox location,
14 when did you first communicate that, or the Division com-
15 municate that, to Hixon?

16 A On March 30th.

17 Q Did you subsequently thereafter person-
18 ally meet with any of the personnel of Hixon to discuss
19 this matter?

20 A Yes.

21 Q And when did that occur, Mr. Bush?

22 A That occurred on -- on the 31st, on
23 March 31st.

24 Q And what was discussed, Mr. Bush?

25 A That indeed, according to the -- to the

1 pool rules, Hixon Development was at an unorthodox loca-
2 tion.

3 Q And with whom did you meet and make --
4 have that discussion?

5 A Mr. John Corbett.

6 Q And as a result of discovering that lack
7 of approval of the unorthodox location, am I correct in
8 understanding that a hearing was required in order to re-
9 solve that matter?

10 A That's correct, in -- in regard to the
11 nonstandard location or the unorthodox location.

12 Q Did you personally have any conversa-
13 tions or contacts with any of the Mobil personnel with re-
14 gards to this matter?

15 A No, I did not.

16 Q You've -- how long have you processed
17 these kinds of things, Mr. Bush, in years?

18 A Around 5-1/2 years.

19 Q All right. In -- in reviewing -- have
20 you had occasions to review and discuss unorthodox well
21 locations for various wells in this area?

22 A Oh, yes.

23 Q Do you have a recommendation as an ad-
24 ministratoer and as a regulator as to how we might resolve
25 the -- the equities among the parties and come up to some

1 solution?

2 A Yes, I do, Mr. Kellahin. In the --
3 Hixon Development acted with all prudence in contacting the
4 NMOCD for -- for advice and unfortunately received the
5 wrong advice. We don't feel that Hixon should be penalized
6 with -- with an allowable adjustment; that at the most
7 Mobil be given the opportunity to drill 330 setback on the
8 south for -- from the south of the Missy 3 Well, or the
9 southern boundary of the West Lindrith Gallup-Dakota Pool.

10 Q The Mobil proposed penalty of taking the
11 top allowable, dividing it among the two wells and then as-
12 sessing against the Missy 3 a footage factor penalty of 330
13 over the 790, have you ever seen a formula utilized like
14 that in your area of responsibility?

15 A No, I have not.

16 Q Do you have any observations or comments
17 with regards to whether or not you personally feel the
18 Mobil proposed penalty is fair and reasonable?

19 A I feel that the Mobil proposed penalty
20 is much too punitive

21 Q Why, sir?

22 A Well, it -- if you -- if you examine the
23 -- the window of the -- of the proration unit, in a stand-
24 ard situation, Hixon could have very well been closer to
25 the Mobil No. 75 Well, and I feel that -- that since the

1 -- the Mobil 75 is close to the -- to the Hixon proration
2 unit, that maybe, if nothing else, they should share in an
3 allowable reduction situation that Hixon -- has been pro-
4 posed for Hixon.

5 MR. KELLAHIN: I have no fur-
6 ther questions.

7 MR. CATANACH: Mr. Carr?

8

9

CROSS EXAMINATION

10 BY MR. CARR:

11 Q Mr. Bush, do your duties for the Oil
12 Conservation Division involve the administration of the New
13 Mexico Oil & Gas Act?

14 A Yes.

15 Q And the rules of the Division?

16 A Yes.

17 Q Those provisions provide -- the Oil &
18 Gas Act provides your duty is to protect correlative
19 rights, isn't that correct?

20 A That's correct.

21 Q And it is also your duty to prevent
22 waste, isn't that right?

23 A That's right, Mr. Carr.

24 Q And there are statewide rules that are
25 promulgated by this Division to carry that out, isn't that

1 correct?

2 A That's correct.

3 Q And there are special pool rules that
4 are designed to do that.

5 A That's correct.

6 Q And when those rules are adopted it's
7 safe for an operator to presume they're based on prevention
8 of waste and protection of correlative rights, isn't that
9 also fair?

10 A That's right.

11 Q And when you're out there administering
12 these rules don't you expect operators to be familiar with
13 the rules as well as just asking the Division every time
14 there's a question?

15 A Yes.

16 Q All right. Now, in this case a mistake
17 was made. I think we can all agree with that. That's what
18 I understand your testimony to be, isn't that right?

19 A That's correct, Mr. Carr.

20 Q Now, the No. 1 -- the No. 3 Well,
21 however, is at an unorthodox location, is it not?

22 A That's right.

23 Q It's not within the requirements as pro-
24 vided in the special pool rules for this particular pool,
25 isn't that correct?

1 A Again you're correct.

2 Q And when an operator comes in and is
3 drilling at an unorthodox location, if they tell you that's
4 a mistake, does that absolve you from responsibility to
5 protect correlative rights?

6 A No, no, it doesn't.

7 Q Now, when -- when you say you don't
8 think a penalty should be imposed, did you calculate
9 drainage areas?

10 A No, I did not.

11 Q Did you estimate how many reserves were
12 going to be produced from the No. 2 Well?

13 A I did not.

14 Q Did you estimate how many additional re-
15 serves could be produced from the No. 3?

16 A I did not.

17 Q Did you compare those with the total
18 potential reserves under that tract?

19 A No.

20 Q Did you -- had you made any estimate of
21 the fact that that might authorize production in excess of
22 the reserves that are there?

23 A No.

24 Q And if they did authorize production in
25 excess of the reserves that were there, would that give

1 Mobil and opportunity to produce the share of reserves that
2 are under its tract, if in fact some of those were being
3 drained from it?

4 A Yes.

5 Q It would give them an opportunity to
6 produce their reserves if they're being produced in the
7 Hixon Well?

8 A Oh, excuse me, no.

9 Q But you didn't consider any of these
10 factors.

11 A No, I did not.

12 Q You just think a penalty is punitive be-
13 cause it's going to restrict a well because it was drilled
14 under some mistaken notion.

15 A Indeed it was, it was drilled under a
16 mistaken notion.

17 Q Whose mistake was that? Was it Mobil's?

18 A No, it was not.

19 Q Was it -- was it the Division's?

20 A Yes.

21 Q Was it Hixon's?

22 A Yes.

23 Q And if this authorizes drainage it's
24 going to be drained from Mobil, isn't that right? They
25 offset them east, south and southeast.

1 A In the event that the drainage calcu-
2 lations are correct.

3 Q And in that situation they would taking
4 reserves from Mobil, right?

5 A That's conceivable.

6 Q Now, you were here for Mr. Corbett's
7 testimony, were you not?

8 A Yes.

9 Q You were here for Mr Craig's testimony,
10 were you not? Both of them testified that wells at 660
11 feet apart in this reservoir wouldn't be efficient drain-
12 age patterns. Did you hear that?

13 A That's correct.

14 Q And if that is the case wouldn't you
15 think that would be a wasteful well?

16 A The -- you mean if -- if we were able to
17 allow --

18 Q If you --

19 A -- them to -- to offset --

20 Q If you accept the fact, if you accept
21 both of their testimonies, that you have an inefficient
22 drainage pattern, isn't that wasteful?

23 A Yes, but the wells were on 660.

24 Q If we were authorized to come in 330 off
25 of the south line, south of that common line, like they are

1 330 north, that would be 660. That would be an ineffi-
2 cient drainage pattern if you accept the testimony of the
3 expert witnesses here today.

4 A If it's 660 or -- or less, yes.

5 Q And -- and if it's an inefficient drain-
6 age pattern, wouldn't that cause waste?

7 A It could.

8 Q And wouldn't that violate your duties
9 under the Oil & Gas Act to come in and recommend that?

10 A It could.

11 Q So you could recommend waste by doing
12 this and you could also impair our correlative rights by
13 doing this.

14 MR. KELLAHIN: Was that ques-
15 tion answered? I don't think we have an answer yet.

16 A Well, I think that that's subjective.

17 Q Isn't that what your job is to do, is to
18 make these decisions to assure that waste doesn't occur and
19 correlative rights are protected?

20 A That's right.

21 Q Did you state you thought the Mobil 75
22 ought to share in some sort of a reduced allowable?

23 A In that they were at an unorthodox loca-
24 tion.

25 Q Were they encroaching on anyone else?

1 A They would, of course, come closer to
2 Hixon's proration unit.

3 Q They were 540 feet off that line, isn't
4 that correct?

5 A That's correct.

6 Q And the pool rules would permit being
7 330 feet off that line, isn't that right?

8 A That's right.

9 Q And they were not encroaching on that,
10 isn't that correct? Maybe on an arrowhead but not on an
11 offsetting operator.

12 A Okay.

13 Q All right.

14 MR. CARR: I have no ques-
15 tions.

16

17

REDIRECT EXAMINATION

18 BY MR. CARR:

19 Q Mr. Bush, when you look at the section
20 to the west of 35 on any of the displays, let me find one
21 for you, sir. Mr. Bush, when you look at the section t the
22 west of 35, I believe it's 34 --

23 A Yes.

24 Q -- am I correct in understanding that
25 Mr. Schalk has spudded a West Lindrith Gallup-Dakota well

1 in Section 34?

2 A That's correct.

3 Q Approximately where is that, Mr. Bush?

4 A Oh, Mr. Kellahin, let's see, it -- it
5 offsets the -- it's in the southeast quarter.

6 Q And does it offset the western boundary
7 of Mr. Hixon's -- I'm sorry, of Hixon Development Company's
8 spacing unit by 330 feet?

9 A Yes, it does.

10 Q Within the interior of West Lindrith
11 Gallup-Dakota, then, wells can be as close as 330 to that
12 boundary?

13 A Yes, they can.

14 Q And when we look at the Missy No. 3, it
15 can be 330 legally from the eastern boundary of its spacing
16 unit in relation to the Mobil property that's dedicated to
17 the 75 Well?

18 A Yes. Yes, Mr. Kellahin.

19 Q And if the northwest quarter of Section
20 1 to the south was part of the West Lindrith Gallup Pool
21 within an interior boundary, then Mobil could drill a well
22 330 from that common line, as well.

23 A From the -- from the east section line
24 or the west --

25 Q Well, by assumption now, let's assume

1 that the western -- the southern boundary of West Lindrith
2 --

3 A Yes.

4 Q -- has been extended and includes the
5 northwest quarter of Section 1.

6 A Okay.

7 Q All right? If that pool boundary is
8 moved 160 acres to the south --

9 A Yes.

10 Q -- then the difference between those two
11 spacing units would allow a well as you have recommended be
12 allowed for Mobil to be as close as 330 feet.

13 A Yes.

14 Q And that takes into consideration the
15 fact that that complies with the West Lindrith Gallup-
16 Dakota rules.

17 A 330 from the -- from the proration unit
18 either on the east or the west, sure, but from the north --

19 Q It doesn't currently comply.

20 A That's right.

21 Q We would have to change that western
22 boundary by some extension or modification.

23 A That's right.

24 Q And if that were to take place, then you
25 could have a West Lindrith Gallup-Dakota Well 330 feet away

1 from all our sides of this spacing unit.

2 A With the -- with the current pool rules,
3 well, maybe I'm not following you.

4 Q All right, under the current pool rules.

5 A Under the current pool rules they'd have
6 to be 790 from the -- from the proration -- the northern
7 proration boundary.

8 Q All right.

9 A In the event that they were drilling in
10 the northwest quarter of Section 1, they would have to
11 situate at least 790 from the (unclear).

12 Q Now, Schalk is allowed to be 330 for
13 what reason?

14 A They're within the interior of the West
15 Lindrith Gallup-Dakota.

16 Q If the southern boundary line of Section
17 35 is changed so that is now an interior line, move the
18 pool south --

19 A Yes, yes, I understand what you're
20 getting at.

21 Q All right, if that pool is moved south,
22 then --

23 A Yes.

24 Q Then it's a 330 location, isn't it?

25 A Yes.

1 Q And with regards to drainage within the
2 pool itself, there's no one that has presented a case to
3 change the spacing other than what it is now, 330.

4 A That's correct.

5 Q Notwithstanding the fact that you've got
6 160-acre spacing.

7 A That's right.

8 Q There is that degree of magnitude of
9 flexibility in locating wells on 160 acres within the in-
10 terior of West Lindrith, is there not?

11 A That's correct.

12 Q Your proposed solution is to allow
13 Mobil, then, to offset the Hixon spacing unit the same
14 distance as Mr. Schalk has offset it on the west.

15 A That's right.

16 Q And by doing so, then you will have a
17 situation where the various offsetting operators have the
18 opportunity to protect their correlative rights because
19 they can locate wells equidistance apart within the limits
20 of the pool rules.

21 A That's correct.

22 Q What is your understanding of the basis
23 for the 790 rule on the buffer?

24 A The 790 rule on the buffer of the West
25 Lindrith Gallup-Dakota with the exception of that that is

1 common with the Gavilan, is -- there was a feeling that --
2 that there needed to be some kind of an adjustment made to
3 prevent the drilling of unnecessary wells opposite the
4 boundary of the West Lindrith Gallup-Dakota Pool.

5 Q When we're dealing with the Gallup
6 Mancos interval.

7 A That's correct.

8 Q That was to separate the Mancos wells
9 from the West --

10 A That's right, yes.

11 Q -- Lindrith wells in that --

12 A Yes, yes, yes --

13 Q -- formation?

14 A -- yes, we must -- must consider the
15 fact that it -- that all this started with the disparity in
16 allowable and setback and that -- and the fact that the 160
17 proration units were butting up against the 640's in the
18 Gavilan for the Mancos supply only. The Dakota was a se-
19 condary factor.

20 Q If a Gavilan -- if a Mancos well is
21 drilled in Section 1 by Mobil and is put at a location 790
22 from the northern boundary of Section 1, what would be the
23 allowable for that well using the Mancos allowable?

24 A The Mancos allowable rules from the
25 Gavilan?

1 Q Yes, sir.

2 A On 160's?

3 A No, sir, on 640's.

4 Q On 640's.

5 A Right.

6 Q Let me set the situation for you. If
7 Mobil steps out to the west from the 73 Well in Section 6,
8 goes out a mile and drills in Section 1 and dedicates Sec-
9 tion 1 to a Mancos well, they can get 800 barrels of oil a
10 day, can't they?

11 A That's right.

12 Q Yeah, and what's its allowable going to
13 be if it comes farther down the hole in the Dakota?

14 A That's the Gavilan-Greenhorn-Graneros
15 Dakota, which currently has the same -- same situation.

16 Q As in West Lindrith.

17 A As the --

18 Q As the West Lindrith or as Gavilan?

19 A As in Gavilan.

20 Q So conceivably Mobil could drill a
21 Gavilan Mancos Well, complete in the Dakota, and get 800
22 barrels of oil day and be 790 feet apart from a Hixon well?

23 A Yes.

24 MR. KELLAHIN: I have nothing
25 further.

1 MR. CARR: Nothing further.

2 MR. CATANACH: The witness may
3 be excused. We'll take a couple of minutes recess.
4

5 (Thereupon a recess was taken.)
6

7 MR. CATANACH: We're going to
8 recall Mr. Mark Craig to the witness stand, please.

9 MR. STOVALL: Let the record
10 reflect that's at the request of the Division.
11

12 MARK CRAIG,

13 being recalled as a witness and remaining under oath, tes-
14 tified as follows, to-wit:
15

16 CROSS EXAMINATION

17 BY MR. STOVALL:

18 Q Mr. Craig, I'd just like to explore some
19 possibilities with you to consider alternatives --

20 A Okay.

21 Q -- to this situation that we have here.
22 There are some -- I think the record is pretty clear that
23 there is a well drilled at an unorthodox location due to
24 some combined errors of the Division and Hixon Development
25 and there are some proposals as to how to equitably protect

1 the correlative rights of Mobil in this situation.

2 A Right.

3 Q Now, some of this is ground that you've
4 actually gone over but I'd just like to explore it with you
5 just for a minute to consider alternatives other than the
6 ones that you have proposed.

7 Certainly as far as with respect to the
8 Missy No. 2, you have no -- no -- that well could produce
9 its allowable, unrestricted allowable, forever, as far as
10 you're concerned, and you --

11 A Well, it's in a -- it's in an orthodox
12 location. I see no reason to try to penalize that well.

13 Q And if the Missy No. 3 were another 400
14 or whatever feet it takes to get to the 790 location, 460,
15 I guess, further north --

16 A 440.

17 Q 440, excuse me.

18 A I believe.

19 Q Then you would have no objection to
20 those combined wells producing their --

21 A How could I? They'd be --

22 Q -- combined allowable.

23 A -- complying with all the rules of this
24 state.

25 Q If the Missy No. 3 in its present loca-

1 tion were the only well in the proration unit, what penalty
2 would you suggest?

3 A If it were the only well?

4 Q In the proration unit.

5 A I would --

6 Q Would you suggest a penalty, if any?

7 A Of course, because it's in a nonstand-
8 ard location.

9 Q What penalty would you suggest?

10 A I would suggest just based on -- on an-
11 other case I saw, the 330 divided by 790 times the depth
12 bracket allowable for that, you know, for that proration
13 unit, say if there's one well in the proration unit and
14 that's all you could have. That's what I would suggest.

15 That makes some sense. It's -- I think
16 it's better than some of the other formulas I've seen which
17 have no basis in reality.

18 Q Your editorial comments are appreciated
19 immensely, but you've destroyed my train of thought.

20 A Sorry. We -- I -- can I say something?

21 Q Yes.\

22 A We looked at this another way, too. We
23 looked at a 330 foot -- if you drew a circle 330 feet, you
24 know, with a radius of 330 feet, compared it to the area of
25 the circle 790 feet, and compared those two areas, and then

1 you multiplied that times the depth bracket allowable, that
2 gives you 67 barrels, I think it was 67 barrels of oil per
3 day. If you used that as a ratio method, what that says is
4 at the point the Missy No. 3 had cumed the same amount of
5 oil as -- if we drilled a well up here in a legal location
6 790 feet away, and we drew a circle around that and drew a
7 330 foot circle around that, the ratio of those two areas
8 would make a somewhat reasonable allocation factor.

9 Q It's somewhat more difficult to calcu-
10 late.

11 A Well, it's not, really not, it's just
12 330 squared divided by 790 squared, and multiply that times
13 the depth bracket allowable.

14 So we -- I mean that makes some sense,
15 too, but that's even more onerous than -- than the one we
16 proposed.

17 Q Now, under your proposal what you've es-
18 sentially proposed is the 330 over 790 and then divide that
19 in half because there are two wells, --

20 A Right.

21 Q -- is that correct?

22 A There's -- as I see it if you --

23 Q Well, let me just -- let me just take
24 you through this line of reasoning. I think --

25 A Sure.

1 Q -- I understand and I don't need to have
2 you re-explain it here.

3 A Right.

4 Q I'm not trying to lengthen this pro-
5 ceeding.

6 A If it was gas wells it would be very
7 simple to allocate production.

8 Q And then what -- what you're saying is
9 that the Missy No. 2 could produce whatever it could up to
10 the unit allowable.

11 A Well, certainly.

12 Q If that number comes up with 80 and I've
13 forgotten what the unit allowable is in there.

14 A 382.

15 Q 382, so we've got a 302 available, if
16 the Missy No. 2 could produce 302, then it would be a --
17 you've have no objection to that. The unit --

18 A How could I?

19 Q -- would still be getting its allowable,
20 isn't that correct?

21 A That's correct.

22 Q What would be your reaction, and I'm
23 just asking for your -- I'm not expressing any feeling, if
24 -- if we used a 330 over 790 formula without dividing by
25 two and add the penalty on the Missy No. 3, and then allow

1 the unit its full allowable, the rest of it would have to
2 be made up in the Missy No. 2.

3 A The problem I see with that is you take
4 330 and divide it by 790, I believe that's 43 percent.

5 Q I'll take your word for it. We can
6 figure the numbers subject to check (not clearly under-
7 stood).

8 A What you're doing essentially is you're
9 giving it no penalty.

10 Q Why do you say that?

11 A Well, if you take 300, if you take 382
12 barrels, you have to allocate that some way between the two
13 wells. I mean if you're -- I know there's no mechanism in
14 place to do that with this Commission. If it was gas wells
15 we'd probably take absolute open flow or something like
16 that and (unclear) it somehow that way, but these are not
17 gas wells, they're oil wells, there's no -- nothing that
18 says how to allocate production between wells.

19 So what we're saying, and I think this
20 is a safe assumption based on the logs we've seen, is that
21 the Hixon Missy No. 3 will have the same productive capa-
22 city as the No. 2 and if they're equal capacity, then I
23 believe the depth bracket allowable should be divided
24 equally between the two wells.

25 Q And then do I understand correctly that

1 what you're saying is a 43 percent penalty really amounts
2 to no penalty because it gets virtually half the produc-
3 tion of the unit anyway?

4 A That's correct. You get 43 percent of
5 382.

6 Q Okay, thank you. I just wanted to get
7 your reaction to that, if you consider that as a another
8 possibility. Let me just ask you one last --

9 A That would be 164 barrels a day, which
10 is essentially, I consider that no penalty.

11 Q One last question that if, Mr. Kellahin
12 posed all sorts of "what ifs" to you, let's make it a real
13 "what if", if in fact the sections to the south, I believe
14 that's 1 and 2, were to be -- if the West Lindrith Gallup-
15 Dakota Pool were to be expanded to include those sections,
16 do I understand that you would not then consider a penalty
17 to be necessary because this well would then be in a legal
18 location?

19 A If I had data to show that those wells
20 were in communication and were of a common source of supply
21 I'm not sure what I'd do. I might even suggest forming a
22 new pool.

23 I do not think 660 feet between wells is
24 an efficient way to drain --

25 Q That's not my question. I'm not asking

1 whether or not it's an efficient way --

2 A You're posing something I really can't
3 comment --

4 Q I'm suggesting that -- that if Mobil
5 were to drill a well, for example, in Section 2, Section 2
6 might be -- or the pool might very well be expanded through
7 a nomenclature proceeding --

8 A It might not.

9 Q -- to include Section 2.

10 A It might not. It might be set up as a
11 separate pool.

12 Q Only on Mobil's application, I suspect
13 --

14 A Who knows --

15 Q Let me pose a "what if", let's not dis-
16 cuss that, if it was proposed would you then agree that
17 it's a legal location and a penalty would no longer be ap-
18 plicable?

19 A If that happened, but I --

20 Q That's all I said, is if it happened,
21 would you agree it's a legal location --

22 A I don't know that that would happen.

23 Q I don't either. I'm just asking what
24 you'd say if it did.

25 A Sure, if that's what happened.

1 MR. STOVALL: Okay, I have no
2 further questions.

3 MR. CARR: Mr. Catanach?
4

5 REDIRECT EXAMINATION

6 BY MR. CARR:

7 Q Mr. Craig, did some of these sound like
8 hypotheticals to you?

9 A Certainly.

10 Q All right, thank you.

11 MR. STOVALL: I would stipu-
12 late that they are, Mr. Carr.

13 MR. CARR: Unlike Mr. Kellahin
14 I couldn't see the difference.

15 Are we ready to close?

16 MR. CATANACH: Certainly.

17 A Can I step down?

18 MR. CATANACH; Yes, you may.

19 MR. CARR: May it please the
20 Examiner, some years ago Emory Arnold, who was District
21 Supervisor for the Aztec District of the Oil Conservation
22 Division, told Pete Porter to run his district, he, Emory
23 Arnold, would run his own.

24 I thought that was strange but
25 we always operated under the assumption that whether -- who

1 was in charge, no matter who was in charge, we were pur-
2 suing the same goal, and that's the prevention of waste and
3 the protection of correlative rights.

4 I always thought that until
5 today. For today a new theory seems to be evolving, and
6 that is, if I make a mistake we can throw out the statu-
7 tory unit position, and I submit to you that's absurd.

8 You know, what we've heard
9 today is an awful lot of stuff about what if this, that, or
10 the other thing. Hypotheticals are not before you. What
11 we have is a well at an unorthodox location. It violates
12 the rules, rules that Mobil thought meant something.

13 We're not here in a hearing to
14 change pool rules, to move a pool boundary, or to change
15 individual spacing before you or undrill a well that has
16 been drilled. We've got a particular fact situation and
17 we're asking you, at least, Mr. Catanach, to enforce the
18 rules of the Division and the statutes which empower you to
19 act. That's what we're here for.

20 Now, what are the facts?
21 Hixon drilled a well that violates the rules of the Divi-
22 sion. It's in an improper location. It was a mistake.

23 It isn't Mobil's mistake. I
24 submit, in fact, it isn't the Division's mistake. It's a
25 mistake of the operator. It was drilled at the wrong place

1 and they didn't know. They didn't know until they were 3
2 hours and 20 minutes into drilling a 3-week objective and
3 because their economics and because their concern of
4 keeping their venture profitable, which is a proper "con-
5 cern", but because of those considerations they stayed
6 there. They didn't move the well. They didn't direction-
7 ally drill. They continued to drill at an illegal loca-
8 tion and now we come up here and we want a penalty that's
9 just half of what we ordinarily would get.

10 That's no penalty at all.
11 It's nothing, and yet what they've done is they've come too
12 close to us under the rules and they're putting two wells
13 on a unit that somehow should be permitted to produce un-
14 restricted.

15 I have a hard time under-
16 standing the line of questioning that says, yes, if you
17 restrict the well that's crowding you to 80, eventually
18 you're not going to get to produce the top depth bracket
19 allowable. Nothing guarantees anybody the right to pro-
20 duce the top depth bracket allowable. The question here is
21 getting outside the rules and getting too close to an off-
22 setting property where they can drain us on three sides.

23 That's what they're here
24 doing. They say, well, when we drilled it, we weren't
25 going to get a geologic benefit. Well, they did, although

1 there was a trend that was there, and I suggest to you they
2 weren't trying to get a geologic benefit. They're trying
3 to get away from the Missy No. 2, a well that after five
4 months has already produced 40-to-60,000, after five
5 months; 40-to-60,000 of the 171,000 they estimate are re-
6 coverable.

7 I submit to you the facts just
8 reek of draining the offsetting properties and they're
9 doing it with a well at an improper location and we're
10 asking you to do something about it, because, Mr. Catanach,
11 we have two options. An effective penalty from you, and I
12 mean one where we divide the formula in half so it means
13 something, or we have to go out and offset drainage with
14 counter drainage, which means 330 from the lease line which
15 a lot of people thought, perhaps, would solve it, but the
16 two engineers, or the two technical witnesses called by the
17 two parties, Mr. Corbett for Hixon and Mr. Craig for Mobil,
18 both said that's an inefficient pattern. And we submit to
19 you that if you're going to come in and require an ineffi-
20 cient pattern what you're doing, in effect, is causing
21 waste. It would be a wasteful well. So that isn't an op-
22 tion at all.

23 So we're right back to where
24 we started. We're asking you for a penalty and we come in
25 and we say, yes, but look at the economics. It's going to

1 cost us money. Well, perhaps that's true, but I've never
2 understood why economics are a factor in determining cor-
3 relative rights. Correlative rights is a function of
4 drainage. It's giving us a chance to get our share and
5 just because somebody else is going to be adversely af-
6 fected in terms of their bottom line figure, doesn't mean
7 they have a right to drain us. It -- it runs right in the
8 face of correlative rights.

9
10 And so what we are doing is
11 we're coming before you, we're asking you to exercise the
12 statutory duties of this Division if nobody else will, and
13 impose a penalty that's meaningful and read some meaning
14 into your rules and tell us again that what you're here for
15 is to protect correlative rights and prevent waste, not
16 just cover up mistakes.

17 MR. KELLAHIN: Mr. Examiner,
18 it's uncontested that this is certainly not an intentional
19 violation of the rule. It certainly is a special circum-
20 stance seeking special solutions. In the typical unortho-
21 dox location case we have an operator that prior to spud-
22 ding the well understands, in fact, that he is at an unor-
23 thodox location. This is not that situation.

24 We have a situation where
25 through the complexity of the rules and the misunder-
standing of both Mr. Corbett and Mr. Bush, the application

1 for permit to drill was approved.

2 I've lived and breathed the
3 Gavilan and West Lindrith for a few years now and it didn't
4 occur to me until I started studying it that the 790 rule
5 applied to the southern boundary of West Lindrith. It
6 didn't dawn on me and I suggest it didn't dawn on the
7 Division staff or on Mr. Corbett, either.

8 We've spent hours developing
9 that buffer zone and that was principally to deal with the
10 Gallup production in West Lindrith along the vertical sec-
11 tion line where the two townships come together and we have
12 Gavilan moving west and West Lindrith moving east. That
13 was a way to make sure that there was some way to protect
14 correlative rights and prevent waste that Mr. Carr's
15 talking about.

16 To suggest now that we should
17 take what is an honest mistake and allow Mobil to pursue
18 the opportunity to take advantage of that situation, and to
19 extract a punitive penalty against Hixon, I think is
20 grievous. The facts speak for themselves. They have off-
21 set the Missy No. 2 Well, placing closeology, trying to get
22 into the same formation that produces in that Dakota Well.

23 They've drilled one well.
24 I've heard it time and time again from their witness today
25 and from Mr. Carr, that they're concerned about the mul-

1 tiple wells in the adjoining spacing unit. Those two wells
2 are permitted. They're allowed under the current rules and
3 either one of those wells could produce 382 barrels by
4 themselves.

5 To suggest that we have to
6 take that and artificially divide it among the two wells
7 and then compound it by further extracting a penalty on
8 location is unheard of. Mr. Bush never heard of it; never
9 happened certainly up in his district. That's punitive.

10 I suggest it's further puni-
11 tive to take a 790 setback which has no application at all
12 to what we're dealing here and apply that as part of the
13 formula. If you want a footage formula, why don't we get
14 to the one that's really bothering Mobil? What they're
15 concerned about is that No. 75 Well and if you want to
16 create a unique situation with the solution, you take 330
17 and divide it by 540, as Mr. Stovall was suggesting as one
18 of the choices. That reduces the ability of the Missy 3
19 Well to compete for reserves against the well in 75.

20 Ultimately, I think Mr. Bush's
21 suggestion is the right one, that in order to protect cor-
22 relative rights in this pool you allow the offsetting oper-
23 ator the opportunity to drill at a similar location. If he
24 chooses not to do so, then that's his choice, but I don't
25 think that you need to extract such a penalty against

1 Hixon, particularly when you look at the undisputed tes-
2 timony in the transcript. I suggest to you that in ex-
3 tracting its pound of flesh from us, Mobil's been lying
4 behind the law. They want to take advantage of a situa-
5 tion that they allowed to happen.

6 The undisputed testimony is
7 that prior to spudding this well Mobil's hound-dogging the
8 OCD and they find the APD and they're aware that this
9 location has been approved and at least two days later the
10 well was spudded. If they want to be the good guys with
11 the clean hands to walk in here and righteously ask you for
12 an outrageous penalty, let them explain to you why they
13 didn't act in good faith among all operators, including the
14 responsibilities of the Oil Conservation Division to alert
15 us that we've made a mistake. They sit there and they hold
16 it. They don't do anything about it until they write us a
17 letter weeks later. Their hands are dirty in this deal and
18 I don't think they justify the outrageous penalty they're
19 suggesting.

20 The Oil Conservation laws of
21 this state demand equity. They require you to prevent
22 waste and protect correlative rights. They don't allow you
23 to take a punitive punishment against a situation that was
24 obviously a mistake and demands a novel and unique solution
25 and we would ask that you not award the type of penalty

1 that Mobil seeks to impose upon us, we think is totally
2 outrageous. We suggest to you that allowing them the op-
3 portunity to offset, to take advantage of proving up their
4 acreage as we have done is sufficient enough opportunity to
5 offset any violation of correlative rights and we would ask
6 that you impose that as the solution.

7 MR. CATANACH: Thank you, Mr.
8 Kellahin, Mr. Carr.

9 Anything further in this case?
10 Case 9661 will be taken under advisement.

11

12 (Hearing concluded.)

13

14

15

16

17

18

19

20

21

22

23

24

25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

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 and true transcript of the proceedings in
the Examination Case No. 9661
heard by me on April 26 1989.
David R. Catamb, Examiner
Oil Conservation Division

NEW MEXICO OIL CONSERVATION COMMISSION

COMMISSION HEARING

SANTA FE, NEW MEXICO

Hearing Date JULY 20, 1989 Time: 9:00 A.M.

NAME	REPRESENTING	LOCATION
W T Kellerman	Kellerman/Kellerman Agency	Santa Fe
John C. ...	Hixon Development	Farmington
Mike Haddenham	Hixon Development	Farmington
Aldrich L. Kuchera	Hixon Dev Co	Farmington
William F. ...	Campbell + Gluck, T.A.	Santa Fe
Michael Felop...	" " "	" "
John Faulhaber	MOBIL	DENVER
Phyllis Myers	Self - Land Owner	Bellevue
Jacy LeCora	RW Byram	Santa Fe/Roosevelt
Douglas Bland	State of NM - MMD	Santa Fe
Craig N Eggerman	Mobil	DENVER
Richard ...	Mobil	DENVER

NEW MEXICO OIL CONSERVATION COMMISSION

COMMISSION HEARING

SANTA FE, NEW MEXICO

Hearing Date JULY 20, 1989 Time: 9:00 A.M.

NAME	REPRESENTING	LOCATION

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

6 20 July 1989

7 COMMISSION HEARING

8 IN THE MATTER OF:

9 Application of Hixon Development Comp- CASE
10 any for an unorthodox oil well locat- 9661
11 ion and simultaneous dedication, Rio
12 Arriba County, New Mexico.

13 BEFORE: William J. Lemay, Chairman
14 William M. Humphries, Commissioner

15 TRANSCRIPT OF HEARING

16 A P P E A R A N C E S

17 For the Division:

18 For Hixon Development
19 Company:

20 W. Thomas Kellahin
21 Attorney at Law
22 KELLAHIN, KELLAHIN & AUBREY
23 P. O. Box 2265
24 Santa Fe, New Mexico 87504

25 For Mobil Producing Co.:

William F. Carr
Attorney at Law
CAMPBELL & BLACK, P. A.
P. O. Box 2208
Santa Fe, New Mexico 87501

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

I N D E X

STATEMENT BY MR. KELLAHIN	4
STATEMENT BY MR. CARR	9
JOHN CORBETT	
Direct Examination by Mr. Kellahin	13
Cross Examination by Mr. Carr	53
Questions by Mr. Lemay	83
RICHARD A. BURNS	
Direct Examination by Mr. Carr	86
Cross Examination by Mr. Kellahin	99
Questions by Mr. Humphries	111
Questions by Mr. Lemay	118
MICHAEL HADDENHAM	
Direct Examination by Mr. Kellahin	122
Cross Examination by Mr. Carr	137
Questions by Mr. Humphries	148
Questions by Mr. Lemay	150
Redirect Examination by Mr. Kellahin	151
RICHARD A. BURNS RECALLED	
Redirect Examination by Mr. Carr	152

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

I N D E X Cont'd

Recross Examination by Mr. Kellahin	154
Questions by Mr. Lemay	157

FRANK CHAVEZ

Direct Examination by Mr. Kellahin	158
Cross Examination by Mr. Carr	168
Questions by Mr. Humphries	178

STATEMENT BY MR. CARR	182
-----------------------	-----

STATEMENT BY MR. KELLAHIN	189
---------------------------	-----

E X H I B I T S

Hixon Exhibit One, Book of Exhibits	15
Hixon Exhibit Two, Area Map	34
Hixon Exhibit Three,	137
Mobil Exhibit One, Plat	88
Mobil Exhibit Two, Formula	90
Mobil Exhibit Three, Pressure Data	93
Mobil Exhibit Four, Interference Test	94
Mobil Exhibit Five, Build-up Test Data	95
Mobil Exhibit Six, Production History	95

1 MR. LEMAY: Call next Case
2 Number 9661, a de novo hearing, the application of Hixon
3 Development Company for an unorthodox oil well location and
4 simultaneous dedication, Rio Arriba County, New Mexico.

5 I'd like appearances in Case
6 Number 9661.

7 MR. KELLAHIN: Mr. Chairman,
8 I'm Tom Kellahin of the Santa Fe law firm of Kellahin,
9 Kellahin & Aubrey. I'm appearing on behalf of the Appli-
10 cant, Hixon Development Company.

11 MR. LEMAY: Thank you.
12 Additional appearances in the
13 case?

14 MR. CARR: May it please the
15 Commission, my name is William F. Carr with the law firm
16 Campbell & Black, P. A., of Santa Fe. We represent Mobil
17 in opposition to the application.

18 MR. LEMAY: Thank you. Are
19 there additional appearances in Case Number 9661?

20 Okay, let's put the show on
21 the road. Mr. Kellahin.

22 MR. KELLAHIN: Thank you, Mr.
23 Chairman.

24 Gentlemen, I've handed you an
25 exhibit book that is marked as Hixon Exhibit One, in which

1 we have placed a number of documents, displays, exhibits,
2 each of which is numbered by a page number and there is a
3 table of contents just inside the cover sheet of Exhibit
4 Number One.

5 Exhibit Number Two is an area
6 map showing the relationship of the West Lindrith Gallup
7 Dakota Pool with the adjacent pools, showing wells in this
8 area, and if you'll turn to the map, I will attempt to de-
9 scribe for you what our proof is today, some of the de-
10 tails of the facts and circumstances, and then describe for
11 you the issue that has brought us before you.

12 As you can see from the docket
13 of the case, this is an application originally brought by
14 Hixon Development Company for an unorthodox oil well loca-
15 tion in the West Lindrith Gallup Dakota Pool. On Exhibit
16 Number Two you can see that pool outlined with the blue
17 outline.

18 You'll find that well located
19 in Township 25 North, 3 West, in the last tier of town-
20 ships in -- sections in that township in Section 35.

21 Within that section, then, you
22 will see that there are a number of wells called Missy 1-Y
23 and the Missy 2 and the Missy 3. If you take the south
24 half of 35 and divide it into the southeast quarter, you'll
25 find the Mobil Lindrith Unit 75 Well.

1 If you look at the southwest
2 quarter of Section 35 you'll find the Missy 2 and the Missy
3 3. It is the Missy 3 Well that is the subject of this
4 hearing. It is a Dakota producer.

5 Unlike the more conventional
6 case that comes before you on unorthodox locations, in
7 which the applicant prior to spudding the well comes before
8 you to seek approval of an unorthodox location, my party
9 did not intend to drill an unorthodox location. This well
10 has already been drilled and completed.

11 It will be their testimony
12 from Mr. John Corbett, the Vice President of Hixon and
13 their petroleum geologist that supervised the permitting
14 and drilling of this well, Mr. Corbett will tell you as a
15 geologist that there was no material difference in the un-
16 orthodox location and the closest standard location.

17 Within the Dakota Pool, this
18 West Lindrith Pool, wells are spaced on 160 acres, and the
19 flexibility of the well locations allow wells to be as
20 close as 330 feet from the boundaries of the spacing unit,
21 with the exception, unknown by Hixon at the time, that on
22 the southern side of this township there applied a 790 rule
23 from the outer boundary of the pool.

24 You will also be told and the
25 Commission order will show that the West Lindrith Gallup

1 Dakota, the eastern boundary of that pool abuts up to and
2 is contiguous with the western boundary of the Gavilan
3 Mancos Pool. The 790 rule applies to that boundary as
4 well.

5 They've included in the exhi-
6 bit book, and you will find, Commission Order R-4314-A. It
7 is that order that is part of the confusion that occurred
8 that resulted in this location being applied for under what
9 we mistakenly believed was a standard location.

10 The mistake was perpetuated
11 because the Aztec District Office of the Division approved
12 the location, 330 from the boundary. The testimony will
13 show that the well was commenced and the second day of
14 drilling there was concern expressed by the Division to
15 Hixon that in fact the well now may be at an unorthodox
16 location. My client agonized over whether to continue with
17 the drilling. They made the decision that they were now
18 committed to the well at the unorthodox location and had no
19 other economic choice but to continue drilling at that
20 location.

21 The circumstances have given
22 rise to the question of what is an appropriate penalty for
23 a Dakota Well faced with that circumstance.

24 At the Examiner hearing Mobil,
25 who is the offset operator to the east, proposed a penalty

1 which the Examiner adopted and which we contend is onerous
2 and ought to be modified by the Commission.

3 Within the provisions of the
4 West Lindrith Dakota Pool you are entitled without penalty
5 to have a second well in 160-acre unit. The spacing unit
6 allowable for those Dakota Wells is 382 barrels of oil a
7 day and the rules allow you to produce that allowable for
8 the spacing unit in any combination between two wells if
9 you happen to have two wells on a spacing unit.

10 Mobil proposed a penalty based
11 upon two factors, one of which is they penalized this
12 spacing unit for exercising the right to have two wells and
13 they took the 382 barrels of oil allowable for the spacing
14 unit and divided that in half.

15 They then took the unorthodox
16 location as the numerator with the southern boundary spac-
17 ing footage, 790, as the denominator and came up with a
18 further penalty resulting in the Missy 3 Well being allowed
19 to produce no more than 80 barrels of oil a day.

20 As a result of that order,
21 then, the Missy No. 3 Well is 42 percent closer to the
22 outer boundary to the south and yet is subject to an 80
23 percent penalty. And it is that penalty that we propose to
24 discuss in detail with you this morning. It is the penalty
25 that we ask you to change and modify and it will be the

1 basis of our presentation this morning.

2 MR. LEMAY: Thank you, Mr.
3 Kellahin.

4 Mr. Carr.

5 MR. CARR: May it please the
6 Commission, the evidence presented today is going to show
7 that in 1987 the Oil Conservation Division promulgated
8 special pool rules for the West Lindrith Gallup Dakota
9 Pool. In developing these rules there was an industry study
10 committee and Hixon participated in that effort.

11 The rules that resulted from
12 that effort and from the Oil Commission order provides for
13 a buffer zone to provide for orderly development between
14 this pool and adjoining acreage.

15 We're here today because
16 Hixon, although they participated on the committee, made a
17 mistake and they drilled a well too close to the outer
18 boundary of the pool. The well is too close to acreage
19 operated by Mobil and Mobil is here seeking the imposition
20 of a meaningful penalty on the ability of the Missy No. 3
21 to produce.

22 We're asking you to confirm
23 what the Examiner did and impose the same penalty.

24 The evidence is going to show
25 that although Hixon worked on the committee, although the

1 rules were available to them, they went forward with the
2 well and they knew approximately 3 hours and 20 minutes
3 into drilling that they could be at an unorthodox location
4 and they talked about it and the evidence will show they
5 decided to take the risk. So the question is what penalty
6 should be imposed? How can it be made effective?

7 Mr. Kellahin correctly noted
8 that there is a provision in these rules that permits for
9 additional wells on a unit and production of the allowable
10 in any combination out of these wells. But when you have a
11 well at an unorthodox location, that compounds the problem
12 in terms of how to make the penalty meaningful when you've
13 got one well that can produce most of the allowable and now
14 you want to come in and cozy up to your neighbor and have
15 another well that is able to produce and that we're certain
16 they will recommend it produce at a rate which will in ef-
17 fect (unclear) virtually unpenalized; a penalty that will
18 for most of the producing life of this well enable it to
19 produce with no restriction whatsoever on its ability to
20 produce from the reservoir.

21 As we go through this case I
22 think it's very important to keep in mind what is not in
23 issue in this case.

24 No one's here asking you to
25 change the pool rules. That's not before you. Mobil is

1 before you asking you not to ignore them.

2 There's no question here about
3 how long anyone has been in the area. Correlative rights,
4 unfortunately, is one of those things where every day you
5 do wake up in a new world, every day you have them. You're
6 directed by statute to protect them whether we have been
7 out there ten years or ten days or (not clearly heard.)

8 It's not a question of whether
9 or not the Oil Conservation Division should correct what-
10 ever caused this. The Division expects an operator to be
11 familiar with the rules and it isn't their fault or your
12 fault that the well was spudded, nor is it Mobil's fault
13 that the well was spudded in the wrong location. That's
14 not the question.

15 In fact it isn't really a
16 question of whether or not there was a mistake. It's a
17 question of drainage. It's a question of correlative
18 rights. It's a question of a wasteful development pattern
19 in the reservoir. It's a question of whether or not you're
20 going to enforce the meaning in your rule and we're going
21 to come before you and show that they have gained an advan-
22 tage on us, that our correlative rights are at risk, and
23 there are only two ways to correct it.

24 One is for us to come offset
25 them, again in violation of these rules, being an exception

1 to have wells 660 feet apart, practically 40-acre spacing.

2 Or to have a penalty which is
3 meaningful and let's us go forward in developing this area
4 consistent with your rules; to have a well at a standard
5 location that because of a penalty can compete across the
6 common boundary between Hixon and Mobil, can compete for
7 reserves that are under their tract and under our own.

8 We're going to ask you for a
9 meaningful penalty. We're going to ask you to confirm the
10 Examiner's order and to enter an order which will uphold
11 and support the rules for a penalty order.

12 MR. LEMAY: Thank you, Mr.
13 Carr.

14 At this point I'd like the
15 witnesses to give -- that are going to give testimony to
16 please stand and be sworn in.

17
18 (Witnesses sworn.)

19
20 You may be seated.

21 Mr. Kellahin.

22 MR. KELLAHIN: Thank you, Mr.
23 Chairman.

24 Mr. Chairman, I'd like to call
25 at this time Mr. John Corbett.

1 A Geology.

2 Q And what year did you obtain that de-
3 gree?

4 A 1982.

5 Q What is your current capacity with Hixon
6 Development Company?

7 A I'm Hixon's Vice President of Explora-
8 tion.

9 Q Do you perform geologic duties for your
10 company?

11 A Yes, I do.

12 Q Describe for us what general duties you
13 had with regards to the permitting of the Missy No. 3 Well
14 in Section 35 that we are discussing here this morning.

15 A It was my responsibility to propose the
16 drilling of the location, to handle the application for a
17 permit to drill, and once the well was approved to oversee
18 the logging, the geologic aspects of drilling the well.

19 Q Did you participate in the discussions
20 including the geologic evaluation with regards to the
21 location of the Missy 3 Well within the southwest quarter
22 of Section 35?

23 A Yes, I did.

24 MR. KELLAHIN; At this time,
25 Mr. Chairman, we tender Mr. Corbett as an expert petroleum

1 geologist.

2 MR. LEMAY: His qualifications
3 are acceptable.

4 Q Let me ask you, sir, to turn to Exhibit
5 Number One. Let's turn to page 3 of Exhibit Number One.
6 Would you take a moment and help us orient ourselves as to
7 what the sequence is of the wells in Section 35 in terms of
8 what order in which they were drilled and who are the oper-
9 ators of the various wells as shown on that display?

10 A Yes, sir. The first well drilled in
11 Section 35 was in the northwest quarter section. It's the
12 Missy No. 1-Y drilled by Hixon Development.

13 We followed that with the Tesia Kuchera
14 No. 1.

15 After that was the Missy No. 2 in the
16 southwest quarter section.

17 After we drilled that Mobil drilled the
18 B Unit No. 75.

19 After that Hixon Development drilled the
20 Missy No. 3.

21 Q Within what pool are we dealing with
22 these wells, Mr. Corbett?

23 A These wells are in the West Lindrith
24 Gallup Dakota Pool.

25 Q And what are the spacing requirements

1 for the pool?

2 A Throughout the interior of the pool an
3 operator is set back 330 feet from the lease line, quarter
4 section line; also 330 feet from an interior quarter
5 quarter line.

6 Along the boundary of the pool the
7 operators are set back 790 feet from the pool boundary.

8 Q Did you know that at the time that you
9 were permitting the Missy No. 3 Well, Mr. Corbett?

10 A At the time we were permitting the Missy
11 No. 3 Well we got the impression that the 790 setback was
12 only along the boundary of the Gavilan Mancos Pool and the
13 Northeast Ojito Pool.

14 Q Within the West Lindrith Dakota Pool
15 what is the primary producing interval for the wells in
16 Section 35?

17 A The wells primarily produce from the
18 Dakota. In fact the Missy No. 2, the Missy No. 3, and the
19 Lindrith B Unit No. 75 are completed only in the Dakota
20 sandstone.

21 Q Approximately what vertical interval do
22 we find the Dakota sandstone that's being produced in these
23 wells?

24 A This is at approximately 7700 feet.
25 There's a page in Exhibit One that illustrates that if you

1 care to turn to that.

2 Q We'll come to that in a minute, Mr. Cor-
3 bett.

4 When we talk about the Gallup or the
5 Mancos formation, where is that formation in the Missy No.
6 3 Well in relation to the Dakota?

7 A The base of the Mancos formation as the
8 description is in the pool rules, is at approximately 7300
9 feet.

10 Q Let's turn to page four of the exhibit
11 book, Mr. Corbett. Would you identify that display for us?

12 A Yes, sir. This is a plat of Section 35
13 of 25 North, Range 3 West, also the west half of Section 34
14 and the two quarter sections to the south in Township 24
15 and the one (unclear) Section 35. It's essentially the
16 proration unit for the West Lindrith Gallup-Dakota Pool,
17 adjacent to section for the Missy No. 3 proration unit.

18 Q What are the size for the spacing and
19 proration units for this pool?

20 A These blocks are 160 acres each.

21 Q And within each 160 acre tract you have
22 located four either squares or rectangles?

23 A That's correct.

24 Q What are those?

25 A That's the legal window that an operator

1 is allowed to drill a well in the West Lindrith Gallup-
2 Dakota Pool or adjacent to the pool boundary.

3 Q When we look at Section 35, in the
4 southwest quarter of 35 there are now two wells?

5 A That's correct.

6 Q In that quarter section?

7 A Yes, there are. In that quarter section
8 we have the Missy No. 2 and the Missy No. 3.

9 Q Based upon your understanding of the
10 rules for the pool, are you allowed to have two wells in a
11 spacing unit?

12 A Yes, sir, two wells per proration unit
13 is allowed in the West Lindrith Gallup-Dakota Pool.

14 Q Within the interior boundary of that
15 pool you can locate wells how close to each other, Mr. Cor-
16 bett?

17 A No well can be drilled within the West
18 Lindrith Pool within 660 feet of another producing or
19 drilling well in the pool.

20 Q When we look at the southwest quarter of
21 35, there is the Mobil 75 Well?

22 A That's correct.

23 Q It appears not to be in one of the
24 standard location windows, if you will, in that spacing
25 unit.

1 A That is correct.

2 Q What would be the standard locations for
3 that well?

4 A In a standard location, the nearest
5 standard location would be probably 2310 from the east line
6 and 990 feet -- no, I'm sorry, 1650 feet from the south
7 line.

8 Q When we look at this display and look at
9 the relationship between the Missy No. 2 and the Missy No.
10 3 Well, was there any material difference to you as a geo-
11 logist in picking the location for the Missy No. 3 Well
12 between the location that was drilled and the closest
13 standard location?

14 A As I stated earlier, when we picked the
15 location for the No. 3, the 75 had not been drilled. We
16 didn't have logs on the No. 75 until after our well was
17 drilled and there is no drilling farther to the south of
18 the Missy No. 3.

19 Geologically it was simply a matter of
20 stepping out.

21 Q Had you known at the time that you were
22 filing your application for a permit to drill that the
23 location you had picked was an unorthodox location that
24 might be subject to a penalty, what would you have done,
25 Mr. Corbett?

1 A We certainly would have moved to an
2 orthodox location because we had no geologic basis for
3 wanting to be that far to the south as we were.

4 Q Was the location drilled, the 330 loca-
5 tion, was that drilled in order to gain a geologic advan-
6 tage over Mobil?

7 A No, it was not.

8 Q What was the purpose in drilling that
9 well?

10 A The Missy No. 2 doesn't produce at the
11 top allowable for a West Lindrith Gallup-Dakota Well. We
12 had thought that we would be able to more efficiently drain
13 our proration unit and also to produce our top allowable by
14 drilling a second well.

15 Q Under the West Lindrith Gallup-Dakota
16 rules as you know them, Mr. Corbett, are you allowed to
17 produce two wells on a spacing unit in any combination so
18 long as you don't exceed the maximum 382 barrels of oil a
19 day?

20 A That's correct. The top allowable is,
21 for the pool rules, allowed to be produced in any combina-
22 tion from the two wells within a proration unit.

23 Q Let's go back to March of 1989 and if
24 you'll turn to Exhibit Number One, have you prepared for us
25 a chronology of the events as you recall them with regards

1 to the permitting and drilling of this well?

2 A Yes, sir, page one of Exhibit One is
3 that chronology.

4 Q You've indicated an entry on March 14th
5 of 1989?

6 A That's correct.

7 Q What was occurring about this time?

8 A On that date we had determined that we
9 wanted to drill a second well in our Missy No. 2 proration
10 unit. I had called the Aztec office of the NMOCD and I had
11 questions concerning the numbering of wells, how the allow-
12 able would be apportioned between the two wells, and also
13 the legal location for drilling a second well in a prora-
14 tion unit.

15 Q Who did you discuss this with at the
16 Aztec office of the Division?

17 A I spoke with their geologist, Mr. Ernie
18 Busch.

19 Q Based upon that conversation what were
20 you told?

21 A He told me that the numbering was to be
22 consecutive, that the Missy No. 2 would be followed by the
23 Missy No. 3; that our allowable was to be made up in any
24 combination but was not to exceed 382 barrels per day with
25 a 3000 GOR, and that the legal setbacks were 330 feet from

1 the window and thus our proposed location at 330 from the
2 south line and 2310 from the west line (unclear).

3 Q Please turn to page five of the exhibit
4 book. What is shown on that page, Mr. Corbett?

5 A This is a copy of our -- the first page
6 of our application for a permit to drill.

7 Q And when did you sign and submit this to
8 the Aztec office of the Division?

9 A This was submitted on March 16th, two
10 days after my conversation with Mr. Busch.

11 Q At the time that you submitted the ap-
12 plication to Mr. Busch, were you then aware that your re-
13 quested location was at an unorthodox location?

14 A No, sir, we did not know that our loca-
15 tion was unorthodox.

16 Q Did you receive the APD back from the
17 District office of the Division?

18 A Yes, sir. Our application was approved
19 and returned to us.

20 Q When did you get it back?

21 A On March 17th.

22 Q In approving the application by the
23 Division's District office, did they make any notation to
24 you that your well was at an unorthodox location?

25 A No, sir, they did not.

1 Q What then did Hixon do with regards to
2 the drilling of the well?

3 A Having had our location approved, we
4 began our dirt work and built our location, moved in a rig
5 and drilled the well.

6 Q Your entry says approximately March
7 20th, a location is being built.

8 A That's correct. I believe we started
9 building the location the 20th.

10 Q And approximately what date is the loca-
11 tion completed and ready for the rig?

12 A It took approximately 4 days, with 3
13 days of moving in the rig, rigging up. We also had 1 day
14 of waiting on the drilling contractor.

15 Q At this time was there any activity
16 being conducted by Mobil on the Unit 75 Well that's to the
17 east of the location of the Missy 3 Well?

18 A Yes, sir. I believe that throughout
19 this time period Mobil had drilled their well and had com-
20 pany personnel on that location completing their well.

21 Q When did you commence the drilling of
22 the well, Mr. Corbett?

23 A We began drilling on March the 30th.

24 Q Is that shown on Exhibit Number Seven?
25 I'm sorry, on page 7 of Exhibit Number One?

1 A Page 7 is our sundry notice, notice that
2 we'd spudded 1:10, Wednesday, March the 29th. We set our
3 surface casing on March the 30th.

4 Q I'm trying to reconcile there, we're one
5 day off here depending on which display you look at, and if
6 you'll compare Exhibit Number -- on page number one, it
7 says the rig was spudded at 1:00 p.m. on March 30th. The
8 Commission form on page seven says it was spudded on the
9 29th. Which one of those is the correct date, upon your
10 understanding?

11 A Well, I prepared page one.

12 Q 1:10? Is that the mistake or is the
13 foreman mistaken on the date of spudding?

14 A As I understand it, having briefed and
15 prepared page one, it was March 30th that we began our
16 drilling operations.

17 Q When did you first hear from anyone that
18 there was the possibility that the well you were drilling
19 was in fact at an unorthodox location?

20 A In the afternoon of March 30th, appro-
21 ximately 4:30 that afternoon, Mr. Chavez of the Aztec
22 office of the OCD called me and said that a question had
23 been raised about our location, and it wasn't verified un-
24 til March 31st.

25 Q Describe as best you can recall now what

1 Mr. Chavez specifically told you about 4:30 on March 30th.

2 A He told me then that he had had a phone
3 call from Mobil Oil, the offset operator, that they were
4 concerned that our location was in an unorthodox location
5 and that that may be correct.

6 Mr. Busch, who had given me my initial
7 information on the location, was out of the office at that
8 time and would be in the following morning. He asked that
9 I come by their office after he had a chance to go over the
10 rule in question with Mr. Busch and we could make a deter-
11 mination at that time as to whether or not we were actual-
12 ly in a nonstandard location.

13 Q When Mr. Chavez called you on -- about
14 4:30 on Thursday afternoon, did he direct you to cease
15 drilling the well?

16 A No, he did not.

17 Q Did you at that point elect to stop
18 drilling the well?

19 A No, we didn't.

20 Q Why not, sir?

21 A A question had been raised but at the
22 same time I had in my hand an approved application for a
23 permit to drill by Mr. Chavez, and we thought that certain-
24 ly had some merit. We decided that we would continue until
25 he verified whether or not we were in fact in a nonstandard

1 location.

2 Q When did you then meet with Mr. Chavez
3 to discuss and review whether or not the well was in fact
4 at an unorthodox location?

5 A We met the following morning at approx-
6 imately 7:30.

7 Q What did you do between the time that
8 you heard from Mr. Chavez about the question of the loca-
9 tion until you met with him the next morning with regards
10 to the drilling of this well?

11 A Right after I got off the phone with Mr.
12 Chavez I called my supervisor, Al Kuchara, who's the Pres-
13 ident of Hixon Development, and apprised him of the situa-
14 tion. We discussed it and in light of the question we
15 weren't sure whether or not we were in a nonstandard loca-
16 tion and because we had an approved APD we determined that
17 we would continue drilling until we verified that Mobil's
18 question was justified.

19 Q On Friday morning, then, did you meet
20 with Mr. Chavez and Mr. Busch to discuss the well?

21 A That's correct.

22 Q All right, what was the first topic of
23 conversation?

24 A The first thing that we determined or
25 discussed was whether or not we were in a nonstandard loca-

1 tion.

2 Q How did you go about reviewing the in-
3 formation to make that judgment?

4 A We reviewed a copy of the West Lindrith
5 Gallup-Dakota Pool rules and seeing that the buffer zone,
6 which is a 790 foot setback, we determined that we were in
7 a nonstandard location.

8 Q Having confirmed that the well in fact
9 was at an unorthodox location, what options did you dis-
10 cuss with regards to what to do with the well?

11 A We discussed a number of options. One
12 of them was to simply stop operations, plug the well we had
13 already set surface casing on, reclaiming that location,
14 staking a location, building a location, and drill in a
15 legal location to the north of where we were.

16 Another option would have been to
17 directionally drill into a legal location.

18 And the third option, which was the one
19 that we settled upon, was to apply for an unorthodox loca-
20 tion and hopefully, we would be able to receive some reas-
21 onable restriction of allowable from the NMOCD.

22 Q In -- in making the decision about going
23 forward or skidding the rig or directional drilling, all
24 those decisions within your company, were you given any
25 guidance by the Division as to the possible ranges of ulti-

1 mate solutions for this well?

2 A We discussed in our meeting on March
3 31st a variety --

4 Q Who is "we"?

5 A I'm sorry, that would have been myself,
6 Mr. Busch and Mr. Chavez.

7 Q And what was the range of possible sol-
8 utions that were discussed?

9 A Some of the possibilities and the one
10 that we thought would probably be most (unclear) restric-
11 tion of our allowable, would have been to divide the dis-
12 tance we were from the lease line, 330 feet, by the dis-
13 tance we should have been, 790 feet, and believed that
14 would proportionately reduce our allowable for that well
15 approximately 40 percent over or times 382 barrels per day.

16 Q Was it discussed or considered at that
17 time that if you go forward with the well, that you might
18 be subject to having the allowable on the Missy 2 shared in
19 half with Missy 3 and then have the footage location factor
20 apply to the penalty?

21 A No, that was never in question. We felt
22 that because the pool rules allowed for dividing top allow-
23 able in any way we could produce it from the two wells in
24 a proration unit, that wouldn't be a factor.

25 Q Had you realized at the time that you

1 elected to continue drilling that the Missy 3 Well would
2 ultimately be allowed to produce no more than 80 barrels of
3 oil a day, would you have continued drilling it?

4 A I believe that 80 barrels a day would
5 have caused me to shut down drilling and consider the other
6 two options, or moving the rig or deviating the well.

7 Q When did Hixon, or you personally, Mr.
8 Corbett, receive any verbal or written communication from
9 Mobil that they were objecting to your well location?

10 A Page 8 of Exhibit One is the first
11 communication that we had from Mobil or the NMOCD concern-
12 ing our unorthodox location; mailed on April 4th, I believe
13 we received it on April 26th.

14 Q At the time you spudded the well had you
15 or anyone in Hixon's office, to your knowledge received any
16 telephone calls from Mobil about the well location?

17 A No, sir, we had not.

18 Q On March 29th did you hear from Mobil
19 about the location?

20 A No, we did not.

21 Q March 30th?

22 A We didn't hear from Mobil then.

23 Q March 31st, in your meeting with Mr.
24 Chavez about the location, did you hear from Mobil?

25 A No, sir.

1 Q When did you receive the April 4th
2 letter from Mr. Maynard, it's a letter from Mr. Maynard to
3 Mr. Chavez dated April 4th over Mobil's letterhead, page 8?
4 Did you receive a copy of that?

5 A We did receive a copy of that. I be-
6 lieve ours arrived on April the 6th.

7 Q Prior to April 6th had you had any dis-
8 cussions with Mobil about the location of the well and
9 possible penalties on the well?

10 A No, we had not.

11 Q What's the date of your first discussion
12 with Mobil with regards to the possible penalty?

13 A I believe that our discussions began the
14 day that we received this letter. I called Mr. Craig Ager-
15 man with Mobil and began discussing -- we felt that we'd be
16 better off in our nonstandard location (unclear) we had
17 reached some sort of an agreement with Mobil concerning the
18 restriction of our allowable, and we began to discuss then
19 what an appropriate restriction would be.

20 Q Were you able to reach a solution with
21 Mobil with regards to a penalty for the well?

22 A No, sir, we were not. The ultimate
23 solution that they came up with was the one that was adopt-
24 ed and that's one that we couldn't accept.

25 Q On April 6th, when you got the Mobil

1 letter objecting to the location and proposing a penalty,
2 what was the status of the well?

3 A On April 6th we were well into drilling.
4 I'm not sure of what our depth would have been.

5 Q Let's turn to some of the geologic dis-
6 plays, Mr. Corbett, and if you'll look at page 10 and 11, I
7 think you've got logs on the Missy 3 Well?

8 A Yes, sir, those are our open hole logs.

9 Q What are you showing on those pages?

10 A We have, on the lefthand page is our
11 induction electric log. On the righthand page is our
12 neutron density. Those are the porosity logs.

13 These primarily indicate that we're
14 producing from a sandstone. If you're familiar with log
15 interpretation, (unclear) the gamma ray curve, this is the
16 far left curve on either page, the fact that it moves to
17 the left and then follows a straight line across our pay
18 zone, suggest there is a very clean sandstone. That's also
19 seen by the rather high (unclear) resistivity readings and
20 also the fact that we have crossover on our neutrons and
21 our density and porosity.

22 Q Do you have a geologic display that we
23 can use to show the relationship between the Mancos forma-
24 tion and the Dakota formations in any of the wells we've
25 been discussing, whether it be the Lindrith 75 or the Missy

1 2 or Missy 3 Wells?

2 A Yes, sir. If you continue to page 14,
3 there's a page that folds out, this is a correlation of our
4 log on the Missy No. 3 and a type log for the Gavilan Man-
5 cos Pool, the Northwest Exploration Gavilan No. 1. It il-
6 lustrates the base of the Gavilan Mancos at a depth of ap-
7 proximately 7340 in our block and the Dakota porosity that
8 we're producing from is 7800.

9 Q Approximately 660 feet vertical separa-
10 tion between the bottom of the Mancos and the top of the
11 Dakota in the Missy 3 Well?

12 A There is quite a bit of separation ver-
13 tically, approximately 500 feet.

14 Q I'm sorry, I miscalculated, about 500
15 feet separation?

16 A Yes, sir.

17 Q Mr. Carr, in his opening comments to the
18 Commission, made note of the fact that Hixon Development
19 Company participated with the industry study with regards
20 to a buffer zone between Gavilan Mancos and the West Lind-
21 rith Dakota Pool.

22 A That's correct.

23 Q And did you participate in that study?

24 A Yes, I did.

25 Q And were you a participant in the

1 hearings that resulted in Commission Order R-4314-A that
2 established the 790 foot setback buffer?

3 A No, sir, we did not participate in those
4 hearings.

5 Q But you did participate in earlier in-
6 dustry discussions prior to the hearing or after the hear-
7 ing?

8 A Prior to the Gavilan Mancos hearings and
9 the establishment of buffer zones between the Gavilan
10 Mancos and the West Lindrith Gallup-Dakota. The NMOCD and
11 a number of industry participants and operators at that
12 meeting -- at those meetings the possibility of a buffer
13 zone was discussed, and in fact that's where this (unclear)
14 buffer zone came up.

15 The possibility of restricting the West
16 Lindrith Gallup-Dakota Pool to 790 setbacks throughout the
17 pool was also discussed and met with industry opposition.
18 It was struck at that meeting and didn't re-emerge until
19 this order was published. That is perhaps where we got the
20 mistaken impression that the buffer zone followed only
21 along the west of the Gavilan Mancos Pool.

22 Q Have you had an opportunity to prior to
23 this hearing review Commission Order R-4314-A?

24 A Yes, I have..

25 Q Is that in your exhibit book?

1 A Yes, it is.

2 Q Let's turn to the order. I think it's
3 found on page 15, 16 and 17.

4 A That's correct.

5 Q Is this a copy of the order that you're
6 now familiar with?

7 A Quite.

8 Q Let's look at some of the specific pro-
9 visions of the order.

10 If you'll look down at page 15 and find
11 Finding No. 2, and the last line in paragraph 2 at the bot-
12 tom of the first column, says that's promulgated by Divi-
13 sion General Rule 505.

14 A (Unclear).

15 Q And do create a buffer zone in those
16 sections that adjoin the Gavilan Mancos Oil Pool to the
17 east, and then it identifies a tier of sections.

18 A That's correct.

19 Q Will take a copy of Exhibit Number Two,
20 which is your large map, and show us where that tier of
21 sections is and describe them for us?

22 A In Exhibit Two there is an area where
23 the West Lindrith Pool, outlined in blue, abuts the Gavi-
24 lan Mancos Pool, outlined in yellow. There's approxi-
25 mately a 5 mile section there. That's the buffer zone

1 that's discussed in Finding No. 2 of this order.

2 Q When we look at Finding No. 3, it also
3 describes sections identifying Township 25 North, Range 2
4 West, on page 16. What is your understanding of the find-
5 ings insofar as their attempt to control well spacing with
6 regards to the Mancos formation as it might be discovered
7 in West Lindrith in relation to Gavilan Mancos?

8 A I'm sorry, sir, I didn't follow the
9 question.

10 Q When you read through the whole findings
11 of the order, is there any relationship that you find as a
12 geologist and as a petroleum geologist, in discussing an
13 administrative solution between West Lindrith and Gavilan
14 with regards to the Mancos formation?

15 A The -- a lot of the object of this order
16 was to establish an administrative solution for bringing
17 the Gavilan Mancos together. You're questioning the Mancos
18 formation only?

19 Q Only, only the Mancos formation.

20 A Yes, sir, the West Lindrith Pool was
21 placed on 790-foot setback in order to protect the Gavilan
22 Mancos in a buffer zone.

23 Q Do you find any findings in your review,
24 based upon your knowledge of this particular area, that
25 address themselves to well spacing or drainage patterns for

1 the Dakota formation?

2 A No, sir, the only reference to the
3 Dakota in this pool is that in Finding No. 15, where it's
4 noted that it produces at a marginal productivity.

5 Q Now let's turn to the rules themselves.
6 Let's turn first to Rule No. 4, which is shown on Page 16.
7 What is your understanding of Rule 4 with regards to well
8 locations within the interior boundaries of the West
9 Lindrith?

10 A Throughout the interior of the West
11 Lindrith Pool, in fact even in the boundary area itself, in
12 the buffer zone, a well can be 330 feet from an offset
13 proration unit with the exception of the pool boundary it-
14 self (unclear).

15 Q Where do we find the language that picks
16 up the 790 footage location of the outer boundary of West
17 Lindrith?

18 A That's Rule 4-B.

19 Q In the event there is a well located
20 closer than 790 to the outer boundary of the West Lindrith
21 Pool, what options does an operator within the pool have in
22 terms of offsetting that well?

23 A In that situation an operator within the
24 pool can offset a well producing outside the pool by the
25 same distance as the well outside the pool by accepted pool

1 rules.

2 Q Under at least one fact situation under
3 that rule can the situation occur that along the outer
4 boundary of West Lindrith you could have two Dakota wells
5 spaced 660 feet apart?

6 A That could very easily happen.

7 Q The rules permits it, as best you under-
8 stand it?

9 A Yes, it does.

10 Q When we look at Rule 6, Mr. Corbett,
11 what does that rule allow you to do with regards to
12 drilling a second well in the 160-acre spacing unit?

13 A I'm sorry, Rule No. --

14 Q Rule No. 6. It's page number 17, I
15 think. What is your understanding of that rule?

16 A Rule No. 6 establishes a top allowable
17 to 382 barrels per day per proration unit. That may be
18 made up in any combination of the two wells within the
19 proration unit.

20 Q Let's look at Exhibit Number Two, which
21 is the map that you have prepared, the big display. Give
22 us a general description of what information is shown on
23 Exhibit Number Two.

24 A Exhibit Number Two is a map of this area
25 of Rio Arriba County that includes portions of the West

1 Puerto Chiquito Mancos, the Gavilan Mancos, the Northeast
2 Ojito, the West Lindrith Gallup-Dakota Pool and the Lind-
3 rith Gallup-Dakota Pool.

4 Q What wells have you located on the dis-
5 play?

6 A The wells shown on this display are the
7 only Gallup and Dakota producing wells.

8 Q Let's use that display in connection
9 with page 3 of Exhibit Number One, where you've shown the
10 immediate area around the southwest quarter of Section 35.
11 When we look at the southeast quarter of 35 -- of 34, I'm
12 sorry, there's a Schalk Well located on that display?

13 A Yes, sir, that's correct.

14 Q The Briny No. 1?

15 A Yes.

16 Q Can you describe how close that well is
17 to your spacing unit?

18 A That well is 330 feet from our lease
19 line.

20 Q When we look at Exhibit Number Two, in
21 the southern end of the Township 25 North, 3 West, which is
22 the southern end of Section 35, follow that township line
23 across with me until you get within the West Lindrith Gal-
24 lup-Dakota Pool in Section 4.

25 A Yes, sir.

1 Q What kind of development is taking place
2 in relation to Section 4 and Section 32 within the Gallup-
3 Dakota Pool?

4 A Section 32 is, I believe, operated by
5 Joseph Pool (sic). It produces primarily from a Dakota
6 sandstone comparable to our Missy 3. His well is probably
7 not producing at quite the high rates but he has developed
8 it on essentially 80-acre spacing by using his infill well
9 in this 160-acre proration unit.

10 To the south of that (not clearly under-
11 stood) drilled a couple of good wells. Mobil is offsetting
12 by 330 feet.

13 Q Within this common source of supply of
14 the West Lindrith Gallup-Dakota Pool are wells continuing
15 to be drilled up to 330 feet from the adjacent spacing
16 units?

17 A Throughout the pool, the interior of the
18 pool, wells are still being drilled 330 feet from the lease
19 lines.

20 Q In making your study, Mr. Corbett, have
21 you found any examples of any well that has been subject to
22 a penalty as proposed in this particular case and as in
23 fact entered by the Examiner in this case?

24 A No, sir, I have no precedent for estab-
25 lishing and dividing the top allowable by two so as to

1 break it up evenly between the two wells in the proration
2 unit.

3 Q Let's turn to the issue of what choices
4 you made at the time Mr. Chavez and you agreed that the
5 well in fact was at an unorthodox location. You had dis-
6 cussed the ranges of potential penalties and you had made
7 some business judgments with Mr. Kuchara about continuing
8 drilling. You said earlier one of the options was to
9 directionally drill the well at that point.

10 A That's correct.

11 Q Why didn't you exercise that as the so-
12 lution?

13 A Directionally drilling provides an in-
14 crease in cost during drilling and also it's a compounded
15 problem as you produce the well. When it becomes necessary
16 to use an artificial lift or pump the well, you have prob-
17 lems producing.

18 Q Can you give us an approximate range at
19 that time on March 30th that you expected the Missy 3 Well
20 to cost to drill and complete the well?

21 A We were anticipating costs of approxi-
22 mately \$450,000 to drill and complete this well.

23 Q And at that point did you have an indi-
24 cation of what it might cost you or what you believed it
25 might cost you to directionally drill the well?

1 A We could anticipate, and although this
2 isn't exactly my area of expertise, I think probably in the
3 range of \$200,000 to directionally drill the well.

4 Q Within the range of possible choices,
5 then, that was discussed with Mr. Chavez, what was your
6 conclusion about the viability of directionally drilling
7 the well once you recognized you were at an unorthodox
8 location?

9 A Once you've directionally drilled the
10 well, you may have increased problems with collecting the
11 oil. It increases your operating costs and this can cause
12 the premature abandonment of the well (unclear) left in the
13 ground.

14 Rather than waste those, that was per-
15 haps the first possibility that we ruled out.

16 Q What other possibilities or alternative
17 choices did you have or did you discuss on March 31st?

18 A One possibility would have been to shut
19 down our operation and move our well to a standard loca-
20 tion. You're questioning the possibility for reduced
21 allowables here?

22 Q Well, let me make sure you're answering
23 me in the context of the question.

24 I am told by you earlier that in discus-
25 sions with Mr. Chavez, that the choice, the possibility of

1 penalties was perhaps not to have any penalty at all, or
2 one that reduced the allowable for the Missy 3 Well to
3 approximately 160 barrels of oil a day.

4 Now is that a correct recollection or
5 statement of yours, of your testimony?

6 A Yes, sir, it is. One of the possibili-
7 ties that was brought up in our meeting in Aztec, was that
8 this was a mistake that was perpetuated by the NMOCD and as
9 they were a party to the error, it might be that we need
10 not have a restrictive allowable for that well. We thought
11 it was more probable that we would be proportionately re-
12 duced based on our distance to the lease line.

13 Q Within the context, then, of that poten-
14 tial penalty, one of the other choices apart from direc-
15 tional drilling, was to simply abandon the well at that
16 time. Did you examine that as a choice?

17 A That was the first possibility we ruled
18 out. We felt that two wells would be warranted to develop
19 the proration unit and we did want to drill the Missy No.
20 3. So we ruled out abandoning the drilling the well alto-
21 gether.

22 Q Did you consider stopping the well at
23 that point in time on Friday, March 31st, and then skid-
24 ding the rig and then redrilling the well at a standard
25 location?

1 A That was discussed.

2 Q And what resolution was made upon that
3 option?

4 A Because of the expenses involved and
5 also because of the proximity of Mobil's nonstandard loca-
6 tion of the B No. 75 and the Missy No. 2, we decided that
7 we were going to be better off to leave our well in a non-
8 standard location and approach the OCD for some reasonable
9 reduced allowable.

10 Q Let's divide that answer in half and let
11 me examine with you that portion that you've described the
12 issue being moving towards the Unit 75 Well.

13 Was that part of your reasoning in not
14 moving the well?

15 A Well, the question of drainage had come
16 up and been brought up with us by Mobil. If we are going
17 to consider that, we don't know geologically what's to the
18 south of us. Mobil doesn't know. They're in the process
19 right now of doing seismic before they can drill another
20 well down there, before they will drill another well, to
21 the south of us.

22 We felt that if we -- in terms of drain-
23 age it would be better to be in the position we're in; a
24 slight crowding an existing well, there may or may not be
25 an interference problem there, but we don't even know that

1 the reservoir continues to the south, so we felt that we
2 were better off to the south.

3 Q A standard location would have been
4 towards the existing Mobil 75 Well?

5 A To shut down and move to a standard
6 location would have moved us from approximately 1400 feet
7 from the No. 75 Well to approximately 900 feet from the
8 No. 75.

9 Q The other part of your answer deals with
10 the economics of stopping the well and moving the rig,
11 rebuilding a location, and then drilling at a standard lo-
12 cation.

13 A That's correct.

14 Q Did you on March 31st attempt to quanti-
15 fy the cost impact that would have to be absorbed by making
16 that as your decision?

17 A We did some back of the envelope calcu-
18 lations as far as writing off the drilling so far, building
19 that location, the casing that was already run in that
20 well, that was only surface casing, and cementing that.

21 We would also have had to reclaim that
22 location, build a new location and we had also paid surface
23 damages to the Myers (sic), the surface owners and mineral
24 owners.

25 Q In terms of exercising that choice have

1 you been able to put a general range of value on what it
2 would cost you in additional dollars to make that as a
3 choice?

4 A I have attempted to quantify that but it
5 I was -- it was beyond my realm of expertise and I under-
6 stand that my number was a little low. As I understand,
7 it's closer, probably closer to \$200,000 to shut down a rig
8 and move a location.

9 Q Did you examine any other options with
10 Hixon employees or personnel or their president with re-
11 gards to deciding how to extract yourself from this predic-
12 ment back on March 31st?

13 A I think that was the full range of op-
14 tions.

15 Q Do you see now any other range of op-
16 tions that weren't considered?

17 A No, I don't.

18 Q Let's deal now with what in your opinion
19 is an appropriate solution in terms of a penalty for this
20 well, and let me invite you to look at the Examiner order
21 that was entered in this case as shown in your exhibit book
22 starting on page 18.

23 We've discussed it in general but de-
24 scribe again now that we're looking at it the mechanics of
25 the penalty.

1 A The penalty actually is spelled out on
2 page 19 of Exhibit One, halfway down the page Mobil has
3 proposed this reduction on allowable and they have had one
4 (unclear). This is in fact the one that Mr. Catanach adop-
5 ted as our reduction for our allowable.

6 Q The F-2 factor is the one that you ob-
7 ject to, is it, Mr. Corbett?

8 A No, sir. The F-2 factor is one that we
9 discussed at Aztec in our meeting --

10 Q I'm sorry. I have not made myself
11 clear.

12 F-1 is the one that divides the allow-
13 able between two wells.

14 A Yes, sir. F-1 is what we object to.

15 Q And the F-2 factor is the one that has
16 the footage parameter put in.

17 A There is a reasonable basis for the F-2
18 and we accept that.

19 Q Do you find any reasonable basis for the
20 F-1 factor?

21 A No, sir.

22 Q Why not?

23 A We can find no precedent in any of the
24 wells in this pool or without this pool by the OCD for
25 dividing a top allowable. The pool rules state that an

1 allowable may be made up in any combination from the two
2 wells that we have in our proration unit.

3 Q Describe further the operation of the
4 order as it now stands with regards to how you can produce
5 the allowable on a spacing unit with the two wells having
6 the Missy No. 3 restricted to not in excess of 80 barrels a
7 day.

8 A The Missy No. 3, as you said, it's re-
9 stricted to not more than 80 barrels per day. The prora-
10 tion unit is allowed 382 barrels but the Missy No. 2 is
11 capable of producing somewhere below 200 barrels per day,
12 so we are missing out on a top allowable.

13 Q Let's turn to page 20, Mr. Corbett. Is
14 that a display you prepared, sir?

15 A Yes, sir. This is one possibility for
16 reducing our allowable for the Missy No. 3.

17 Q And what were you attempting to examine
18 or analyze with this method?

19 A The double circle method is one that's
20 been used previously by the NMOCD to restrict allowables
21 for wells that are closer than a legal location permits to
22 the lease line.

23 What we have done is calculated the
24 area of a circle with a radius of 790 feet because that's
25 where we should be from that lease line. The ratio of that

1 full circle being on our lease to that portion of it that
2 is currently on our lease, the restriction that we've come
3 up with there is 290 barrels a day that we would be allow-
4 ed from the Missy No. 3.

5 Q Have you examined any other methods of
6 possible penalties that either in the past have been con-
7 sidered by the Division or that you have considered your-
8 self for this well?

9 A Yes, we have. The other, the next page,
10 page 21 of Exhibit One, is a calculation using the ratio
11 method as we propose it be applied, whereby the Missy No. 3
12 be reduced by the 330 that we are from the lease line over
13 the 790 that we should be from the lease line, and multiply
14 that by our depth bracket allowable of 382 and you arrive
15 at a solution of 160 barrels of oil per day to be produced
16 from the Missy No. 3.

17 This is a solution that in our meeting
18 March the 31st we thought would be applied because it was a
19 reasonable solution and in fact we contacted Mobil and pro-
20 posed this solution to them.

21 Q In examining this information and parti-
22 cularly looking at the West Lindrith rules, do you find a
23 basis for applying the 790 setback to the Dakota production
24 in the Missy Well?

25 A As we've shown in the correlation, the

1 790 setback around that pool was intended to protect the
2 Gavilan Mancos, or specifically that rule stated the common
3 source of supply in the Mancos.

4 The Missy No. 2 and Missy No. 3 are not
5 completed in the Mancos and that source of supply is not
6 threatened.

7 The other reason that I have a problem
8 with that 790 setback, as you can see on the plat that
9 shows legal windows and where the offsetting wells are, Mr.
10 Schalk on one side has drilled a well 330 feet from our
11 lease line and Mobil on the other side has drilled 540 feet
12 from our lease line. We're now being asked to set back 790
13 feet from their lease lines. The inconsistency gives me
14 problems with the 790 foot setback.

15 Q Within the same common source of supply
16 of the Dakota production you're faced with the conflict of
17 having to abide by or endure conflicting spacing rules?

18 A That's essentially correct.

19 Q Let's look at page number 22, Mr. Cor-
20 bett.

21 This is a portion of the Commission Rule
22 505 on the depth bracket allowables?

23 A That's correct.

24 Q Let's look at the rule for a moment. I
25 think you've drawn a line at the 7000 to 7900 foot inter-

1 val?

2 A That's correct.

3 Q You had told us earlier that the top
4 perforation in the Dakota in the Missy 3 Well is within
5 that depth bracket, below 7000 feet and above 8000 feet?

6 A That's correct. It's approximately 7810
7 feet.

8 Q When we look across the depth bracket
9 allowable and look at the 160 acres, we see the rule pro-
10 vides for 427 barrels of oil a day for Dakota production at
11 that depth, does it not?

12 A That's correct.

13 Q You told us earlier that on 160-acre
14 spacing for this Dakota Pool, that the top allowable is
15 only 382 barrels of oil.

16 A That's correct. The West Lindrith
17 Gallup-Dakota is a commingled pool. The top allowable was
18 established by the top perforation in the type well, the
19 discovery well for that pool. Because the Gallup formation
20 is included, that put it above 7000 feet till we were as-
21 signed a higher horizon and a lower depth bracket allow-
22 able.

23 That's a -- that's poolwide.

24 Q When we look at the depth bracket allow-
25 able and let's assume under this formula that the Missy 3

1 Well is assigned not its share of 160 acres but is assigned
2 40 acres. At this depth and at a 40-acre spacing unit size
3 for the Missy 3, what would be its allowable?

4 A 187 barrels of oil per day.

5 Q And if this well was on 40-acre spacing
6 what would be a well location that would be standard on
7 40-acre spacing?

8 A 330 feet from the lease line.

9 Q And what is Mobil asking you to be re-
10 stricted to in terms of a producing rate on a daily basis
11 for the Missy No. 3 Well?

12 A Mobil is seeking that we be restricted
13 to that 80 barrels of oil per day.

14 Q What is the purpose of Exhibit -- page
15 23 of Exhibit One, Mr. Corbett?

16 A Page 23 is where we initially IP'ed the
17 well, the Missy No. 3. You can see that it's produced 347
18 barrels of oil per day and it's capable of producing 423
19 MCF.

20 Q Page 24, what is that, sir?

21 A Page 24 is the actual allowable that's
22 been assigned for that well subsequent to Mr. Catanach's
23 order, where we were limited to 80 barrels of oil per day.

24 Q In conclusion, Mr. Corbett, what are you
25 proposing to the Commission for a solution to this matter?

1 A There were three pages, 20, 21 and 22
2 that considered possible solutions and as far as I know,
3 both Page 20, the double circle penalty, has been applied
4 before. It has its detractors and its proponents, as does
5 number 21, Page 21, the ratio method. The ratio method is
6 what we believed in our meeting would be assigned to our
7 well; however, as we are at a 330 foot setback, we would be
8 happy to accept a 40-acre allowable. We're within that,
9 the confines of the 40-acre spacing, or our setback are
10 those that would be applied to 40-acre spacing.

11 I think that that's probably the best
12 thought out depth bracket allowable, not something that was
13 contrived by someone who was looking for a way out of a
14 situation. It was passed down -- it was derived by en-
15 gineers and geologists who were attempting to provide
16 reasonable allowables for wells producing from that depth.
17 The Dakota formation here is producing from deep within
18 this depth bracket. I think 187 barrels per day is the
19 most reasonable solution to this problem.

20 MR. KELLAHIN: Mr. Chairman,
21 that concludes my examination of Mr. Corbett.

22 We would move the introduction
23 of his Exhibits One and Two.

24 MR. LEMAY: Without objection
25 Exhibits One and Two will be admitted into the record.

1 Thank you, Mr. Kellahin.

2 Mr. Carr.

3
4 CROSS EXAMINATION

5 BY MR. CARR:

6 Q Mr. Corbett, initially I'd like to be
7 sure I understand what your position is in this case.

8 You're not asking this Commission to
9 change the pool rules for the West Lindrith Gallup-Dakota
10 Pool, are you?

11 A No, sir, I'm not.

12 Q And you're not disputing that the Missy
13 No. 3 drilled where it is, is too close to the outer
14 boundary when compared to the existing pool rules.

15 A That is correct.

16 Q And as you understand now, the pool
17 rules, having reviewed them, if Mobil was to come in and
18 attempt to offset the Missy No. 3, unless they got an ex-
19 ception to the pool rules, they would have to be 790 feet
20 from that line, isn't that correct?

21 A If I were on the outside of the pool
22 boundary and they were attempting to drill within the pool
23 boundary, they would not -- they would be currently allowed
24 a location.

25 Q Your well is not outside the pool

1 boundary, though, is it?

2 A That's correct.

3 Q And we would have to get an exception to
4 the pool rules, would we not, to come in and offset 330
5 feet south of the line.

6 A (Unclear).

7 Q The only situation where you are per-
8 mitted to come 330 feet to the outside boundary of the pool
9 in a buffer zone is if there is an existing well outside
10 the pool 330 feet from the line, is that correct?

11 A That's correct.

12 Q Now if I understood your testimony, it's
13 your opinion that these rules were designed primarily for
14 development of the Gallup, is that correct?

15 A That's, as I understand the order, cor-
16 rect.

17 Q Would that statement also apply to the
18 well location requirements in the West Lindrith or just to
19 the boundary area?

20 A Throughout the interior of the pool?

21 Q Yes, sir.

22 A The order states that 330 foot offsets
23 from the lease lines are acceptable throughout each of
24 these pools.

25 Q Now, I just want to understand what you

1 are saying. Is that -- was the primary objective in de-
2 veloping those in your opinion for the Gallup formation or
3 was it for both formations?

4 A The order was to protect the common
5 source of supply in the Mancos Pool.

6 Q So is it your testimony that even the
7 spacing requirements were primarily directed to develop-
8 ment of the Mancos Gallup formation?

9 A That's correct.

10 Q You were involved in the committee work,
11 though, is that correct, in developing these rules?

12 A We attended the operators meeting where
13 they discussed bringing the West Lindrith Gallup-Dakota at
14 least into an adjacent position with the Gavilan Mancos
15 Pool.

16 Q And you did not participate in the hear-
17 ing, though, is that correct?

18 A That's correct.

19 Q Were you aware a hearing was held?

20 A Yes, sir.

21 Q Were you aware there were special rules
22 promulgated for this pool back in 1987?

23 A It was discussed prior to those hearings
24 that a buffer zone would be established between the Gavilan
25 Mancos Pool and the West Lindrith Gallup-Dakota Pool. We

1 were aware of the formula that would be used and the set-
2 backs that would be used, and those were, in fact, used to
3 bring the West Lindrith Pool into an adjacent state with
4 the Gavilan Mancos Pool.

5 We were not aware that that boundary, or
6 buffer zone, was to be continued around the entire West
7 Lindrith Gallup-Dakota Pool.

8 Q You were aware, however, there were
9 special pool rules in West Lindrith, isn't that correct?

10 A I think every pool in the state has pool
11 rules.

12 Q On this one you were aware that there
13 were special rules for this pool.

14 A Yes, sir.

15 Q Do you have a copy of the rules govern-
16 ing the activity -- the Oil Conservation Division rules
17 governing oil and gas development in New Mexico? Do you
18 have those rules in your office?

19 A Yes.

20 Q And you didn't consult those when you
21 were picking this location, is that correct?

22 A We were aware of the statewide rules for
23 development of oil and gas. I don't believe that the gen-
24 eral rules for the NMOCD include any specific statements
25 concerning the West Lindrith Gallup-Dakota Pool.

1 Q Did you check the rules for this pool at
2 the time you picked the location?

3 A At the time that we picked the location
4 I called the Aztec office of the OCD and spoke with Mr.
5 Busch, asked him my questions, and trusted him to be an
6 authority on setbacks and numbering and the allowables
7 within the pool.

8 Q Except for contacting Mr. Busch did you
9 look for a copy of the rules and review them?

10 A I looked for a copy and couldn't find
11 one in our office. We have one now.

12 Q Is it customary as you go about picking
13 locations and planning to develop this area that you call
14 the Oil Conservation Division and ask for their interpre-
15 tation of the rules?

16 A This was the first time that I had
17 called the NMOCD and asked them specifically concerning
18 this. From time to time questions come up in our operating
19 that if we don't have a set of rules or we can't find them
20 in our office, we'll call the District Office and ask
21 either Mr. Chavez or Mr. Busch or Gholson a question about
22 rules or operating practices within the state.

23 Q You're not disputing the fact that the
24 rules for the West Lindrith Gallup-Dakota Pool do provide
25 for an allowable rate of 382 barrels a day, is that cor-

1 rect?

2 A That's correct.

3 Q When you talk about the depth bracket
4 allowable for a 40-acre well you're not talking about
5 changing the depth bracket allowable or the allowable rate
6 for the entire pool, are you?

7 A It's not our intent to rewrite the West
8 Lindrith Pool rules or to form a new pool for the Dakota in
9 this area, although there may be cause to do that if some
10 operator (unclear).

11 Q You're just asking that a different
12 depth bracket allowable be considered in imposing a penalty
13 on the Missy No. 3, is that correct?

14 A We're asking that the depth bracket al-
15 lowable that would fit the perforations over the depth of
16 our producing horizon be applied to the Missy No. 3.

17 Q And that would be a different depth
18 bracket allowable from the one as set forth in the pool
19 rules, right?

20 A That's correct.

21 Q Now, if I understood your testimony, in
22 your page I think it's number 1 in Exhibit Number One, you
23 indicate that Mobil picked up the application for permit to
24 drill on March the 28th. How do you know that?

25 A That's a verbal communication from

1 (unclear) in the Aztec office of the NMOCD.

2 Q Mr. Busch told you that?

3 A That's correct.

4 Q Now, if we take a look at the -- the
5 C-101, the Application for Permit to Drill, that's page 5
6 in your book, there's nothing on that that would indicate
7 when you were intending to spud the well, is there?

8 A The approximate date work will start is
9 in Box No. 16.

10 Q And what does that say?

11 A March 26th, 1989.

12 Q You have approval, however, under this
13 to commence at any time until the 17th of September of this
14 year, isn't that correct?

15 A We were advised that this approval is
16 good for six months.

17 Q And you went ahead and, if I understand
18 the time -- the time set out on Exhibit One, you commenced
19 drilling at approximately noon, or 1:00 p.m. on March 30th,
20 isn't that right?

21 A That's correct.

22 Q And then at 4:20 you received a call
23 from Mr. Chavez.

24 A Yes.

25 Q At that time you knew there was some

1 question as to the location, isn't that correct?

2 A We knew at that time that Mobil had
3 raised a question.

4 Q All right, and you knew it was Mobil at
5 that time that was questioning the location?

6 A That's correct.

7 Q And you took the -- did you personally
8 get the call from Mr. Chavez?

9 A Yes, I did.

10 Q Where were you at that time, in your
11 office?

12 A I was in my office.

13 Q And then was -- at that time, if I un-
14 derstand your testimony, you discussed this with Mr.
15 Kuchara, is that correct?

16 A That's correct.

17 Q Did you look at the rules at that time?

18 A Yes, I did.

19 Q Did you consider calling any other oper-
20 ators to find a copy of the rules?

21 A I may have attempted to call another
22 operator. By the time I was talking to Mr. Chavez and with
23 Mr. Kuchara, it was after 5:00 o'clock and most of the
24 other operators were closed for the day.

25 Q Mr. Corbett, in your experience drilling

1 and developing oil and gas properties in New Mexico, were
2 you aware at that time that there was a possibility that a
3 penalty could be imposed on a well located at an unortho-
4 dox well location?

5 A The primary example that (not clearly
6 understood) in this situation is the Mobil Lindrith B Unit
7 No. 75 is at a unorthodox location and no penalty was ap-
8 plied. It was given administrative approval.

9 Q (Unclear), do you know that a penalty of
10 -- did you know that before you met with the Commission on
11 the 31st that a penalty might be applied to a well at an
12 unorthodox location?

13 A It was a possibility.

14 Q If we -- you keep talking about the
15 Mobil well at an unorthodox location. I don't dispute that
16 it is. That's the Missy -- no, let's see, which well is
17 that?

18 A Mobil Lindrith B Unit No. 75.

19 Q Okay. Is that spotted on your Exhibit
20 Number Two? All right, it's spotted in the southeast
21 quarter of Section 35, isn't that correct?

22 A That's correct. It's also on page 4 of
23 Exhibit One.

24 Q Now that well is unorthodox because it
25 is too far to the north, isn't that correct?

1 A Or southeast, yes.

2 Q It is not too close to the Hixon acreage
3 off to the west, is it?

4 A Would you care to hear some of the his-
5 tory of why we have a nonstandard location?

6 Q Let me just ask you, the well is how
7 far -- do you know how far that well is from the --

8 A 540 feet from the (unclear) line.

9 Q And it could have been drilled 330 feet,
10 could it not?

11 A It could have.

12 Q And you got notice of -- of Mobil's pro-
13 posal, did you not?

14 A Mobil sought our approval for their non-
15 standard location when they were seeking administrative ap-
16 proval of it. They had conducted an archaeologic survey
17 including the northwest enveloping that proration unit, and
18 also the southwest proration unit.

19 At that time we asked that they consider
20 the northeast and also the southeast window and Mobil did
21 not do that for whatever reasons, I don't know, but they,
22 they had asked -- they applied for approval. Mr. Catanach
23 was handling the case and he intervened on their behalf,
24 called me numerous times, and finally we, at his urging,
25 dropped our protest and allowed them to drill a nonstandard

1 location.

2 Q They could have located that well under
3 existing pool rules closer to your acreage than in fact it
4 was drilled, isn't that right?

5 A Because of archaeology they could not
6 have put it closer to our lease in a standard location.

7 Q Well, they could have drilled at various
8 locations 330 feet away, isn't that correct?

9 A There are a number of (unclear) points
10 330 feet from our lease line.

11 Q Mr. Corbett, aren't there standard lo-
12 cations 330 feet from your lease line they could have lo-
13 cated that well?

14 A No, because of archaeology.

15 Q They could not -- are you -- is it your
16 testimony that the No. 75 Well could not have been north
17 and been at a standard location 330 feet from your tract?

18 A They attempted to propose drilling a
19 well there. Because of archaeologic considerations they
20 could not put their well there.

21 Q How far from your lease line do the
22 rules require them to be?

23 A 330 feet.

24 Q And how far were they?

25 A 540 feet.

1 Q Thank you. Now the next day you veri-
2 fied the location was unorthodox, isn't that correct?

3 A That's correct.

4 Q And you did that at the Oil Conservation
5 Division's Aztec District office?

6 A Yes, sir.

7 Q And you discussed it with Mr. Chavez and
8 Mr. Busch.

9 A Yes, sir.

10 Q Discussed options, did you not?

11 A We did.

12 Q Did you discuss a penalty?

13 A We did.

14 Q Did they give you any guarantee as to
15 what the penalty would be?

16 A No, they did not.

17 Q Was it discussed that you might consider
18 discussing this matter with Mobil?

19 A Yes, it was.

20 Q It was discussed, was it not, that that
21 would make it easier at the time of hearing if you could
22 reach an agreement with them. Isn't that right?

23 A That's correct.

24 Q And you've stated, I think, in response
25 to questions from Mr. Kellahin that you didn't hear from

1 Mobil on the 30th, did you?

2 A We did not.

3 Q You didn't hear from them on the 31st.

4 A We did not.

5 Q Or the 1st of April.

6 A No.

7 Q Or the 2nd.

8 A No.

9 Q Or the 3rd.

10 A No.

11 Q 4th.

12 A No.

13 Q 5th.

14 A No.

15 Q Or the 6th.

16 A We did receive notice from Mobil on the
17 6th and --

18 Q Now, let me ask you --

19 A -- on that date I initiated the dialogue
20 between the two companies.

21 Q Now, you were the one drilling the well,
22 correct?

23 A That's correct.

24 Q You knew Mobil was objecting to the lo-
25 cation, correct?

- 1 A That's correct.
- 2 Q You knew that you had a better chance at
3 the hearing if you could reach an agreement, correct?
- 4 A That's correct.
- 5 Q You have a telephone in your office that
6 you can talk to Frank Chavez with, correct?
- 7 A That's correct.
- 8 Q Did you call Mobil on the 30th?
- 9 A The restriction of our allowable is not
10 Mobil's decision.
- 11 Q But the interval --
- 12 A I have discussed it with the NMOCD.
- 13 Q Did you talk to Mobil about working
14 something out on the 30th?
- 15 A No, we did not.
- 16 Q The 31st?
- 17 A No.
- 18 Q 1st?
- 19 A No.
- 20 Q The 2nd?
- 21 A No.
- 22 Q The 3rd?
- 23 A No.
- 24 Q 4th?
- 25 A No.

1 Q 5th?

2 A No.

3 Q The 6th?

4 A Yes.

5 Q You called Mobil and talked to Mobil on
6 the 6th?

7 A Yes.

8 Q What prompted that, the letter from
9 Mobil?

10 A Yes, it did.

11 Q How long did it take to drill this well?

12 A Approximately two weeks.

13 Q Two weeks. Now, if we -- you knew that
14 there was a question about the location on the 30th and you
15 didn't call them until the 6th, wasn't the well halfway
16 down during that period of time?

17 A Approximately.

18 Q You're not saying here to this Commis-
19 sion that Mobil acted in bad faith by not calling you, are
20 you?

21 A No, I'm not.

22 Q Okay, just to be sure that -- that's
23 clear.

24 When you were discussing this with the
25 Oil Conservation Division was anything discussed about

1 whether or not the rules were designed for the Gallup or
2 the Dakota Pools?

3 A Yes, sir, it was.

4 Q And it was the conclusion they were de-
5 signed primarily for the Gavilan Gallup?

6 A Yes, it was.

7 Q When you were looking at the options
8 available to you did you consider just stopping your acti-
9 vity until you determined what the penalty was?

10 A That was one possibility.

11 Q And you decided not to just stop until
12 you knew what you were going to be facing in terms of a
13 penalty.

14 A We (not clearly understood) recommenda-
15 tions of a penalty from the Aztec office prior to our
16 hearing. We could have gone to them as far as to reach a
17 verbal agreement with Mobil. As it said before it was not
18 Mobil's decision what the penalty should be; that's the Oil
19 Conservation Division's, and we knew that we would not have
20 any kind of a firm, in writing reduction level until after
21 a nonstandard location could be approved in a hearing.
22 That wouldn't come until -- I'm sure there's a date on Mr.
23 Catanach's order, if you look that up. We consider that to
24 be the date that we needed to shut down.

25 Q Now at the time you decided to go for-

1 ward you knew there was some risk that there would be a
2 penalty imposed.

3 A We did.

4 Q When you were meeting with Mr. Chavez
5 and Mr. Busch did you discuss potential drainage from the
6 offsetting property?

7 A You're suggesting potential drainage
8 from Mobil's B 75?

9 Q Yes.

10 A I don't recall discussing it. It cer-
11 tainly would be a consideration.

12 Q You're the one who actually picked this
13 location, isn't that correct?

14 A That's correct.

15 Q You testified there was no geological
16 basis to move it -- that would have prevented you from
17 moving back to 790 location for this well, isn't that
18 right?

19 A We didn't intend in drilling this loca-
20 tion to achieve a geologic advantage in the reservoir.

21 Q There were other factors that came into
22 play on getting the well as far south as possible, isn't
23 that right?

24 A (Not clearly understood.)

25 Q Weren't you interested in getting as far

1 away from existing wells in the area producing from the
2 Dakota?

3 A That's something that we might consider
4 in trying to maximize our production from that proration
5 unit and we certainly didn't want to waste any oil within
6 the proration unit.

7 Q Wasn't that a consideration in moving
8 the well as far south as you could?

9 A It probably was.

10 Q And your primary objective in drilling
11 this well was in drilling a Dakota well, isn't that right?

12 A That's correct.

13 Q And if your location was approved, are
14 you -- have you made any recommendation as to whether or
15 not Mobil ought to be able to come in and locate the well
16 -- a well 660 feet away south of the pool boundary?

17 A I don't think we've ever discussed a
18 location at 660 feet south of the boundary.

19 Q Well, let me restate my question. 660
20 feet away from you south of the boundary, 330 feet from the
21 lease line?

22 A We have discussed that as one of the
23 possible alternatives. The rule states that, as I said
24 earlier, had our well been outside of the pool boundary,
25 Mobil would be allowed without having to go to hearing to

1 drill a well 330 feet inside the pool boundary.

2 One possible solution that's being con-
3 sidered is that they simply be reciprocal with that and al-
4 low them to drill a well 330 feet outside the pool bound-
5 ary.

6 Q Your primary objective in drilling the
7 No. 3 was the Dakota formation, isn't that right?

8 A That's right.

9 Q Do you have any Dakota shows in that
10 well?

11 A The No. 3?

12 Q Yes.

13 A Substantial ones.

14 Q Substantial Dakota shows, and do you
15 have any Gallup shows?

16 A No, we did not run a mudlogger on that.
17 The open hole logs are relatively inconclusive on it.

18 Q Now if we talk about not gaining a geo-
19 logical advantage, when you compare the No. 3 to the No. 2
20 is the thickness of the formation fairly comparable?

21 A Yes, it is.

22 Q And how does the porosity compare be-
23 tween the two wells?

24 A It's again fairly comparable.

25 Q Do you -- can you make an adjustment now

1 from having -- you have produced the No. 3 for a month,
2 have you not?

3 A That's correct.

4 Q Based on that information and the in-
5 formation you have on the No. 2, are they comparable wells?

6 A Well, they're not. Was there not an
7 artificial (not clearly understood) on the No. 3, they
8 would be comparable.

9 Q Now, when we look at Dakota wells in
10 this area, they drain a substantial area, isn't that cor-
11 rect?

12 A The state has allowed development on 80
13 acres and if you'll turn to Exhibit Number Two, Section 32
14 of 25 North, 3 West -- (not clearly understood.)

15 Q If wells were located 660 feet apart in
16 this area they'd be actually on 40 acres, wouldn't they?
17 Isn't that correct?

18 A If on a matrix basis both horizontally
19 and vertically wells were drilled 640 feet apart that would
20 amount to 40 acre spacing.

21 Q 660 apart would be 40 --

22 A I'm sorry, yes.

23 Q -- acre spacing.

24 A Yes.

25 Q Now in the Dakota formation based on

1 what you know of this reservoir, would 40-acre spacing be
2 an appropriate development pattern?

3 MR. KELLAHIN: Objection to
4 the question, Mr. Chairman. We don't seek to change or
5 modify or amend the spacing rules to allow 330 locations.
6 We're not here to present reservoir engineering studies on
7 drainage. It's an accepted fact and the question is not
8 relevant.

9 MR. CARR: I'd like to state
10 in response to the objection, Mr. Corbett said one of the
11 things they considered was permitting drilling of wells 330
12 feet apart, offsetting (unclear) 330 south of the line
13 applies to these two tracts, and my question is to follow
14 up on that, and the question is, is that an effective
15 drainage pattern.

16 It's an appropriate question.
17 It's -- if he says that he has not considered that at all,
18 then that's all we need to know.

19 MR. LEMAY: I'll allow the
20 question in light of the conversation that he had with
21 Mobil concerning that.

22 A As I answer that, please bear in mind
23 that wells can be 660 feet apart on 40 acres; they can also
24 be that on 80 acres and they can also be that on 160 acre
25 spacing.

1 Now, -- I'm sorry --

2 Q The question is in the Dakota is that an
3 effective spacing pattern?

4 A We're not recommending that 40-acre
5 spacing be -- that the pool be developed on 40-acre spac-
6 ing.

7 Q This is one of those cases where maybe
8 these rules were designed for the Gallup formation.

9 A I'm sorry, what was your question?

10 Q I'll withdraw the question. Does Hixon
11 Development Company operate other wells in the West Lind-
12 rith Gallup-Dakota Pool?

13 A Yes, we do.

14 Q Are they, in terms of their producing
15 capabilities, comparable to the No. 2 and No. 3 wells?

16 A The Missy No. 1-Y was at one point.

17 Q And is it now?

18 A It'd declined.

19 Q And that is also in this Section 30 --
20 35?

21 A That's correct.

22 Q Based on your knowledge of the pool is
23 this one of the best producing areas in the reservoir?

24 A Yes, it is.

25 Q When we look at these wells, do they

1 have a typical production profile? That is, do they de-
2 cline from the time when they're put on first production?

3 A The -- throughout the pool most wells do
4 begin to decline almost immediately.

5 Q From the time these wells go on they
6 start declining immediately?

7 A Almost immediately.

8 Q And is that a fairly constant decline
9 over the life of the well?

10 A It is based on the equation, yes.

11 Q And could you give me an estimate of the
12 percentage of decline you experience as these wells pro-
13 duce?

14 A There are wells that have declined hy-
15 perbolically at rates as high as 70 percent in this pool.
16 In this area where we benefit from having matrix porosity,
17 which is not actually something that they have throughout
18 the balance of the pool, we're seeing exponential declines
19 and certainly not 70 percent declines.

20 Q I'm sorry, I didn't hear. Surely not
21 what?

22 A Certainly not 70 percent declines.

23 Q Do you generally see in excess of, say,
24 a 10 percent decline?

25 A These wells are probably declining in

1 the range of 15 to 20 percent; something that we're more
2 familiar with in our other sandstone reservoirs, say, at
3 this time in other pools in the state.

4 Q I think you, in testifying about a pro-
5 posed penalty, indicated you had never -- had been unable
6 to find any precedent for what Mr. Catanach did in the
7 Examiner order. Is that -- that what you said?

8 A That's what I said.

9 Q When you were looking at the orders, did
10 you look to see if there was any comparable situation where
11 you had an infill well situation with one well too close to
12 the outer boundary of the field?

13 A I've not seen an order in that situa-
14 tion.

15 Q So not only no precedent from the order
16 but no precedent from the fact, is that right?

17 A That's correct.

18 Q When we take a look at your page 20 in
19 your exhibit book, this is the double circle penalty
20 method. That's what this is called. Do you have that in
21 front of you?

22 A Yes, I do.

23 Q Now, if I understand this, what you are
24 recommending is a production limitation of 290 barrels of
25 oil a day, is that right?

1 A That would be the solution we arrived at
2 with this method.

3 Q Now, question is, does that 290 barrels
4 of oil daily figure apply to the unit with the two wells or
5 does this figure apply just to the Missy No. 3?

6 A The Missy No. 3 is the well that is ac-
7 tually too close to the lease line, and the second lower
8 circle would actually protrude over the lease line; there-
9 for this reduction in allowable should be applied to the
10 Missy No. 3.

11 Q Only to the Missy No. 3.

12 A That's correct.

13 Q It could produce up to 290.

14 A That would be the solution arrived at
15 with this method.

16 Q And the depth bracket allowable by pool
17 rule is 283.

18 A 382.

19 Q Okay, 382. Have you got with you pro-
20 duction information on the No. 3?

21 A I don't have it in my possession here.

22 Q Well, have you reviewed it?

23 A Yes, I have.

24 Q For the month of June?

25 A Yes.

1 Q That's when you were able to produce
2 your testing allowable, isn't that right?

3 A I believe in the month of June --

4 Q Well, maybe not, maybe it was the month
5 of May where you -- have you produced the well and been
6 able to test it to see what in fact it will make?

7 A We did that.

8 Q Does it make 290 barrels of oil a day?

9 A It will make, if allowed to produce,
10 well in excess of 290 barrels a day.

11 Q And how long would you expect a well to
12 be able to actually produce at this rate if it was on and
13 producing, based on your testimony about the decline rate
14 for a well?

15 A At 290 barrels per day or after (not
16 clearly understood)?

17 Q Can you estimate how long this well, if
18 unrestricted, would be able to produce at 290 barrels of
19 oil a day?

20 A Unrestricted and based on the decline
21 rate we've seen, approximately a year.

22 Q A year? Then after a year this would be
23 no penalty at all?

24 A That would be correct. It would still
25 be in force and presumably, if we were ever to open the

1 Mancos formation and raise the production rate above 290
2 barrels per day, then it would be curtailed again.

3 Q But if we look at just the Dakota and
4 what you're producing now, this penalty would last, in
5 effect, or be effective for probably a year.

6 A That's at a rough estimate and (un-
7 clear.)

8 Q What kind of producing life do you ex-
9 pect from a Dakota well in this area?

10 A These wells are unique to the area, as I
11 said before, in that they actually have matrix sandstone
12 porosity and not fracture porosity that we've seen in the
13 other West Lindrith Pool wells. These wells, the first
14 well drilled into this was the Missy 1-Y and it has yet to
15 play out.

16 Q And how long ago was the Missy 1-Y
17 drilled and completed?

18 A Approximately two years.

19 Q I'm sorry?

20 A Approximately two years.

21 Q Wouldn't you anticipate that a well like
22 the Missy No. 3 would produce for five years?

23 A I would hope it would.

24 Q Maybe ten years?

25 A It's a possibility.

1 Q Isn't it fair to say that if we use the
2 penalty as set forth on page 20 that virtually the bulk of
3 the production from the Missy No. 3 would be produced with
4 no meaningful penalty on it at all?

5 A As I said, this has not been passed (not
6 clearly understood) and not necessarily (unclear). This
7 was included because it was considered.

8 Q Are you recommending that be adopted by
9 the Commission?

10 A No, we're not.

11 Q Now let's go to the ratio method. If we
12 look at the ratio method, that's on page 21, and this is
13 simply a portion of, I guess, what the Examiner order pro-
14 vided for; that is, looking at the actual location compared
15 to the setback as provided for in the rules and developing
16 a percentage, was 42 percent decline (unclear) the depth
17 bracket allowable, is that correct?

18 A That's correct.

19 Q And you would apply the 160 barrel fig-
20 ure to the Missy No. 3 only, is that right?

21 A That's correct.

22 Q Do you have any idea of how long it will
23 be -- can you estimate how long it would be before the
24 Missy No. 3 would drop below the point where it is able to
25 produce 160 a day?

1 A Again I've done no calculations and I
2 would hazard a guess it would be a hazardous guess.

3 Q If we, in fact, look at the well in this
4 location, based on your experience in the area, isn't it
5 fair to say that it's going to be draining a wide area?

6 A There's substantial porosity, as can be
7 seen in (unclear). We've opened that up (unclear). We're
8 hoping that we can drain the entire proration unit with
9 our two wells.

10 Q Do you expect basically radial drainage
11 in this area?

12 A At this point there is certainly not
13 enough geologic evidence to say that the reservoir is even
14 continuous to the south. We don't know if drainage will be
15 radial or what; it may be a square, but I doubt it.

16 Q Are you testifying that you don't think
17 the reservoir is present south of the unit that's dedicated
18 to this well?

19 A We don't know. We don't have geologic
20 information.

21 Q Did you try and make any calculation as
22 to the percent of the production using 160 barrels a day
23 that would come from offsetting properties?

24 A I have not calculated any drainage from
25 the (unclear) properties.

1 Q You don't know what percent of that
2 might come from acreage owned, in fact, by Mobil?

3 A As I said.

4 Q If we go to page 22, you're suggesting a
5 -- that you would accept a 40-acre allowable for the well,
6 is that right?

7 A That's correct.

8 Q Is it your testimony that you believe
9 the well would only drain 40 acres?

10 A This is the allowable as it stands es-
11 tablished for that depth bracket and in a conventional
12 matrix porosity reservoir.

13 Q For 40-acre spacing.

14 A That's correct.

15 Q Do you have any -- do you know how the
16 spacing units are determined?

17 A I know that in this pool we have 160-
18 acre spacing and if that pool had two wells it, that could
19 be developed on 80-acre spacing.

20 Q Aren't these spacing rules really tied
21 to the area that these wells can be expected to drain?

22 A Yes.

23 Q Is it your opinion that the Missy No. 3
24 will drain 40?

25 A What we're recommending here is that

1 because when you're at a 40-acre setback, we accept a 40-
2 acre allowable.

3 Q So you're not talking about how many
4 acres that well can drain, you're only talking about how
5 close to the outside boundary of your unit you are, isn't
6 that right?

7 A These numbers were established after
8 calculations had been made for wells that would drain 40
9 acres.

10 Q You're not testifying one way or the
11 other about what the Missy will drain, whether it will
12 drain 40 or not?

13 A No, I'm not.

14 Q Do you have an opinion on that?

15 A I do.

16 Q And what is that?

17 A I -- because we were -- I believe it
18 will drain more than 40 acres.

19 MR. CARR: I have no further
20 questions.

21 MR. LEMAY: Are there addi-
22 tional questions of the witness?

23

24 QUESTIONS BY MR. LEMAY:

25 Q I just have a couple of quick questions

1 here, Mr. Corbett.

2 Did you frac the well?

3 A Yes, we did.

4 Q Is there a tendency to have the well
5 production come off the frac and then kind of follow a
6 decline or do you see it pretty much even after you frac?

7 A We saw some decrease after fracing in
8 the Missy No. 2 and No. 1-Y.

9 No. 3 was curtailed almost immediately
10 after --

11 Q After it came off the frac would the
12 well make 290? Was that your testimony? 290 barrels of
13 oil per day?

14 A No, sir. Right after the frac the well
15 was capable of producing 347 barrels of oil per day.

16 Q But after the frac pressure bled off,
17 what kind of a rate were you at then?

18 A We're -- well, I think this is actually
19 after most of our frac was back. We had four barrels of
20 water (unclear). A stabilized rate on that well would be
21 probably 300 to 347 for the first two months.

22 Q In excess of 300 barrels of oil per day.
23 You've got a good well.

24 A Thank you.

25 Q How about the No. 2? What would it do?

1 A The No. 2 is now producing in the range
2 of 190 barrels per day.

3 Q 190?

4 A Yes, sir.

5 Q How about the 1-Y?

6 A 1-Y is, I believe, in the range of 150
7 barrels per day and that has the Mancos, also.

8 Q That's with the Mancos. Okay. Do you
9 know what Mobil's Lindrith Unit B No. 75 would make?

10 A I've not seen production data on that,
11 although I'm told it's in the range of 200 to 250 barrels
12 per day.

13 Our wells are currently in (not clearly
14 understood).

15 MR. LEMAY: That's all I have.

16 Any other questions of the
17 witness?

18 If not, he may be excused.

19 We'll take a 15 minute break.

20

21 (Thereupon a recess was taken.)

22

23 MR. LEMAY: We shall continue.

24 Mr. Kellahin, do you have any
25 other witnesses?

1 MR. KELLAHIN: That concludes
2 our direct presentation, Mr. Chairman.

3 MR. LEMAY: Thank you.

4 Mr. Carr.

5 MR. CARR: Thank you, Mr.
6 Chairman.

7 At this time I would call
8 Richard Burns.

9
10 RICHARD A. BURNS,
11 being called as a witness and being duly sworn upon his
12 oath, testified as follows, to-wit:

13
14 DIRECT EXAMINATION

15 BY MR. CARR:

16 Q Will you state your full name for the
17 record, please?

18 A Richard Alvin Burns.

19 Q Mr. Burns, where do you reside?

20 A Westminster, Colorado.

21 Q By whom are you employed and in what
22 capacity?

23 A Mobil Oil Corporation as a petroleum
24 engineer, as a reservoir engineer.

25 Q Have you previously testified before the

1 New Mexico Oil Conservation Division or Commission?

2 A No, I have not.

3 Q Would you briefly review your educa-
4 tional background for the Commission, please?

5 A I graduated from the University of Okla-
6 homa in January of 1971 with a Bachelor of Science in pet-
7 roleum engineering and then I graduated from the University
8 of Wyoming in January of 1982 with an MBA.

9 Q Will you review your work experience
10 since graduation from college in 1971?

11 A I began work as a petroleum engineer in
12 January of 1971 with Union Oil of California. I worked for
13 them as a petroleum engineer for fifteen years.

14 I left Unocal in January of 1986 and be-
15 gan work for Mobil.

16 Q Are you familiar with what Hixon seeks
17 in this case?

18 A Yes, I am.

19 Q Are you familiar with the area that is
20 the subject of this hearing?

21 A Yes, I am. I became familiar with the
22 area when I was assigned to that regional area in the
23 winter of 1987, the fourth quarter of 1987. In fact, I did
24 some of the first preliminary work in the economics for the
25 B-75 Well.

1 Q Have you also been involved in the
2 reservoir work that has been done by Mobil concerning this
3 particular area?

4 A Yes, I have.

5 MR. CARR: We would tender Mr.
6 Burns as an expert witness in petroleum engineering.

7 MR. LEMAY: His qualifications
8 are acceptable.

9 Q Mr. Burns, what does Mobil seek by ap-
10 pearing in this proceeding today?

11 A We seek to receive a penalty, a meaning-
12 ful penalty for the Missy No. 3 Well.

13 Q You've been present for Mr. Corbett's
14 testimony, have you not?

15 A Yes, I have.

16 Q We don't have to go back through what
17 wells, what pool these wells are completed in, but I would
18 ask you if you're familiar with the rules that govern de-
19 velopment of the West Lindrith Gallup Dakota Pool?

20 A Yes, I am.

21 Q Would you refer to what has been marked
22 for identification as Mobil Exhibit Number One, identify
23 this for the Commission and review the information con-
24 tained on this exhibit?

25 A Okay. The cross hatched area is the

1 West Lindrith Gallup-Dakota Pool. It shows the southern
2 boundary. The dark black line is the northern boundary of
3 the Lindrith B Unit, which is operated by Mobil. It also
4 contains the well locations with the Gallup-Dakota produc-
5 tion. It also includes the two unorthodox wells, the Missy
6 No. 3 and the Mobil Lindrith B-75.

7 In addition to that, it shows the
8 southern -- a southern proration unit below the southern
9 boundary of the West Lindrith. Dark black boxes are the
10 orthodox drilling windows for those -- that proration unit.

11 Q Do you know how long Mobil has been in-
12 volved in this area?

13 A I know we've been there for a long time.
14 I can't give you an exact number of years.

15 Q Mr. Corbett testified about the order of
16 drilling of the wells in the area which is really the sub-
17 ject of this hearing. When was the Lindrith B Unit 75 Well
18 actually approved by Mobil for drilling, do you know?

19 A It was approved in February of 1988.

20 Q And was that actually prior to the time
21 that the Missy No. 2 was drilled?

22 A That was before the Missy No. 2 was
23 drilled.

24 Q And what delayed the development in the
25 drilling of the 75 Lindrith B Unit Well?

1 A There were two main things. The first
2 was to get approval from the working interest owners be-
3 cause different working interests in different formations,
4 an agreement had to be worked out with the -- with the
5 other owners. That was the majority of the time.

6 In addition there was some permitting
7 delays due to our archaeological studies.

8 Q No, you've testified that you were fami-
9 liar with the rules of the West Lindrith Gallup-Dakota
10 Pool. If Mobil was to come in and try and offset the Missy
11 No. 3 at a location 330 feet south of the northern bound-
12 ary of the Mobil Lindrith B Unit, in your opinion would
13 that require an exception to the existing pool rules?

14 A Yes, it would.

15 Q Would you now refer to what has been
16 marked Mobil Exhibit Number Two, identify this, and explain
17 what is shown on this exhibit?

18 A Okay. This is Mobil's recommended pro-
19 posed allocation penalty formula to calculate the rate for
20 the Missy No. 3 and what we've done is we've taken the
21 actual distance from the southern boundary, which is 330
22 feet, divided by the standard distance, 790 feet, which
23 gives us a 42 percent reduction times the top allowable for
24 that proration unit, 382 barrels, and then an order taking
25 account the fact there are two wells in that unit and also

1 to supply us with a meaningful penalty, we've divided that
2 by two.

3 Q I'd like for you to for a minute ex-
4 plain to the Oil Conservation Commission Mobil's reason-
5 ing in suggesting that the allowable be divided by two.

6 A Well, of course there are two wells on
7 -- on that particular proration. In addition those two
8 wells are extremely equal in terms of height, porosity,
9 productivity, so in order to make this -- you would normal-
10 ly assume that each one of the wells would produce half of
11 the allowable for that unit, and so to give us a meaningful
12 penalty, we've divided it by two.

13 Q If the well was permitted to produce at,
14 say, 162 barrels a day, that is without dividing by two, do
15 you have an opinion as to whether or not that would in fact
16 be a meaningful penalty on the well's producing ability?

17 A You would normally expect that well to
18 make about 180 barrels a day, half the unit's allowable, so
19 160 barrels would only be a slight. slight reduction, and
20 would constitute no real penalty at all.

21 It would not, in fact, reduce the drain-
22 age radius, the drainage into the southern -- to -- to the
23 south into Mobil's acreage to the south.

24 Q If the figure 162 is not divided by two,
25 what impact could that have on Mobil's plans for develop-

1 ment of this acreage?

2 A If we would not get a reduction below
3 that, we would have to go in and drill a well 330 feet to
4 the south of the southern boundary.

5 Q Now, Mr. Corbett indicated that that
6 would be a 40-acre development pattern. Do you agree with
7 that?

8 A Yes, I do.

9 Q Do you believe that a well 660 feet away
10 from the Missy No. 3 in the Dakota would be an effective
11 development pattern for that --

12 A No, I do not. The data definitely indi-
13 cates that the drainage radius of these particular wells is
14 much larger than that and we would -- it would be consti-
15 tuted waste in terms of the well cost and the area to be
16 drained.

17 Q Do you believe that a well 660 feet away
18 from the Missy south of the Lindrith B Unit, do you believe
19 that would be an unnecessary well to produce the Dakota
20 reserves?

21 A Yes, I do.

22 Q If the penalty that you recommend is
23 imposed and the well is permitted to produce at a rate of
24 approximately 80 barrels a day, do you believe that this
25 would enable Mobil to protect it's correlative rights?

1 A Yes, I do.

2 Q And would you be able then to develop
3 the wells at standard locations consistent with the pool
4 rules?

5 A Yes.

6 Q Would this enable you to have a more
7 effective development pattern for the area?

8 A Exactly.

9 Q If the well's production is restricted
10 as you recommend and Mobil goes back and drills 790 feet
11 consistent with the rules, do you believe with the penalty
12 that a well at 790 would be able to compete for the re-
13 serves in the area?

14 A Yes, exactly.

15 Q Let's go to Exhibit Number Three and I'd
16 ask you to identify that, please.

17 A This is the pressure history from a
18 pressure test that was run in the Lindrith B-75 Well. The
19 test was initiated on April the 21st and continued for
20 seven days.

21 Initially you have a pressure build-up
22 to a static level of approximately 2187. It remains that
23 way for about 3 to 4 days. Then in approximately 95 hours
24 we see a pressure response from the stimulations that were
25 done in the No. 3 Missy Well.

1 Q Okay, and what you have is a fracture
2 treatment or frac job in the No. 3 Well.

3 A That's correct.

4 Q And we're talking about a response seen
5 in the Lindrith B-75, is that right?

6 A Right, uh-huh.

7 Q How far apart are these wells?

8 A 1300 feet.

9 Q All right. Let's go to Exhibit Number
10 Four and again I'd ask you to identify what this exhibit is
11 for the Commission.

12 A Okay. This is a magnification of the
13 previous data. We've expanded the data from 80 hours
14 forward and expanded the pressure scale, also.

15 It shows --

16 Q So that's the same information that's
17 plotted before with a different scale on the graph.

18 A Exactly.

19 Q All right, would you review what that
20 shows?

21 A Okay. You show pressure responses in
22 the B-75 from the two portions of the stimulation that was
23 done on the No. 3 Missy Well. First the breakdown that was
24 done and then the -- the frac. The pressure response ap-
25 proximately happens about two hours after the corresponding

1 events in the Missy No. 3.

2 Q What conclusions can you draw from this
3 interference test information?

4 A The wells are 1300 feet apart and we see
5 very rapid response in the B-75, which would indicate
6 there's a high degree of pressure communication which would
7 also indicate large drainage radiuses (sic).

8 Q Do you have any reason or are you aware
9 of anything that would suggest that you would not exper-
10 ience this kind of a pressure response for a drainage area
11 to the south of the Missy No. 3 Well?

12 A No. Given the data that we have, we
13 would expect the same data to the south.

14 Q Would you now go to Exhibit Number Five
15 and I think this exhibit you can simply identify for the
16 Commission.

17 A This is a time log from the pressure
18 data that shows that we -- when we ran the bomb in the
19 hole, the fact that we started to gather data at 2:00
20 o'clock p.m. on April the 21st, and the gauge was removed
21 approximately 10:00 o'clock on April 28th.

22 Q Let's go to the last of the Mobil ex-
23 hibits, Exhibit Number Six, and I'd ask you to identify
24 this exhibit.

25 A These are production histories from the

1 Missy 1-Y and Missy No. 2.

2 Q Now will you go to these exhibits and
3 review for the Commission the particular points that are
4 significant to this hearing?

5 A All right. It gives us some data upon
6 the production rates of these two wells. The thing that is
7 of engineering note to me was the fact that within a couple
8 months after the start of production from the Missy No. 2
9 we begin to see a decline in the production in the 1-Y, and
10 this is very indicative of interference between these two
11 wells.

12 Now the fact that they're 2000 feet
13 apart would again be indicative of large drainage radiuses
14 (sic) from this -- these particular wells.

15 Q Now the No. 1-Y also has Gallup produc-
16 tion, is that correct?

17 A That's correct.

18 Q What effect would it have on this curve?

19 A Well, depending on what that production
20 is, it would tend to mitigate the interference between the
21 wells because the Missy No. 2 does not have any Gallup in
22 the hole perforated.

23 Q You've been present at this hearing and
24 heard some testimony about the possibility of imposing pen-
25 alties on the Missy No. 3. You've heard a number of them.

1 Have you heard any penalty recommended other than the one
2 proposed by Mobil that in your judgment would effectively
3 restrict production from the Missy No. 3 Well?

4 A None of the proposals would effectively
5 restrict production.

6 Q And if those are not -- if the produc-
7 tion from the Missy No. 3 is not effectively restricted,
8 what effect does that have on Mobil?

9 A Well, again, that forces us -- if the
10 production is not restricted, then we'll have drainage to
11 the south and that forces Mobil to drill a 330 well upon
12 the southern boundary.

13 Q Now you're familiar with the rules for
14 this pool and the boundary that has been provided for it in
15 this pool, is that correct?

16 A Yes.

17 Q Do you see anything based on your study
18 of the area that would suggest that the boundary for the
19 pool should in fact be moved to the south?

20 A No, I don't see any reason why we should
21 move. In fact, the data from the wells (unclear) indicate
22 that we might want to start a new pool to the south, and in
23 fact that we may have a border, maintain that border in its
24 current location.

25 Q What are Mobil's plans for further de-

1 velopment in this area?

2 A We currently are preparing a proposal
3 which we expect to have to management within a few days
4 which will propose a developed well to the south in Section
5 1 in the northeast standard window of the northwest prora-
6 tion unit in Section 1.

7 Q And will your primary objective in that
8 well be the Dakota formation?

9 A Yes, sir.

10 Q Do you recommend that the penalty that
11 is proposed by Mobil and is accepted by the examiner be
12 affirmed by this Commission?

13 A Yes, sir, I do.

14 Q If that penalty is adopted, in your
15 opinion will it be in the best interest of conservation,
16 the prevention of waste and protection of correlative
17 rights

18 A I do.

19 Q Were Exhibits One through Six prepared
20 by you or compiled under your direction and supervision?

21 A They were.

22 MR. CARR: At this time, Mr.
23 Chairman, I would move the admission of Mobil Exhibits One
24 through Six.

25 MR. LEMAY: Without objection

1 Exhibits One through Six will be admitted into the record.

2 MR. CARR: That concludes my
3 direct examination of this witness.

4 MR. LEMAY: Thank you, Mr.
5 Carr.

6 Mr. Kellahin.

7 MR. KELLAHIN: Thank you, Mr.
8 Chairman.

9
10 CROSS EXAMINATION

11 BY MR. KELLAHIN:

12 Q Mr. Burns, do you have before you, sir,
13 a copy of the exhibits that Mr. Corbett discussed from and
14 in particular a copy of Order 4314-A?

15 A I do not.

16 Q Let me give you one. I ask you, sir, to
17 turn with me to that portion of the order that has the rule
18 section and then if you'll find Rule 6 for me. Would you
19 read Rule 6 out loud for me?

20 A Rule 6?

21 Q Yes, sir.

22 A A standard proration unit 158 through
23 162 acres shall be assigned a depth bracket allowable 382
24 barrels of oil per day. In the event that there is more
25 than one well on 160-acre proration, the operator may pro-

1 duce the allowable assigned to the unit from the wells on
2 the unit in any proportion.

3 The allowable assigned to a nonstandard
4 proration unit shall be -- shall bear the same ratio to a
5 standard allowable as the acreage in such nonstandard unit
6 bears to 160 acres.

7 Q When we look at your exhibit, Mobil's
8 exhibit, I believe it's the Number Two, the one with the
9 proposed penalty?

10 A Yes, sir.

11 Q Mobil's proposed penalty is in direct
12 conflict with Rule 6, is it not, Mr. Burns?

13 A Not necessarily. The well that caused
14 the problem is the Missy No. 3.

15 Q Yes, sir.

16 A And in order to penalize that particular
17 well, then we have to look at the production rate from that
18 particular well.

19 Q There is nothing in Rule 6 on a second
20 well that sets the allowable between two wells on the same
21 spacing unit based upon production or deliverability, does
22 it?

23 A That's correct.

24 Q Let's look at Section number 1 to the
25 south of Section number 35, that's Mobil acreage?

1 A That's correct.

2 Q Have you proposed a well or has Mobil
3 proposed a well in the northwest quarter of Section 1?

4 A No, we have not formally made a pro-
5 posal. We are developing the proposal within Mobil manage-
6 ment right now and I am reasonably comfortable that that
7 well will be approved.

8 Q Now the well you've discussed with Mr.
9 Carr was a well in the northeast quarter of Section 1,
10 wasn't it? Did I misunderstand?

11 A Well, but the -- the -- let me step
12 back. The well, the well that we have proposed --

13 Q Yes, sir.

14 A -- is in the northwest quarter of Sec-
15 tion 1, the northwest proration unit. It's located in the
16 northeast window within that proration unit.

17 Q I apologize. I had heard northeast and
18 I failed to hear northwest. Give me the footage location
19 for the proposed well.

20 A I do not know that exactly.

21 Q All right. In the absence of a well in
22 the northwest quarter of Section 1, then regardless of what
23 the allowable is for the Missy 3, some drainage may occur
24 of the Mobil acreage, isn't that true?

25 A That's true.

1 Q In response to Mr. Carr's question you
2 said that based upon the interference or the response in
3 the 75 Well from the frac treatment in the Missy 3 that you
4 saw a response that you concluded, at least between those
5 two wells, that they would communicate. Is that not true?

6 A That's true.

7 Q And then you hypothecated (sic) to Mr.
8 Carr that based upon radial drainage or some other theory
9 that you might expect a similar occurrence to occur around
10 the Missy 3 as it approaches the Mobil acreage to the
11 south.

12 A That's correct.

13 Q But then moments later you told us that
14 the pool might not extend into Section 1.

15 A I said that this might be a logical
16 place to put a boundary. I did not say that the -- in
17 which direction the pool extended.

18 Q In the absence of a well in the north-
19 west of 1 the Mobil acreage, if the pool extends that far,
20 is going to subject to some drainage, is it not?

21 A That's correct and that's what we're
22 attempting to do, is to minimize that drainage.

23 Q All right, and if you exercise the right
24 to have a well 790 from that common boundary dedicated 160
25 acres to that well, what would be your allowable for that?

1 A For that particular well at that point
2 in time with only one well in the proration unit, it would
3 be 382 acres -- I mean 382 barrels of oil per day.

4 Q Have you attempted to determine where is
5 the point of drainage and counterdrainage between a well
6 located as you propose in relation to the Missy Well, if
7 the Missy Well is restricted to 80 barrels of oil a day?

8 A I have not done that calculation, no.

9 Q That is a calculation an engineer could
10 perform if the data is available, is that not true?

11 A Yes, I have -- I have an idea where that
12 calculation would be at; not physically punched the num-
13 bers.

14 Q Is it fair to characterize that point as
15 a no flow boundary?

16 A Theoretically it could be called a no
17 flow boundary. That's correct.

18 Q Have you determined where that no flow
19 boundary would be if we use 80 barrels of production re-
20 stricted on the Missy 3 Well?

21 A Yes. We have attempted to locate that
22 no flow boundary at the boundary between the two leases.
23 In fact, to get that boundary, no flow boundary on the
24 line, we would have to further restrict the Missy Well to
25 approximately 65 barrels a day, but since the -- that cal-

1 culation is a little bit more difficult than the normal
2 ratio, and since it's reasonably close to the 80 barrels
3 that we proposed, we went with the simpler allocation
4 formula.

5 Q Have you attempted to relate the deliv-
6 erabilities of the Missy 2 and the Missy 3, one to the
7 other?

8 A Yes.

9 Q If the Missy No. 3 was at a standard
10 location, and we still had the Missy No. 2 at its current
11 location, notwithstanding what its current rates are, then
12 the operator under the rules has the opportunity to produce
13 all of the allowable from the Missy No. 3 Well, doesn't he?

14 A That's correct.

15 Q So if that well was located 790 feet
16 from the south boundary and was allowed to produce the
17 total allowable, have you calculated where the no flow
18 boundary would be in that circumstance between your proper-
19 ty and the Missy 3 Well?

20 A The property to the south and the Missy
21 3 Well?

22 Q Yes.

23 A Yes.

24 Q Have you done a similar calculation to
25 determine where the no flow boundary would be between the

1 75 Well and the Missy 3 Well?

2 A No, I have not done that calculation.

3 Q Were you a participant on behalf of your
4 company in the formulation of the West Lindrith Pool rules
5 that resulted in the boundary footage issued that we dis-
6 cussed here today?

7 A I was not.

8 Q Did you participate on behalf of your
9 company in any of the Gavilan Mancos hearings, Mr. Burns?

10 A I did not.

11 Q Have you made a study or have you deter-
12 mined whether or not there is any relationship in the depth
13 bracket allowables set forth in Rule 505 in terms of their
14 drainage radiuses?

15 A No.

16 Q Is there an engineering explanation for
17 why in this common source of supply in the Dakota we should
18 have wells within the interior boundary that are permitted
19 to be 330 from the common spacing unit and at other points
20 on the outer boundary 790?

21 A What you're attempting to do is protect
22 drainage -- that 790 boundary buffer area applies not only
23 to the inside but to the outside.

24 What you're trying to do is protect
25 drainage from offset pools; that is, a well drilled in the

1 buffer area draining a pool to the outside of the boundary
2 or a well on the outside of the boundary draining the pool
3 on the inside of boundary.

4 Q Are you talking about drainage in the
5 Dakota formation regardless of whether it's within the
6 boundary or adjacent to the outer boundary of the pool?

7 A Yes, we're talking about drainage in the
8 Dakota, as I understand your question.

9 Q Yeah, I'm talking about Dakota produc-
10 tion.

11 A Right.

12 Q I'm trying to find out if there is an
13 engineering explanation based upon drainage or whatever
14 method you can analyze it to explain in terms of well
15 spacing why we should have or allow the wells within the
16 interior of the Dakota Pool to be 330 from a common line,
17 or 660 apart in terms of drainage and at the same point
18 have that rule apply on the outer edge of that pool.

19 A Well, again, I think in this particular
20 circumstance, the rules in the West Lindrith and in the
21 boundary area seem to be devised to -- for the Gavilan
22 formation, where you have relatively lower permeabilities
23 and smaller drainage radiuses the 330 would assume that you
24 have lower permeabilities.

25 In the Dakota sand we apparently have

1 very high transmissibility and get large drainage radiuses.
2 So it would be my professional opinion, in fact, that the
3 330 is not applicable for the Dakota in the West Lindrith.
4 It was devised for the Gavilan.

5 And the 790 was, in fact, devised to
6 protect the Gavilan outside the West Lindrith boundary.

7 Q Are you familiar with the Mobil wells in
8 Section 4 as we move to the west of this particular area?

9 A Just on a cursory basis.

10 Q Let me show you Exhibit Number Two, Mr.
11 Burns. When we look at Section 35 where the Missy 3 Well
12 is and I look immediately south into Section 1, your north-
13 west quarter, the topic of our discussion has been what
14 should be the appropriate distance between wells and there-
15 fore the penalty that is imposed the Missy 3, and it's your
16 contention that the 80 barrels is one that's appropriate to
17 establish a no flow boundary?

18 A That's correct.

19 Q And that's for the Dakota production?

20 A That's correct.

21 Q What has been the solution with regards
22 to that production when we look at Section 4 to the west
23 and its relationship to the offsetting producing wells im-
24 mediately to the north in Section 32?

25 A That is an entirely different area of

1 the field. The area of the Dakota that we're looking
2 around at B-75, Missy 2 area is much better reservoir than
3 that in that general area.

4 I was not a part of the drilling of
5 those wells or the spacing footage, so I am not completely
6 aware of the exact reasoning for the location of the wells
7 but I can say in general that the -- that area of the re-
8 servoir has much lower permeability and on a cursory basis
9 smaller well spacing would probably be required.

10 Q But as they exist now, for those two
11 areas of this pool, we're still dealing with the same pool
12 and the same rules.

13 A That's correct.

14 Q In the absence of the Missy No. 2 Well,
15 let's presume that it doesn't exist, under your penalty
16 calculation, then, what would be allowed to be produced
17 from the Missy No. 3?

18 A Well, it would be the ratio of the
19 distances times that proration unit; the 2 factor would be
20 removed.

21 Q And that gives us the 160 barrels of oil
22 a day.

23 A That's correct.

24 Q What's the current status of the Mobil
25 75 Well, Mr. Burns?

1 A It's currently being produced with a rod
2 pumping unit. The last test that I'm aware of it was pro-
3 ducing about 220 barrels a day.

4 Q Do you find any other examples within
5 the West Lindrith Dakota-Gallup Pool in which the penalty
6 that Mobil has proposed has been adopted by the Division?

7 A I do not know of any other situations.

8 Q (Inaudible) Mark Craig?

9 A That's correct.

10 Q And where is Mr. Craig now?

11 A He has been assigned to another area in
12 the Denver Division.

13 Q All right, then you've been asked to re-
14 place him in presenting Mobil's position today?

15 A That's correct. Since I had some know-
16 ledge of the entire area and of this proceeding, I was --
17 have been assigned this area.

18 Q When we look at Mobil's plans of devel-
19 opment other than the proposed well in the northwest of
20 Section 1, do you have any other proposed development south
21 of the Missy 3 at this point?

22 A Well, at this point in time we don't,
23 but depending on if the current proposal is successful, as
24 has been mentioned before, we have some seismic in the
25 area, you know, I would expect that we would continue the

1 development, but so far as firm proposals, at this point in
2 time we do not.

3 Q Am I correct in understanding in re-
4 sponse to Mr. Carr's question about the relationship be-
5 tween the 1-Y and the Missy 2, before I misquote you, would
6 you tell me again what you concluded based upon that last
7 exhibit, Number Six?

8 A Well, in summary, we see interference
9 between the two wells.

10 Q Based upon what, sir?

11 A The decline in production in the Missy
12 1-Y and the timing associated with the start of production
13 from the No. 2 Missy.

14 Q If that is correct, what -- what basis
15 does that in formulating your position before the Commis-
16 sion have?

17 A That implies that we have large drain-
18 age radiuses in this particular area and that the No. 3
19 Missy into this virtually comparable, if not slightly
20 better than the Missy 2, would also have a large drainage
21 radius and would drain Mobil's acreage to the south.

22 Q Do you disagree with the principle of
23 the rule that an operator in this pool can in fact drill a
24 second well in a spacing unit?

25 A No, I do not.

1 Q So the disagreement is the fact that the
2 Missy 3 because of the circumstances is closer than 790 to
3 that outer boundary?

4 A Yes, the disagreement is the location of
5 the Missy No. 3.

6 Q Thank you, sir.

7 MR. LEMAY: Thank you, Mr.
8 Kellahin.

9 Additional questions of the
10 witness?

11 Commissioner Humphries.

12

13 QUESTIONS BY MR. HUMPHRIES:

14 Q When you did your analysis, I guess
15 we're talking about your interference test as well, did you
16 do any other engineering work between the Missy No. 2,
17 Missy No. 3 and the 1-Y, or is this the extent of your
18 evaluation?

19 A The only other piece of data that we did
20 is we looked at the production curves between the No. 3 and
21 the No. 2. We only have a couple points of data there, so
22 it's very hard to make a very good conclusion, but we do
23 see some interference between those two wells, also.

24 Q When you say "we", does that mean you
25 and --

1 A Mobil.

2 Q -- the other witnesses here?

3 A Mobil. No, myself and the team that's
4 associated with the -- with that area, the geologist and so
5 forth.

6 Q So they're under your direction?

7 A They're not under my direction. We all
8 work together as a team.

9 Q They provide you their conclusions and
10 you report those conclusions under this area.

11 A Well, we work on the data as a team and,
12 yes, in terms of reporting it to the hearing, yes, I do
13 that.

14 Q Do you know what the production on the
15 No. 2 was?

16 A Yes. During the -- May, which was
17 allowed to produce unrestricted, it was approximately 300
18 barrels a day. The production that we've seen in June, of
19 course it was restricted. They produced at 350 barrels a
20 day and then we shut it in for a number of days. I can't
21 remember the exact number of days it was producing but all
22 the production rates that I saw for the month of June, the
23 individual daily rates, were approximately 350 barrels a
24 day.

25 Q That's on the Missy No. 2?

1 A Oh, I'm sorry, I thought -- that's the
2 Missy No. 3.

3 The Missy No. 2, it was producing about
4 300 barrels a day. The test in May was about 250. The
5 tests in June that I saw were in the 190 range.

6 Q So at 190 plus 80, the proration unit
7 can't reach 382 barrels a day.

8 A That's correct.

9 Q And you're aware of that.

10 A Yes, and in fact that we --

11 Q Okay, that's all I need. The drainage
12 rate you indicated is relatively high for the area. What
13 is a meaningful penalty in a drainage rate that's relative-
14 ly high? You -- you've used the term several times of a
15 meaningful penalty. What is a meaningful penalty?

16 A Well, something that would restrict the
17 rate in that particular well and give us the time neces-
18 sary to protect our correlative rights.

19 Q And you've indicated earlier that you
20 would not be as interested in protecting those correlative
21 rights by drilling another well until you finish your re-
22 commendations to management.

23 A Well, we're pursuing with all due dili-
24 gence to drill a well to the south. A large corporation
25 like Mobil, it takes a certain amount of time to get that

1 done.

2 In addition, we'll have some of the same
3 partner problems that we had with the B-75, reaching agree-
4 ment as to how to allocate production. In addition, you
5 always run into permit problems; obviously we had some ar-
6 chaeological problems on B-75. All that causes a time de-
7 lay in actually spudding and completing the well.

8 Q You also indicated that you think that
9 there is some evidence that you have a separate pool; that
10 you are in fact considering that area south of the township
11 line into Section 1 as a separate production interval and a
12 separate pool.

13 A But -- but that was speculative. We
14 have kicked that around a little bit. We think that this
15 may be a logical boundary between two pools but there is a
16 lot more data that has to be gathered and at this point in
17 time that is -- is speculative.

18 Q So then is it equally speculative that
19 there is some potential drainage and damage of correlative
20 rights?

21 A Well, all the data indicates that the
22 formation extends to the south. The isopachs, in fact,
23 show that it's thickening to the south. The rates from the
24 wells are very good, which would indicate that there is no
25 data to suggest this good does not extend to the south.

1 pletely spent all my money and if you do (unclear) type
2 economics, it says you have no other choice but to produce
3 it at 80 barrels a day because that's the only way you can
4 in fact minimize your -- minimize your loss.

5 Q Do you think that radial drainage is
6 even and symmetrical?

7 A Well, that's the only assumption that we
8 can make at this point in time, given the data we have.

9 Q So as far as you're concerned, those
10 wells would behave where they'd completely, evenly and sym-
11 metrically drain a circumference or a radius around?

12 A Well, in perfect -- in honesty, theoret-
13 ically that's the only data that we can -- assumption that
14 we can make.

15 In reality, you know, I wouldn't expect
16 that type of drainage. It depends on the interference.

17 The wells to the north are going to
18 restrict the drainage and, in fact, may force the drainage
19 to the south because that is where my pressure source is.
20 I'm going to have higher reservoir pressure to the south.
21 It's being drained currently by the three wells to the
22 north of Missy 3, so, in fact, we have -- may have more
23 drainage from the south than a radial model would suggest.

24 Q You're suggesting uneven drainage from
25 the south to the north?

1 A It's potential.

2 Q Are you recognizing anything as a dif-
3 ferent matrix --

4 A No --

5 Q -- probably being in there?

6 A -- all I'm looking at is the no flow
7 boundaries that we discussed; the fact that you can have a
8 no flow boundary between the 2 and the 3 and the B-75 and
9 the Missy 3, which will be relatively -- will be closer
10 than normal radial drainage rates that I would expect and
11 then that would force fluid to move from high pressure to
12 low pressure, the low -- the high pressure being in the
13 south.

14 Q Do you give some credence to the fact
15 that there may be a slightly different formation production
16 potential here? It's been suggested that there's matrix
17 porosity versus just fracture porosity.

18 A Because of the productivity of the well
19 and the high degree of interference, the high transmissibi-
20 lity that we're seeing, I think that's right. I think that
21 we're seeing better porosity, better matrix porosity and
22 matrix permeability than you see in a fracture situation,
23 say like in the Gavilan Mancos.

24 MR. HUMPHRIES: I have no fur-
25 ther questions.

1 MR. LEMAY: Any additional
2 questions?

3 I have a couple.
4

5 QUESTIONS BY MR. LEMAY:

6 Q Mr. Burns, would you recommend a second
7 well in the southeast quarter of Section 35?

8 A In the southeast quarter?

9 Q Yeah, a companion well to your No. 75?

10 A It -- it's, from what I know, it's very
11 marginal. I think that we're getting outstanding drainage
12 radiuses, and I'm not sure a second well is needed.

13 If it is drilled, it would be -- I would
14 pick a location as far away as I could get, say, down in
15 the southeast corner.

16 If the geology showed that the formation
17 was present in that area, that's the only recommendation
18 that I would -- I would give.

19 I would probably like to have some addi-
20 tional production data and maybe some pressure data to see
21 just how far the drainage ranges are, because I think there
22 is a reasonable chance that we could drain that whole pro-
23 duction unit with one well.

24 Q I guess you've answered almost my second
25 question, but first, what -- what do you estimate to be the

1 ultimate recovery from the Dakota per well in this area
2 with 160-acre spacing?

3 A Again it depends on how many wells are
4 drilled.

5 Q Just one, one well per 160.

6 A I think that they could recover 350-
7 400,000 barrels.

8 Q And if you drilled a second well, what
9 would your estimate become?

10 A Probably only -- probably half of that;
11 maybe slightly higher.

12 Q So by drilling the second well, you're
13 not getting any ultimate recovery, only maybe some initial
14 -- initial cash flow earlier?

15 A I think that's correct from the data
16 that I have at this point in time.

17 Q Did -- do you agree that the decline
18 rate is probably approximately -- agree with Mr. Corbett's
19 approximate 10 to 15 percent in here?

20 A We really only have the decline rate
21 from the 1, 1-Y Missy, and that is definitely higher than
22 20 percent.

23 We have the production declining from
24 300 barrels a day down to 160 in less than a year, so that
25 would, in itself, if it remained at 150 until approximately

1 November this year, that in itself would constitute a 50
2 percent decline, a nominal 50 percent decline, so I think
3 the 20 percent decline is -- is optimistic.

4 Q How would you estimate variations in
5 decline if you had this interference in here? You mention-
6 ed you did see some effect of the production when the first
7 well was fraced but also when the second well was drilled
8 on -- the Missy over there. Would you hazard a profes-
9 sional opinion as to what the decline rate would be on 160
10 versus, say, 80? If you drill a second well would you ex-
11 pect a decline twice as steep as on one well?

12 A The decline rate would be certainly
13 higher than you -- if you had just one well in the unit.
14 Twice would probably be a good estimate, but that's just a
15 -- that's just a guess.

16 Q So if you used 10 to 15 percent on one
17 well on 160, would you, say, would you double that decline
18 rate approximately for two wells on 160's?

19 A That would certainly be a realistic
20 back-of-the-envelope discussion type answer.

21 The real answer would depend upon the
22 data.

23 MR. LEMAY: I have no further
24 questions. If there is no additional, you may be excused.

25 Do you have one other witness,

1 Mr. Carr?

2 MR. CARR: No, I don't have
3 another witness. I have a brief closing.

4 MR. LEMAY: Let's close it,
5 then.

6 MR. KELLAHIN: I have a rebut-
7 tal witness to call, Mr. Chairman. I want to know if you'd
8 like to have a lunch break or if --

9 MR. LEMAY: Let's have a lunch
10 break if you've got a rebuttal witness, you bet.

11 All right, reconvene at --
12 we'll reconvene at 1:30.

13

14 (Thereupon the noon recess was taken.)

15

16 MR. LEMAY: The hearing will
17 reconvene.

18 We're ready to go with Mr.
19 Kellahin on a rebuttal witness.

20 MR. KELLAHIN: Thank you, Mr.
21 Chairman, I'd like to call at this time Mr. Michael Hadden-
22 ham.

23 Mr. Haddenham spells his name
24 H-A-D-D-E-N-H-A-M.

25 Mr. Chairman, he has not yet

1 been sworn.

2
3 (Witness sworn.)
4

5 MICHAEL HADDENHAM,
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. KELLAHIN:

11 Q Mr. Haddenham, would you please state
12 your name and occupation?

13 A My name is Michael Haddenham. I've
14 worked for Meridian Oil. I -- excuse me. I graduated from
15 the University of Wyoming in 1981 with a petroleum engi-
16 neering degree.

17 Subsequently I went to work for El Paso
18 and then Meridian Oil for six and a half years until
19 January of 1988. At that time I went to work for Hixon
20 Oil.

21 Q Where do you reside now, Mr. Haddenham?

22 A Farmington.

23 Q And what are your current duties with
24 Hixon Development Company?

25 A I'm the Engineering Manager.

1 Q As part of your duties as Engineering
2 Manager have you examined the production on the Missy 2,
3 Missy 3, and Missy 1-Y Wells?

4 A Yes, I have.

5 Q And are you familiar with this informa-
6 tion that 's been furnished to you and is generally avail-
7 able on the Mobil 75 Well?

8 A Yes.

9 Q In making your preparation have you re-
10 viewed the production information from these various wells?

11 A Yes, I have.

12 Q And have you been the Engineering Mana-
13 ger that is responsible to your company for attempting to
14 comply with and administer Mr. Catanach's Examiner Order in
15 this case that set the 80-barrel a day oil allowable on the
16 Missy No. 3 Well?

17 A Yes, it's my job to try (unclear).

18 MR. KELLAHIN: Tender Mr. Had-
19 denham as an expert petroleum engineer.

20 MR. LEMAY: His qualifications
21 are acceptable.

22 Q Let me direct your attention specific-
23 ally to that order in which the Division at this point has
24 restricted the Missy 3 Well to the 80 barrels of oil a day.

25 Have you reviewed the production infor-

1 mation that's been reported to you on that well?

2 A Yes, I have.

3 Q Are you having any difficulty with pro-
4 ducing that well and complying with the 80 barrel a day
5 oil allowable?

6 A Yes. The well is not capable of flowing
7 at the 80 barrel a day. It logs off, creates a problem in
8 bringing it back on line. We have -- every fourth day it
9 takes our pumper approximately 4 to 6 hours to get the well
10 back on and then at that time it will flow for -- it will
11 flow at 300, 350 barrel, and we'll have to shut it in.

12 Q What, in your opinion as an engineer, is
13 the most efficient way to produce the Missy No. 3 Well?

14 A It's not the most efficient way.

15 Q And what would be the most efficient
16 way?

17 A Most -- most efficient way would be it
18 would remain on and let it produce at some rate and the
19 well flow. Flowing is the best way to produce that well.

20 Q Let me show you what is marked as Hixon
21 Exhibit Number Three.

22 For the record, Mr. Haddenham, would you
23 identify what is the information contained as Hixon Exhibit
24 Number Three?

25 A These are the daily gauge reports that

1 are given to us by our pumper.

2 Q And they are daily gauge reports for
3 what three wells?

4 A Missy 1-Y, Missy 2 and Missy 3.

5 Q Do you as an engineer have an engineer-
6 ing opinion with regards to whether or not there will be
7 any permanent loss or damage to either the Missy 3 or the
8 opportunity to lose reserves that might otherwise be re-
9 covered if the Missy 3 continues to be restricted to 80
10 barrels a day?

11 A Well, there's difficulty in producing it
12 because of the paraffin content of the wells. They have to
13 be cut every time the well is shut in. If you don't, there
14 will be a build-up and at some point you'll have to pull
15 the tubing and either replace it or clean it out at that
16 point.

17 Q Apart from the operational expenses and
18 the mechanical difficulty of producing a well such as this
19 at this restricted rate, do you have an opinion as to
20 whether or not this restricted rate is going to ultimately
21 cause this well to produce less reserves ultimately than it
22 might otherwise produce?

23 A Yeah, I do. I feel that there's a loss
24 of 80-to-100,000 barrels of oil because of the restricted
25 amount and you put the reserves off into the future and at

1 some point, oh, let's say, 20 to 25 years down the road
2 that point at which you'll have to try to recover those
3 reserves.

4 Q Mr. Burns discussed this morning his
5 opinions with regards to the information on the response in
6 the 75 Well from the frac treatment in the Missy 3 Well.

7 Have you examined similar information
8 that's been exchanged between the parties?

9 A Yes, I have.

10 Q And you have reviewed his documents on
11 the frac test?

12 A Yes, I have.

13 Q If I'm correct in understanding, his
14 position on those results is that as a result of the frac
15 test and the response in the 75 Well, he equated that, that
16 response to the fact that he believed that there would --
17 those two wells, the Missy 3 and the 75, then, were going
18 to be able between those two wells to develop and produce
19 the reserves that lie between them.

20 Is that a correct summary of your under-
21 standing of what he had told you?

22 A I feel that that interference, you'd
23 have to expect it and that you've got a producing horizon
24 that's a clean, porous zone --

25 Q Well, let me ask you this before you an-

1 swer. Did I correctly state in my own words your recol-
2 lection of Mr. Burns' position on the frac test response?

3 MR. CARR: May it please the
4 Commission, whatever Mr. Kellahin and Mr. Haddenham under-
5 stood that to be, I assume the Commission will understand
6 that Mr. Burns' testimony will speak for itself whether
7 it's characterized one way by Mr. Kellahin or another way
8 by Mr. Haddenham. What was actually said is what (unclear).

9 MR. LEMAY: We understand
10 that, yes, sir.

11 Q With regards to the frac test what was
12 the point that Mr. Burns was attempting to argue from that
13 information?

14 A That there will be drainage between the
15 two wells.

16 Q And do you agree based upon that result,
17 those test results that you can reach that conclusion?

18 A I could not reach that conclusion from
19 the results that were shown.

20 Q Why can you not reach the same conclu-
21 sion that he expressed?

22 A Well, you've got two wells 1300 feet
23 apart and you've got a bottom hole pressure from the frac
24 in the 5000 pound range, and if you've got a noncompres-
25 sible fluid, it's going to transmit a pressure wave at the

1 speed of sound, it's going to be there relatively quick. I
2 don't see how you can say that that's going to equate to a
3 drainage radius per se for the well.

4 Q Does the frac response generated into
5 the reservoir simulate the type of interference that would
6 occur between these wells if each well is in a producing
7 state?

8 A Yes.

9 Q The frac response generates a response
10 -- the frac treatment in the Missy 3 Well generates
11 response in the 75 Well and that's indicated on the inter-
12 ference test.

13 A Yes.

14 Q All right. When you look at that curve,
15 what happens after the initial response indicated on the
16 interference test in the 75 Well? What happens to the
17 response?

18 A It slows down and I think that's due to
19 the sound waves -- now the pressure waves will go there
20 real quick but I don't think they delineate away from the
21 75 that quickly.

22 Q Can you determine for us what would be
23 the no flow boundary between the Missy 3 Well and the 75
24 Well if the Missy 3 Well is continued to be produced at its
25 restricted 80-barrel a day allowable?

1 A Based on the capabilities of both wells
2 I'd say that a no flow boundary would be Hixon's acreage.

3 Q Let's examine Mr. Burns' exhibit that
4 shows the information on the 1-Y Well and the Missy 2 Well.

5 A Okay.

6 Q If I recall correctly, at the time the
7 Missy 2 Well came on line, Mr. Burns' position that he
8 thought the information plotted showed some type of cor-
9 responding response in the 1-Y Well. In other words, when
10 you look at the 1-Y information plotted you'll see a simi-
11 lar decline at the point in which the Missy 2 Well comes on
12 to production and that those two declines follow or track
13 the same rate. Can you see this? That was his contention
14 that information showed.

15 A Right.

16 Q Do you agree with that?

17 A No.

18 Q Why not?

19 A The well, I think, was experiencing a
20 point of not being able to flow on its own in July, 1988,
21 and was put on artificial lift at that time. It was on gas
22 lift.

23 Q Is the Missy 2 and the Missy 1-Y com-
24 pleted and producing from the same correlative interval?

25 A No, they are not.

1 Q Describe for us what the Missy 2 is pro-
2 ducing from and what the Missy 1-Y is producing from.

3 A The Missy 2 is a Dakota zone and the
4 Missy 1-Y is a Gallup-Dakota commingled production.

5 Q Based upon the current available infor-
6 mation, do you as an engineer see any extension of this
7 reservoir into the sections immediately to the south of
8 Section 35?

9 A At this point I don't see any -- any-
10 thing that shows that.

11 Q Can you equate as an engineer the fact
12 that there is an interference response in Well 75 with the
13 frac treatment in 73 (sic) and therefore conclude that the
14 Missy 3 Well has a drainage radius in excess of 790 feet?

15 A Yes, it probably would at full capabili-
16 ties, yes.

17 Q When we take the combination of penal-
18 ties at the time of the hearing, let's go back to April of
19 1989 when the Examiner Order was entered. Let's just use
20 the first of April --

21 A Okay.

22 Q -- so that we have available to us the
23 information for production from the Missy 2 and the Missy 3
24 Wells for January, February and March. At the time the Ex-
25 aminer Order is being -- the Examiner case is being heard,

1 did the Missy No. 2 have the current capacity to make up
2 the allowable for that spacing unit if the Missy 3 Well was
3 restricted to 80 barrels a day?

4 A No, it did not.

5 Q What was it able to make in terms of
6 producing the allowable of 382 if you combine the produc-
7 tion of the two wells restricting the Missy No. 3 Well to
8 80 barrels?

9 A Approximately 280 to 300 barrels a day.

10 Q The spacing unit, then, would produce,
11 with the restricted well and the Missy No. 2 unrestricted,
12 in the range of 280 to 300 barrels of oil a day?

13 A That's correct.

14 Q And the full spacing allowable is 382
15 for that spacing unit?

16 A Yes.

17 Q When we examine the production informa-
18 tion available on these wells through June, Mr. Haddenham,
19 what would be the maximum capacity of the wells to produce
20 the allowable if the Missy 3 Well continues to be restric-
21 ted to 80 barrels a day?

22 A Will you repeat that, please?

23 Q Yes, sir. Has the production stayed the
24 same as -- in relation to the January, February, March pro-
25 duction as compared to June or do you have further de-

1 clines in the producing rates on the Missy No. 2 Well?

2 A We have further declines.

3 Q When you look at the June information,
4 then, production information, what is your estimate of the
5 ability of the Missy 2 to make up the difference in allow-
6 able if the Missy 3 continues to be restricted to 80 bar-
7 rels a day?

8 A It will only be able to make up 200
9 barrels of that allowable.

10 Q Mr. Burns expressed his position on be-
11 half of his company in terms of requesting the Commission
12 to establish a meaningful penalty. Have you examined the
13 economic impact it would cause on this spacing and the
14 various interest owners in the spacing unit?

15 A Yes, I have. I would -- excuse me.

16 Q Have you examined the penalty of using
17 80 barrels of oil a day on the Missy 3 Well --

18 A Yes, sir.

19 Q -- and allowing the balance of the al-
20 lowable to be made up as it could to such extent by the
21 Missy No. 2 Well?

22 A Yes, I have.

23 Q What is the economic impact of that to
24 the interest owners?

25 A Oh, to the interest owners?

1 Q Well, qualified whatever way you've
2 analyzed it, Mr. Haddenham.

3 A I just analyzed it on a gross basis. On
4 a gross basis it would be in the range of, on present
5 value, of \$2-million, \$2.5-million.

6 Q In order to make that analysis that the
7 financial impact is \$2-million, what did you compare that
8 to?

9 A I compared that to the full capability
10 of making the maximum that both wells were capable of
11 doing.

12 Q Have you made a further analysis to
13 determine whether or not it is a meaningful penalty to have
14 the Missy producing rate restricted to somewhere in the
15 range of 160 to 180 barrels of oil a day?

16 A Yes, I have.

17 Q With the balance as it can or to the
18 extent that it could, the Missy 2 Well making up the dif-
19 ference?

20 A Yes.

21 Q What, in your opinion, is the estimate
22 of the financial impact on the gross revenues to the spac-
23 ing unit if that penalty is adopted by the Commission?

24 A I'd say 1-million to 1-million and a
25 half.

1 Q Did you participate with your company in
2 the decision to drill the Missy No. 3 Well?

3 A Yes, sir.

4 Q What was the purpose in drilling the
5 Missy No. 3 Well?

6 A It was to, due to the amount of reserves
7 that are available underneath that proration unit, we felt
8 that as a Dakota producer it would be better to have two
9 wells to expedite removal of the oil from the ground.

10 Q At that point in time that this well was
11 being discussed and evaluated and proposed and finally
12 drilled, was it your intent to obtain any advantage over
13 Mobil in their offsetting acreage with your -- with your
14 well?

15 A No.

16 Q Have you examined the daily drilling
17 reports for the Missy No. 3 Well?

18 A Yes, I have.

19 Q Mr. Corbett this morning was describing
20 for us his recollection of the drilling sequence in terms
21 of when the well was spudded in relation to his conversa-
22 tions with the Division District office on being notified
23 of the potential problem with the location. You were here
24 to hear that testimony?

25 A Yes.

1 Q Have you examined the drilling reports
2 for the Missy No. 3 Well?

3 A Yes, I have.

4 Q Mr. Corbett, in his book, has indicated
5 to us that his information shows that the Missy 3 Well was
6 spudded at 1:00 p.m. on Thursday, March 30. Have you
7 verified whether or not that is correct?

8 A That is incorrect.

9 Q And what is the correct date?

10 A The correct date was March 29th at 1:00
11 p.m..

12 Q What is the basis for your opinion that
13 this statement was incorrect?

14 A I think that John received his informa-
15 tion off the daily drilling report and it is just an error.

16 Q When is the daily drilling report pre-
17 pared in relation to the actual drilling of the well?

18 A The day after.

19 Q When you look at the -- when you look at
20 the Commission form on sundry notices shown in his exhibit
21 book, page number 7, do you have a copy of that?

22 A Yeah, I do.

23 Q Information on that form that was sub-
24 mitted show the spud date of Wednesday, March 29th at 1:00
25 p. m.?

1 A That's correct.

2 Q Is that the correct date?

3 A Yes, it is.

4 Q Having studied this problem and having
5 had to work under the existing order, Mr. Haddenham, do you
6 have an opinion as an engineer as to whether or not the
7 current penalty is fair and appropriate?

8 A I do not feel it's fair and appropriate.

9 Q And why not, sir?

10 A I feel that there is no way that we can
11 recover our reserves from underneath our acreage in the
12 location of that well at that current rate.

13 Q Do you have a recommendation to the Com-
14 mission as to what in your opinion would be an appropriate
15 and fair penalty to impose upon the well --

16 A I have.

17 Q -- in order to allow you to recover your
18 share of the reserves and yet not have an advantage over
19 Mobil because of the surface location of your well?

20 A I think a 40-acre depth tract allowable
21 is appropriate.

22 Q Why do you think that?

23 A I think that's something that engineers
24 and geologists have gone through and a lot of data in de-
25 ciding what a -- what a rate for a certain drainage radius

1 should be and to protect the correlative rights of the
2 people within that area.

3 Q Within the pool boundary for the Dakota
4 Pool are you having other instances in which you as an em-
5 ployee of the operator of that well is met by wells in the
6 Dakota at locations 330 feet from your spacing unit?

7 A Yes.

8 MR. KELLAHIN: Mr. Chairman,
9 we would introduce at this time Hixon Exhibit Number Three.

10 MR. LEMAY: Without objection
11 Hixon Exhibit Number Three will be admitted into the
12 record.

13 Mr. Carr.

14 MR. CARR: Thank you, Mr.
15 Lemay.

16
17 CROSS EXAMINATION

18 BY MR. CARR:

19 Q Mr. Haddenham, how long have you been
20 working with Hixon Development Company?

21 A A year and six months.

22 Q And in that time have you had occasion
23 to work with other -- the drilling of other wells in the
24 West Lindrith Gallup-Dakota Pool?

25 A Yes, I have.

1 Q And based on your experience in this
2 pool, isn't the area that we're talking about in Section 35
3 one of the best areas in the West Lindrith Pool?

4 A I'd say it's one of the best, yes.

5 Q Now, you stated that if you're restrict-
6 ed to a production rate of 80 barrels a day, that you ul-
7 timately think you may lose 80 to 100 -- 80,000 to 100,000
8 barrels of oil, is that your testimony?

9 A That's correct.

10 Q Now, is this the volume that you will
11 not be able to produce out of the Missy No. 3 Well because
12 of the penalty? Is that what you are saying?

13 A That's correct?

14 Q Did you estimate how much of that 80 or
15 100,000 barrels might be calculated production coming off
16 of offsetting tracts owned by Mobil?

17 Q That's not production off offsetting
18 tracts.

19 Q That is not? You don't think that the
20 Missy No. 3 where it's located would be draining from off-
21 setting tracts?

22 A Yes, probably if we produced it a 380
23 barrels a day, we probably would drain the offsetting
24 tract.

25 Q Okay, now when I'm talking -- you're

1 talking about this production being lost, what do you mean
2 exactly? Is it lost to Hixon?

3 A Yes.

4 Q Would it be production that might be
5 produced from a well south of the line?

6 A No.

7 Q It's just permanently going to be left
8 in the ground.

9 A That's correct.

10 Q It's your understanding that the nature
11 of this reservoir is such that if you're not able to pro-
12 duce it in the No. 3 an offsetting well an offsetting well
13 wouldn't be producing those same reserves.

14 A No, they wouldn't.

15 Q Now, let me ask you a couple of ques-
16 tions about communication through the reservoir. You indi-
17 cated that the pressure interference data didn't communi-
18 cate to you that there would be drainage in that area.
19 Isn't that what you said?

20 A No, I don't think I stated that.

21 Q In the pressure interference data be-
22 tween the Lindrith B-75 and the Missy No. 2, I believe, we
23 had an exhibit on that this morning?

24 A Okay, yes.

25 Q And I thought your testimony was that

1 that information didn't suggest to you that those wells
2 were would drain --

3 A That particular information does not
4 suggest that.

5 Q Now, do you have other information that
6 you've looked at concerning this reservoir and the ability
7 of the reservoir to drain large areas?

8 A Just decline curves.

9 Q In your opinion will (unclear) wells in
10 the Dakota in this area drain a large area?

11 A Yeah, they drain -- they'll drain 160
12 acres.

13 Q Each well?

14 A Over a long period of time, yes.

15 Q So the well that's the Missy No. 3 would
16 drain into the acreage to the south of it if it wasn't re-
17 stricted, isn't that correct?

18 A That's correct.

19 Q And so the reason for a penalty is to
20 limit that drainage, isn't that also right?

21 A Yeah, that's correct.

22 Q And the -- do you have an opinion as to
23 whether or not the Missy No. 2, if permitted to produce as
24 it is, and the Lindrith Unit B-75 Well was continued to
25 produce as it now is, do you think they would produce the

1 reserves (not clearly understood)?

2 A Would you restate that question?

3 A I just want to understand your testi-
4 mony. You've stated on the one hand that your throwing out
5 the interference test is not telling me that there is
6 drainage, and that the No. 2 and the Lindrith B-75 won't
7 drain the acreage in between.

8 A Yeah, the --

9 Q And I'm asking you to go beyond just
10 that test.

11 A Okay.

12 Q You're an engineer, you're an expert in
13 this area. If those two wells are permitted to produce,
14 they'll drain those reserves, won't they, between those two
15 wells?

16 A Between the 75 and the Missy 2?

17 Q 2.

18 A No.

19 Q You don't think that each of those wells
20 will drain 160 acres?

21 A Over a long period of time.

22 Q What does a fracture or a pressure re-
23 sponse like you see in those interference tests tell you
24 about the reservoir?

25 A That it's a very good one.

1 Q It's a very good one and that you could
2 expect large drainage areas, isn't that right?

3 A No.

4 Q You could expect to at least see com-
5 munication in a short period of time, could you not?

6 A After a long period of time I think com-
7 munication would occur.

8 Q Now, you've indicated, I think, that the
9 Missy No. 3, I thought you said, had a drainage radius
10 you'd expect of at least 790 feet, is that right?

11 A No, I did not say that.

12 Q What did you say about the range of
13 drainage on the well?

14 A On the Missy 3?

15 Q Yes.

16 A Well, that's kind of hard to really (not
17 clearly understood) something to when you curtail it to 80
18 barrels a day. I think the well will never.

19 Q Okay. Is it possible for you to esti-
20 mate what the drainage radius would be for that well?

21 A At what producing capability?

22 Q I mean if you had it wide open?

23 A If we had it wide open? I think it --
24 it --

25 Q Are you able to do that?

1 MR. KELLAHIN: Counsel is in-
2 terrupting the witness before he's finished his answer, Mr.
3 Chairman.

4 MR. LEMAY: Finish your an-
5 swer.

6 A Sorry, but I've lost my train of thought
7 now.

8 Q I think you stated you could estimate
9 the drainage area and put the well wide open, is that
10 right?

11 A No, I could not, not enough information
12 at this time to actually calculate a drainage area.

13 Q What would you need to do that?

14 A I think we'd need two -- two separate
15 pressure build-ups to accurately calculate that.

16 Q So at this point in time you just don't
17 know what it would drain if it was wide open?

18 A Assuming the life of the well, and we're
19 not able to produce it wide open, so I don't (unclear) on
20 that one.

21 Q If it's restricted to 80 barrels, do you
22 know what it -- at 80 barrels a day do you know what it
23 would drain?

24 A No, I do not.

25 Q You stated, I think, and correct me

1 again if I'm wrong, that you had to, I think, in July put
2 the 1-Y on artificial lift, it wouldn't flow at that time,
3 is that right?

4 Q That is correct.

5 Q And what was your -- your understanding
6 of why that occurred?

7 A The reason we put it on artificial lift
8 is the well would no longer flow on its own.

9 Q And do you know why it might not -- what
10 was --

11 A It would be a pressure decline.

12 Q Could that be partially from production
13 from the Missy No. 2?

14 A No.

15 Q It couldn't be?

16 A Could -- I -- I feel that it's the Gavi-
17 lan Mancos that's declined and not the Dakota. The Dakota
18 right now, I think, is just now starting to stabilize and
19 produce (unclear), the major producing horizon in the well-
20 bore.

21 Q You drilled the Missy No. 3 Well in an
22 effort to keep the 160-acre unit in the southwest of 35 in
23 a top allowable status, isn't that correct?

24 A Yeah, and to accelerate gas flow.

25 Q Isn't locating the well where you did,

1 you were involved in that decision, were you not?

2 A On what decision was that?

3 Q To locate the Missy No. 3 where it is?

4 A Yes, that's correct.

5 Q Did you take into consideration the
6 potential for drainage from offsetting properties?

7 A Not really.

8 Q Did you have an opinion as to whether or
9 not the Dakota reservoir would extend to the south beyond
10 the acreage that you're dedicating to it?

11 A We didn't even know if it extended to
12 where we put that wellbore.

13 Q And you had first drilled the Missy 1-Y,
14 correct?

15 A What?

16 Q In this unit, the first, in Section 35,
17 your first well was the Missy 1-Y, isn't that right?

18 A That's correct.

19 Q And there's some Dakota production from
20 that.

21 A And to this day we really don't know if
22 that well ever did really produce from the first day that
23 it went on line.

24 Q Do you believe it is now?

25 A I believe right now it's starting to

1 produce from the Dakota.

2 Q Then we go down and the second well you
3 drilled in 35 was the Missy No. 2, isn't that right?

4 A That's correct.

5 Q And when you drilled the Missy No. 3 you
6 were hoping to find the Dakota in that one, as well, isn't
7 that right?

8 A (Not clearly understood.)

9 Q You moved about as far south on that
10 unit as you could, isn't that right?

11 A Yeah.

12 Q And I think you discussed the economic
13 impact on Hixon and I think what you stated is that our
14 penalty would cost approximately \$2-million, \$2-1/2 mil-
15 lion, that would be the economic impact on Hixon and the
16 other -- your other interest owners?

17 A Yes, that's correct.

18 Q And in doing that you were basing it on
19 what both wells would be able to produce if they were wide
20 open.

21 A No.

22 Q What were you doing?

23 A I was basing it on 80-acre and holding
24 the other well (unclear).

25 Q Okay, and then that was one of your

1 factors and then you were comparing it to what?

2 A I was comparing it to get to 160 --
3 well, no, to being able to produce both wells wide open.

4 Q Wide open, all right, and what does the
5 No. 2, what is it able to produce right now?

6 A Right now, 200.

7 Q And what would you estimate the Missy
8 No. 3 would be able to do wide open?

9 A Oh, about 330.

10 Q And so you're comparing this production
11 from the Missy 2 and a restricted rate from the Missy 3 to
12 a figure that's in excess of the allowable from --

13 A We cannot produce a well in excess of
14 the allowable. We'd have to shut it -- one of them in at
15 that time, anyway.

16 Q But in making your calculations --

17 A I never went over 382.

18 Q All right. You've been looking at
19 economics in-house on the well, I suspect.

20 A Yeah.

21 Q Isn't that true?

22 A Yeah.

23 Q Have you made economic calculations con-
24 cerning the payout on the well, on the Missy No. 3?

25 A No, I have not.

1 Q Has anyone in your office done that?

2 A I believe John has. My economics were
3 based on the proration unit.

4 Q And you wouldn't be here recommending
5 that a production rate that would assure a top allowable
6 for the unit if it was only a top allowable (unclear)
7 drainage from other tracts, would you?

8 A No.

9 MR. CARR: That's all I have.

10 MR. LEMAY: Commissioner Hum-
11 phries.

12

13 QUESTIONS BY MR. HUMPHRIES:

14 Q Did you estimate the no flow boundary
15 between the Missy 3 and the B-75 or did you do it by calcu-
16 lation?

17 A That's just an estimate based on both
18 wells being approximately, I'd say, able to produce at the
19 same rates.

20 Q And you told Mr. Carr under those cir-
21 cumstances you anticipated that the no flow line would be
22 within the Hixon lease?

23 A Yeah, based on the footages between them
24 and where the lease lines lie.

25 Q But that's just an estimate.

1 A That's correct.

2 MR. HUMPHRIES: That's all.

3 Oh, I have one more.

4 Q You suggested that under that restricted
5 flow level you anticipated a loss of 80 to 100,000 barrels
6 of oil?

7 A That's correct.

8 Q And what factors did you include in that
9 and why did you think that in particular?

10 A I based that on there is 1.6-million
11 barrels underneath that 160 and then if the two wells were
12 able to produce approximately, I'd say 600,000, but at the
13 restricted flow rate Missy 3 will not be able to produce it
14 because the wellbore, I think, won't last that long. I
15 think it's getting up far enough in the future where
16 mechanical problems will come into play.

17 Q What kinds of mechanical?

18 A Casing failures. That's primarily the
19 major one.

20 Q So you anticipate that the loss won't be
21 that you won't be able to recover from the formation but it
22 would be a physical failure --

23 A That could --

24 Q -- that could be corrected by some kind
25 of remedial work.

1 A Possibly, yes.

2 MR. HUMPHRIES: I don't have
3 any other questions.

4
5 QUESTIONS BY MR. LEMAY:

6 Q Mr. Haddenham, you are talking about the
7 paraffin problem at a restricted rate of 160 barrels of oil
8 per day, which was an alternative penalty, I take it.
9 Was the paraffin problem, in your estimation, still
10 present?

11 A It would still be present but it would
12 be easier to deal with it because the well, I do believe
13 that we could flow it at that rate and keep the paraffin
14 moving out of the well instead of shutting the well in and
15 allowing (unclear) on the tubing.

16 Q In trying to accommodate this 80 barrels
17 a day, are you trying to choke the well back to that or
18 were you producing it at a -- at a high rate and then shut-
19 ting it in for a period of time?

20 A We tried to choke it back to the 80 and
21 it would just log off and it would not produce at all, so
22 now (unclear) we have to flow it and then shut it in.

23 Q And apparently during the period of time
24 you shut it in the paraffin builds up?

25 A Well, it's building up prior to that but

1 then once you shut it in, that's when it gets -- really
2 sets up and gets hard, sets up, then.

3 Q Do you think that each well in there
4 will drain 160 acres? Your testimony is that it's a func-
5 tion of time; it will take too long a period of time to
6 produce it and therefore you lose time value of the money
7 plus the chance of mechanical failure?

8 A Right. Wellbores have a -- have a life.
9 They don't last forever, and I don't think you can assume
10 that a wellbore is going to last for 30 years, 25 years. I
11 think you have to get a number and go with that. I think
12 they can go that high.

13 MR. LEMAY: That's all I have
14 of Mr. Haddenham.

15
16 REDIRECT EXAMINATION

17 BY MR. KELLAHIN:

18 Q Mr. Haddenham, in reviewing this matter,
19 do you see any engineering basis for taking the allowable
20 for the spacing unit, dividing it between the two wells,
21 the Missy 2 and the Missy 3, before you calculate the pen-
22 alty on the footage factor?

23 A No, I don't.

24 MR. KELLAHIN: Nothing fur-
25 ther.

1 MR. LEMAY: Additional ques-
2 tions of the witness?

3 MR. CARR: May it please the
4 Commission, I have no further questions of this witness and
5 I am going to refer you to several matters with Mr. Burns,
6 but I hope you his testimony in mind.

7 MR. LEMAY: You may be
8 excused, Mr. Haddenham.

9
10 RICHARD A. BURNS,
11 being recalled as a witness and remaining under oath,
12 testified as follows, to-wit:

13

14

DIRECT EXAMINATION

15 BY MR. CARR:

16 Q Mr. Burns, you were present a few
17 minutes ago when Mr. Haddenham talked about the loss of
18 80,000 to 100,000 barrels of oil from the Missy No. 3 Well
19 by virtue of the penalty, were you not?

20 A Yes, sir.

21 Q In your opinion, or do you have an
22 opinion as to what would happen to that oil?

23 A That oil should be produced in offset
24 wells.

25 Q And isn't that one of the reasons why

1 you're requesting a penalty?

2 A Yes, sir, that's correct.

3 Q Have you made any estimates of the
4 economics on the wells in this area?

5 A Yes, sir, I have.

6 Q Have you made estimates that would be
7 applicable to the costs associated with the Missy No. 3
8 Well?

9 Q Yes, sir, I have.

10 Q Have you been able to estimate with an
11 80-barrel a day allowable how long it would take to pay
12 that well out?

13 A Well, I did some back-of-the-envelope
14 calculations and I showed slightly longer than one year for
15 this to achieve pay out, and I feel those are reasonable
16 estimates based upon two factors: One, my own economic
17 calculations on the B-75 that we did for our own internal
18 economics. In addition I've examined the exhibits that
19 were presented at the Examiner Hearing and Hixon's own
20 calculations show a 1.46 year payout on an 80-barrel a day
21 well.

22 MR. CARR: That's all I have.

23 Thank you.

24 MR. LEMAY: Mr. Kellahin?

25 MR. KELLAHIN: Thank you, Mr.

1 Chairman.

2

3

REXCROSS EXAMINATION

4 BY MR. KELLAHIN:

5 Q In examining the economics, Mr. Burns,
6 on the Missy 3 Well, did you use their well cost number of
7 \$460,000?

8 A Yes, sir, I -- well, I used \$500,000.
9 It could be appreciably higher than that and still stay
10 well under two years.

11 Q The Mobil Unit 75 Well cost \$900,000,
12 approximately, did it not?

13 A That's correct.

14 Q What are the economics in terms of pay-
15 out on your well?

16 A Our payout, given our rate of 200 bar-
17 rels a day, is going to be approximately one year.

18 Q Now that rate of 200 barrels a day is
19 not the flowing capacity of that well to produce, is it?

20 A At this point in time, the tests that
21 I've looked at, that's the rate that we're seeing, between
22 200 and 220 barrels a day.

23 Q That's a restricted rate because of the
24 pump on the well, isn't it?

25 A I can't say at this point in time that

1 that is true or not. I have no data to analyze either way.

2 Q When we look at Hixon Exhibit Number
3 Two, I show that to you, sir, do you see the boundary of
4 the Gavilan Mancos Pool outlined in yellow?

5 A Yes, sir.

6 Q Do you see the West Lindrith Gallup-
7 Dakota outlined in blue?

8 A That's correct, yes, I see that.

9 Q Then we have this acreage, this no-
10 man's-land, if you will, to the south of West Lindrith,
11 particularly when we have the Mobil acreage in Section 1
12 and 2, that is part of the Mobil Unit, is it not?

13 A Yes, that's part of the Lindrith B Unit
14 which is operated by Mobil.

15 Q Does this map show the entire boundary
16 of that Mobil B Unit?

17 A No, it does not.

18 Q Describe for us, as you can on this dis-
19 play, to what extent this area contains the Mobil B Unit.

20 A Well, this is the majority of it. I'm
21 not exactly sure how much further to the south it goes. To
22 my knowledge it's about 70 percent.

23 Q Do you know how long this unit's been in
24 existence?

25 A A long time, not the exact year.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

QUESTIONS BY MR. LEMAY:

Q Just a quick question, Mr. Burns.
What's the trapping mechanism in here in the Dakota?

A It's a stratigraphic trap.

Q You mentioned you had some seismic. Did
that influence your -- where you pick locations or --

A Yes, I --

Q -- where that could be of the wells,
structural --

A It would be very hard to determine the
productivity of the wells from seismic other than we might
be able to determine some height characteristics, height
being a indicative of higher rates, but that's a very thin
interval, 25 feet. It might be -- I think it would be very
hard to pick up on seismic. The seismic data has actually
just been recently taken and hasn't been fully processed
yet, but we will use this to find the location of the for-
mation, primarily, and if there's any other data that we
can get out of it, we'll -- we'll do our best.

At time you're able to determine height
but 25 feet is awful small to come off of seismic.

Q With the seismic I have a hard time un-
derstanding how that would help you in this play.

A If -- if we can see the pinchout. What

1 we're looking for is the pinchout of the Dakota.

2 Q So you anticipate the Dakota will go
3 south in --

4 A Yes, we do.

5 Q -- those sections.

6 MR. LEMAY: Additional ques-
7 tions of the witness?

8 If not, he may be excused.

9 Any more witnesses?

10 MR. KELLAHIN: Mr. Chairman,
11 we'd call at this time Mr. Frank Chavez.

12 MR. LEMAY: I don't think
13 we've sworn him in yet.

14 MR. KELLAHIN: No, sir, he
15 has not.

16
17 (Mr. Chavez sworn.)

18
19 FRANK CHAVEZ,
20 being called as a witness and being duly sworn upon his
21 oath, testified as follows, to-wit:

22
23 DIRECT EXAMINATION

24 BY MR. KELLAHIN:

25 Q Mr. Chavez, for the record would you

1 please state your name and occupation?

2 A I'm Frank Chavez. I'm District Super-
3 visor of the Aztec District of the Oil Conservation
4 Division.

5 Q Were you the Aztec supervisor of the Oil
6 Conservation Division in Aztec, New Mexico, during 1989
7 when Hixon submitted to that District Office an application
8 for permit to drill the Missy No. 3 Well that's the subject
9 of the hearing today?

10 A Yes, I was.

11 Q Do you have a copy of Mr. Corbett's
12 exhibit book?

13 A Yes, I do.

14 Q Let me ask you, sir, to turn to page 7
15 of the exhibit book in which there appears the -- I've
16 asked you to look at the wrong page. Exhibit Number Five
17 -- I'm sorry, page 5 of the exhibit book, that's the APD.

18 Is this a true and accurate copy of the
19 Application for Permit to Drill in the Missy 3 Well?

20 A Yes, it --

21 Q If you know?

22 A Yes, it appears to be, yes.

23 Q Whose signature is contained at the
24 bottom of that exhibit showing that the APD has been ap-
25 proved?

1 A That is mine.

2 Q And on what date did you approve that,
3 sir?

4 A March 17th, the day we received it.

5 Q In processing an Application for Permit
6 to Drill, such as the Missy 3 Well in the West Lindrith
7 Gallup-Dakota Pool, if the applicant, Hixon, has applied
8 for a well location that upon examination by your staff you
9 have determined is an unorthodox location, what do you do
10 with an Application for Permit to Drill?

11 A At that point we notify the operator
12 that the location is a nonstandard location and they will
13 need to have that approved prior to us approving their
14 allowable and assigning an allowable to the well.

15 Q Did that occur in this case?

16 A No, it didn't.

17 Q Have you examined the facts and circum-
18 stances surrounding the approval and issuance of the permit
19 to drill at the location for this well?

20 A Yes.

21 Q Would you describe for us, as best you
22 remember, the sequence of events that led to the approval
23 of this APD?

24 A In our office we have a double check
25 method of approving permits. In the past it's been very,

1 very active for us. It's been real helpful and we seldom
2 have an error as what occurred here.

3 When Mr. Busch had talked to Mr. Cor-
4 bett and apprised me that he'd talked to Mr. Corbett about
5 this well, we discussed it, several issues. One was the
6 numbering of the well since it was the second well in the
7 tract, and the other was the location of the well.

8 At this point we were aware of the order
9 that had been issued prior to that. In 1987 it was at my
10 direction that Mr. Busch set up the committee that did the
11 study that resulted in the changes to the West Lindrith
12 Gallup-Dakota order.

13 When the order was issued we reviewed it
14 as it came into our office and it was our understanding
15 after first reading the order that we were discussing only
16 the boundary between the Gavilan Mancos and the West Lin-
17 drith Gallup-Dakota Pools. That had been our only intent.

18 After this permit was approved -- what
19 it -- Mr. Corbett brought the permit into the office, Mr.
20 Busch wasn't there. Mr. Busch generally signs these and
21 sends them to me.

22 So I went ahead. I knew that Mr. Busch
23 had already reviewed the location. I checked the permit
24 for the proposed casing cement program to be sure that
25 apparently all the i's were dotted, t's were crossed; that

1 it was in order; that the cementing program complied with
2 what we expect for conservation purposes, and then I ap-
3 proved the permit.

4 Q When did you first become aware that
5 there was some question about the well location in fact
6 being at an unorthodox location pursuant to the West
7 Lindrith Gallup-Dakota Pool rules?

8 A Mr. Agarman telephoned me on March the
9 30th and --

10 Q Who is Mr. Agarman, to your knowledge?

11 A He's an employee of Mobil.

12 Q When did he call you?

13 A On the afternoon of March the 30th.

14 Q In response to that phone call what did
15 you do then, Mr. Chavez?

16 A Well, I took the permit and I -- while I
17 was talking to Mr. Agarman I pooled the pool rules and re-
18 viewed them as we discussed them and certainly he was ex-
19 actly right.

20 The way the pool rules were worded, this
21 well was at a nonstandard location, but I know that Mr.
22 Busch is very thorough in -- in processing these applica-
23 tions. We've discussed them quite often. So I considered
24 that since Mr. Vic Lyon and he had co-chaired that commit-
25 tee, that he had discussed something with him; otherwise it

1 wouldn't have gone through the way it had without him
2 noting or apprising me that it was a nonstandard location.
3 So I couldn't get hold of Mr. Lyon that afternoon or Mr.
4 Busch.

5 The first thing the next morning we did
6 discuss this. Mr. Busch said he had not talked to Mr. Lyon
7 and he had read the rules originally the way that I had,
8 that we were talking about only the boundary between the
9 West Lindrith Gallup-Dakota and the Gavilan Mancos Pool,
10 and noted that apparently there was an error in the order,
11 that it was obvious that he'd discussed with Mr. Lyon as to
12 why the order had said, the way the order was worded, this
13 was a nonstandard location.

14 Q When did you notify anyone with Hixon of
15 the location being in fact at an unorthodox location?

16 A Well, when I had called them the after-
17 noon of the 30th I had told them that it looked like it was
18 going to end up that way and then Friday morning, the
19 morning of the 31st, after talking with Mr. Busch and then
20 again with Mr. Lyon, we did get hold of him that morning,
21 we did verify that it was nonstandard and at that time we
22 talked to Hixon about the problem.

23 Q Did -- did you notify Hixon that they
24 should stop drilling the well?

25 A No. We discussed that with them, that

1 anything that's -- any time they're in noncompliance with
2 a regulation, like this, they are drilling at their own
3 risk.

4 We discussed some alternatives as to
5 what was possible, because they were concerned and we were
6 concerned, too. We discussed the idea of stopping and they
7 didn't seem to think that that was reasonable considering
8 the other alternatives, too, of directionally drilling a
9 hole or there was a good possibility of working out some
10 kind of an allowable restriction.

11 There's also a possibility of looking at
12 the order itself and I think at that time we were consider-
13 ing the possibility of maybe coming for a pool rules change
14 or reopening that case that resulted in that order to be
15 sure that is what we wanted to say in those rules.

16 Q But for the instance of having the Missy
17 3 Well at an unorthodox location, is it allowed by your
18 District within the terms of the West Lindrith rules to
19 produce two wells on a 160-acre spacing unit in any combin-
20 ation of the allowable so long as the total production
21 doesn't exceed that spacing unit allowable?

22 A Yes, that's right.

23 Q And that maximum producing rate would be
24 382 barrels a day for that spacing unit?

25 A That's right.

1 Q Are you aware of any other instance in
2 the West Lindrith Gallup-Dakota Pool in which this type of
3 a situation has occurred?

4 A You mean the two wells?

5 Q Yes, sir.

6 A Yes, there are several instances. Mr.
7 Joseph (unclear) has himself drilled on -- basically de-
8 veloped on 80 acres two wells for 16 acres (sic).

9 Conoco further to the west has drilled
10 two proration units with two wells to each.

11 I think Mobil themselves have. I didn't
12 verify that in any records, but on your Exhibit Number Two
13 in Township 24 North, 3 West, it appears that there are
14 some of those locations; for example, Section 16, 21 and 9,
15 where there may be more than one well, and if these well
16 symbols indicate Gallup-Dakota completions.

17 Q In administrating your duties as super-
18 visor of the District Office in Aztec, Mr. Chavez, are you
19 familiar with the depth bracket allowables under Rule 505
20 in the statewide rules?

21 A Yes, I am.

22 Q You've attended the Examiner Hearing
23 that -- in which the parties discussed this matter before
24 Examiner Catanach?

25 A Yes, I have.

1 Q You've been present throughout the
2 entire presentation before the Commission today?

3 A Yes, I have.

4 Q This is in your district, Mr. Chavez.
5 Do you have any recommendation as to what the Commission
6 might do to resolve this matter in an equitable way among
7 the parties so that all rights are adequately protected?

8 A Yes. The question of whether it's
9 standard or nonstandard, you know, is not really a ques-
10 tion; the well is nonstandard.

11 And the problem becomes now, is there
12 equity. There is some inequity the way the rule was
13 written in that surrounding this particular drill tract the
14 Missy 2 and Missy 3 are located in, Hixon can be offset at
15 330 feet without violation of correlative rights, yet they
16 are not able to develop completely at that footage them-
17 selves further to the south in their own drill tract.

18 Consequently, when you're looking at an
19 equity situation, if you want to say that we do want to go
20 to 790, that regardless of the other awkward parts of the
21 rule that are -- and I must say that it's one of the more
22 awkward pool rules that I've seen in that spacing situation
23 -- we can look at the 330 feet as basically a 40-acre type
24 of development.

25 Q Why would you look at it that way?

1 A 40-acre wells are allowed to be spaced
2 330 feet from the tract and even most 80-acre pools are
3 allowed 330 acres from the 40 that the well is located in
4 to an 80-acre tract.

5 But considering that this as a 40-acre,
6 Rule 505 would allow production of up to 187 barrels a day
7 from a single well completed within this depth interval and
8 I think using that as a -- as a basis, we have a good basis
9 within the rules and regulations to use as a model for this
10 type of penalty without having to go into a lot of differ-
11 ent estimations where there's a lack of good, solid infor-
12 mation, without having to go to methods which have (un-
13 clear) as was previously stated. I think we have a good,
14 solid basis in Rule 505 for restricting the Missy No. 3 to
15 a 40-acre allowable for that well as its contribution to
16 the total allowable for the tract.

17 Q With the total tract, then, still being
18 controlled by a top allowable of 382 barrels?

19 A That's correct.

20 Q Have you considered whether or not the
21 allowable for the spacing unit ought to be divided between
22 the Missy 2 and Missy 3 Wells as Mobil proposes before you
23 then calculate the footage penalty factor?

24 A I haven't considered that. We -- we
25 haven't done that in the past. That would be very awkward

1 and we have always allowed the wells, for the allowable to
2 be produced from the drill tract in any proportion from the
3 wells in the tract. That has been done in all our oil
4 pools and in gas pools that are prorated.

5 Q The penalties as you have seen them have
6 been applied to the allowable as opposed to the actual
7 flowing rate or deliverability of the well?

8 A Yes.

9 MR. KELLAHIN: Thank you, Mr.
10 Chairman.

11 MR. LEMAY: Mr. Kellahin. Mr.
12 Carr.

13

14

CROSS EXAMINATION

15 BY MR. CARR:

16 Q Mr. Chavez, you're the District Super-
17 visor for the Division in Aztec, is that correct?

18 A That's right.

19 Q And your duties include administering
20 the Oil and Gas Act in your part of the state, isn't that
21 right?

22 A That's right.

23 Q In doing this you're called upon to be-
24 come familiar with and know the general statewide rules to
25 govern development in the area, isn't that also correct?

1 A That's right, and the policies and
2 procedures that we develop to interpret and apply them.

3 Q And you also are called upon to know
4 the special pool rules governing a particular pool within
5 your district.

6 A That's right.

7 Q And the objective of all of this is to
8 prevent waste and protect correlative rights, isn't that
9 correct?

10 A That's right.

11 Q Often the statewide rules and special
12 rules differ, isn't that correct? (Not clearly under-
13 stood.)

14 A Yes.

15 Q And in the West Lindrith it was while
16 you were director of the -- or District Supervisor that a
17 committee was formed and with Mr. Busch they worked out
18 special rules.

19 A That's right. Mr. Busch and Mr. Lyon in
20 effect co-chaired that -- that committee and at the end Mr.
21 Lyon was the one who wrote the -- the rules that were pre-
22 sented and accepted in a hearing.

23 Q These rules were designed to carry out
24 the duties of the Division to protect the correlative
25 rights of anyone --

1 A They -- they attempt to do that. It's
2 not always clear that they do that and consequently, we
3 come here --

4 Q To make some changes.

5 A To make some changes or to either
6 address the issues that aren't necessarily addressed by
7 those particular rules or orders.

8 Q Mr. Chavez, in your -- when you con-
9 duct your business do you expect the operators in the area
10 also to become familiar with those rules that govern the
11 pools and the statewide rules?

12 A Yes, that's -- in fact, that's one of
13 the rules, is that the operators need to know the rules.

14 Q Now, we don't have any quarrel, do we,
15 the Missy No. 3 is in an unorthodox location?

16 A It is.

17 Q This location is inconsistent with the
18 rule.

19 A That's correct.

20 Q You stated that there were other spacing
21 units in the area that had two Dakota wells on them, per-
22 haps even one operated by Mobil.

23 A I'm interpreting this map. I didn't
24 check, double check this map against --

25 Q But wasn't it your testimony that there

1 were certain units in the area that had two wells on them
2 in the Dakota formation?

3 A Yes.

4 Q Did you find any of those where a second
5 well was drilled at an unorthodox location?

6 A I didn't look for any but I would think
7 that there are. That would be --

8 I didn't check for any.

9 Q Are you aware of any?

10 A No, not off the top of my head.

11 Q Do you have any policy in-house for how
12 you deal with situations where a second well is in an un-
13 orthodox location?

14 A Yes, if you could call it a policy. The
15 -- say, for example, if I could draw a comparison of the
16 gas proration unit, unless there's an objection by the off-
17 set operator to a nonstandard location, there is no change
18 in the allowable.

19 Q If there is an objection by an offset
20 operator, what happens?

21 A Then it has to come to hearing. They
22 have to decide then how to equitably allow for the non-
23 standard well.

24 Q And are you aware of any set policies in
25 your office or by the Division as to how this situation

1 should be handled? Is there any clear custom to handle
2 this sort of thing?

3 A No, not really.

4 Q I think you testified a few minutes ago,
5 Mr. Chavez, that you thought there was an inequity here
6 because Hixon could be offset 330 feet from the boundary of
7 its tract and it couldn't offset at that location. Where
8 would that occur?

9 A I beg your pardon? When -- when would
10 that occur?

11 Q Did you -- did you state that you were
12 concerned that Hixon might be offset 330 feet from the
13 spacing unit boundary but that it couldn't offset a loca-
14 tion 330 feet away?

15 A Let me -- let me clarify what I was
16 speaking of there.

17 Q On that 160-acre drill tract they can be
18 offset, and they currently are from the west side, at 330
19 feet. They're offset by a Mobil well at 540 feet on the
20 east side.

21 On the north they are -- I don't know
22 what the distance is from the north offset but they could
23 be offset by 330 there.

24 The way the pool rules are written it --
25 it's not clear -- I shouldn't say it's not clear because

1 it's in black and white, but it's -- it's not even as far
2 as allowing for drilling distances to the edge of the
3 tracts that are being developed after the rule was written.

4 Q If we go to the west they're offset 330
5 feet away.

6 A That's right.

7 Q Under the rules as they stand, they
8 could drill 330 feet east of that west line, couldn't they?

9 A Yes, they could.

10 Q And in the north, they're offset 330
11 feet north, they could come in and go 330 feet south of the
12 north line and they could drill a well.

13 A Yes, they could.

14 Q They're offset on the east 570 feet,
15 isn't that right?

16 A Yes.

17 Q They actually under the rules would be
18 330 feet, wouldn't they, from the lease line, is that cor-
19 rect?

20 A That's right.

21 Q And on the south half would be back 790
22 under the rules.

23 A That's right.

24 Q And then the operator south of that
25 would also have to be 790 feet away, isn't that correct?

1 A That's right.

2 Q So they really under the rules could
3 offset an offsetting operator as close as that offsetting
4 operator could get to --

5 A That's right. It's not as inequitable
6 to -- in one direction.

7 Q Now, Mobil made a -- sorry, Hixon made a
8 mistake and put the well at the wrong location. We're here
9 today talking about how to deal with this problem.

10 Is it your opinion that because it's a
11 mistake that that has any bearing on how you in-house deal
12 with the problems? Is the fact it's a mistake an issue?

13 A Not necessarily, no, that shouldn't be
14 clouding the issue.

15 Q If you --

16 A I think there's a problem and it hasn't
17 been clarified completely in that how the rule itself
18 speaks to the protection of correlative rights and what was
19 intended by the committee whenever they met and discussed
20 the issue and what finally resulted is a rule addressing
21 Mancos, fractured Mancos production, trying to get a bound-
22 ary there, and all of a sudden here we're discussing Dakota
23 production that's affected by that rule.

24 Q So there may be some (unclear) in this
25 rule, is that what you mean?

1 A Yes, that's what I'm saying, there may
2 be -- some of our rules are not always, perhaps, as good as
3 they can be, and even when they're issued many times we
4 don't see the ramifications later on, and that's why we
5 come to hearing.

6 Q Now, when they came in to you, I want to
7 be sure, you did state that they knew they were going for-
8 ward at their own risk after the (unclear) --

9 A That's right.

10 Q And today you're recommending that a
11 penalty be imposed on the well, you think it would be
12 equitable to use a depth bracket allowable as if it were a
13 40-acre well, is that right?

14 A I'm saying that that is -- we've got a
15 handle on that and that would be one reasonable way of
16 doing it.

17 Q And the reason for that is it's a 330
18 foot setback, isn't that right?

19 A Yes.

20 Q And that's the standard setback for a
21 40-acre spacing unit.

22 A That's right.

23 Q Don't you set spacing units really based
24 on the acres that a well can reasonably be expected to
25 drain?

1 A Yes. We're not really creating a pro-
2 ration unit here, though.

3 Q And in this area wouldn't you think that
4 a Dakota well would drain more than 40 acres

5 A If it could be produced at a high rate
6 it probably could and one of the objectives of depth bracket
7 allowables is that if you have 40-acre spacing, say, for
8 example, and you have a well that is capable of making
9 over that amount, you're restricted to that amount in an-
10 ticipation or to prevent you from draining more than that
11 amount of acreage.

12 Q Aren't your depth bracket allowables
13 really tied into drainage areas?

14 A In a way, yes.

15 Q Now, in making this recommendation did
16 you actually consider the area that this well might be ex-
17 pected to drain?

18 A No, I didn't.

19 Q Did you calculate the reserves under the
20 160 and how many of them might be produced by this well if
21 it was produced at this particular rate?

22 A No, I was just looking at some reason-
23 able way considering our rules and regulations that we
24 could come up with some type of (unclear).

25 Q You didn't consider whether or not at

1 this rate it would be draining from an offsetting property,
2 either, did you?

3 A No, I didn't.

4 Q You didn't have that information, did
5 you?

6 A No, I don't know that anybody has.

7 Q You're really making your recommend-
8 ation based on just how far it's set back from the line,
9 isn't that right?

10 A No. I'm also considering the depth of
11 the well and that the rule, the allowable rules in Rule
12 505, were very carefully thought out, they're traditional
13 and accepted by the industry and they give us a good
14 handle, and I'm looking for something that we can have a
15 better handle on basing the rules.

16 MR. CARR: May I have just a
17 moment, please?

18 Q Mr. Chavez, in making your recommenda-
19 tions, then, what you're doing is trying to go through some
20 sort of a standard that would enable you to set a penalty
21 but you're not looking at the particular characteristics of
22 this well, other than (not clearly heard), is that right?

23 A Yes, that was originally done to set the
24 allowable for the well, anyway; 160 acres at this depth
25 gives us 382 barrels of allowable. So I thought it would

1 probably be acceptable to use the same formula, which is
2 the Rule 505, (unclear).

3 Q So we then take that same thinking for-
4 ward and we go to 40 acres, wouldn't it also be appro-
5 priate (unclear) 160 acre drainage and get 382, cut that in
6 fourths for 40 acres, that you might cut that 382 in quart-
7 ers and (unclear) maybe 85 barrels a day? Wouldn't that be
8 another way to take that same approach (unclear) --

9 A That's -- we've never done that.

10 Q Have you ever come in and set a penalty
11 based on the depth bracket allowable for 40-acre spacing in
12 a 160-acre pool?

13 A In an 860-acre pool?

14 Q In a 160-acre pool.

15 A I guess I don't understand your ques-
16 tion.

17 Q What you're proposing has never been
18 done before, either, has it?

19 A No, not that I know of.

20 Q Okay. Thank you.

21 MR. LEMAY: Additional ques-
22 tions? Commissioner Humphries.

23

24 QUESTIONS BY MR. HUMPHRIES:

25 A I want to make sure, after the confu-

1 sion about the dates, the amount of elapsed time was 3
2 hours and 20 minutes, not 27 hours and 20 minutes, is that
3 right, between the time that the well was spudded and you
4 were contacted? Because there was one -- one document said
5 that it was 24 hours earlier and one document said that it
6 was 3 hours and 20 minutes.

7 A I was contacted -- okay, the -- the
8 dates on page one are -- where it says March 30th --

9 Q Uh-huh.

10 A -- that should be March 29th for the
11 spudding of the well.

12 March 30th is the date that I did call
13 them.

14 Q Was -- had they been in drilling and in
15 activity for 27 hours and 20 minutes?

16 A As best I can tell, yes, that -- it was
17 March 30th that is the date that I was called by my --

18 Q Regardless of whether it was 27 hours
19 and 20 minutes or 3 hours and 20 minutes, a significant
20 amount of endeavor had been taken into consideration by the
21 people who were drilling the well at that time, is that
22 right?

23 A That's right.

24 Q You suggested that -- I'm the first to
25 admit that some of the technical things that we hear in

1 these Commission hearings tend to blur out after awhile and
2 some of the solutions ought to be more common sense than
3 they turn out to be occasionally, but we haven't heard any
4 radically different theories about production in this par-
5 ticular well, but I do recall very clearly the discussion
6 about establishing the buffer zone between the Gavilan
7 Mancos and the West Lindrith Gallup-Dakota and I remember
8 that it was dealing with fractured Mancos production, and
9 you suggested, or I think you suggested, and I probably
10 better -- because I lost a little bit of the theory that
11 you were -- that a 330 foot offset could be allowed in Sec-
12 tion 1 south of the Missy No. 3 if Mobil so chose and
13 sought an unorthodox location. Is that what you said?

14 A Well, let me get -- if they sought an
15 unorthodox location --

16 Q Uh-huh.

17 A -- if they were able to get approval for
18 a 330-acre -- I'm sorry, a 330-foot offset, that would be a
19 nonstandard location in Section 1.

20 Q And if that were the case and Mobil so
21 chose to develop the northwest quarter of Section 1, under
22 those circumstances they would apparently have equal oppor-
23 tunity to develop their correlative rights, or to protect
24 their correlative rights if an unorthodox location was
25 granted.

1 A That's correct.

2 Q Do you see any reason to believe that
3 there's a boundary for a new pool at that -- or between
4 Range 20 -- or Township 24 North and Township 25 North,
5 Range 3 West?

6 A I haven't, but then I haven't looked at
7 the amount of data that others have had.

8 Q Okay, but to your knowledge at this
9 point there's no new pool lying south of --

10 A No --

11 Q -- that may be fairly consistent kinds
12 of production south of that line.

13 A Yes. Our policy is, for example, if the
14 well that the Mobil witness talked about, if they were to
15 file that permit, we would call it a West Lindrith Gallup-
16 Dakota extension unless there was -- they had come to hear-
17 ing prior to that and tried to set up a different pool
18 based on some evidence that they had.

19 Q Thank you.

20 MR. HUMPHRIES: I have no fur-
21 ther questions.

22 MR. LEMAY: Additional ques-
23 tions of the witness? If not, he may be excused.

24 Mr. Kellahin, anything more?

25 MR. KELLAHIN: Nothing fur-

1 ther, Mr. Chairman.

2 MR. LEMAY: Mr. Carr, any
3 more?

4 MR. CARR: Nothing further.

5 MR. LEMAY: Anyone else have
6 any statements in the case?

7 MR. KELLAHIN: I believe
8 there's a party here to make a statement, Mr. Chairman.

9 MR. LEMAY: Yes.

10 MS. MYERS: Mr. Chairman, I'm
11 Phyllis Myers. I own the west half of Section (not clearly
12 understood) half section.

13 (REPORTER'S NOTE: Ms. Myers'
14 statement continued but was not clearly audible to the re-
15 porter.)

16 MR. LEMAY: Thank you. Addi-
17 tional statements in the case?

18 Would you care to close or let
19 the record stand -- you want to close? Mr. Carr.

20 MR. CARR: Initially, before I
21 get into the prepared closing, I would simply state that I
22 appreciate the concerns the landowners may have when ac-
23 reage isn't developed, but the fact that there royalty may
24 be affected is something to take up with their working
25 interest owner. To assure them an income based on drain-

1 age, I submit, is outside what you're required to do under
2 the Oil & Gas Act.

3 We're not here today to change
4 the pool rules, although that seems to be a cloud that
5 overhangs this whole thing.

6 We're not here to talk about
7 changing the pool boundary. I'll address that in a minute.

8 We're here because Hixon made
9 a mistake and we believe that it's a mistake. We're not
10 challenging that. I think Mr. Corbett said we hadn't acted
11 in bad faith and I don't think Mr. Corbett did. But he
12 made a mistake and he drilled a very good well and he
13 drilled it in the wrong place and now we're stuck with try-
14 ing to figure out what can be done about it so that correl-
15 ative rights would be protected.

16 The background facts are fair-
17 ly clear. There was an industry committee to look at the
18 development of rules for this area. Mr. Corbett partici-
19 pated at a committee level. He knew there were rules for
20 the pool.

21 He was expected by this Divi-
22 sion and under your rules, to know what those rules are.
23 He couldn't find his, he called the Division, and as a re-
24 sult a well was spudded at a location that is at a non-
25 standard location, and whether it's 3 hours and 2 minutes

1 or 27 hours, early in the drilling activity he had reason
2 to know that he was at an unorthodox location.

3 He met with the Division and
4 the Division felt bad about it, too, and that's also under-
5 standable. They tried to figure out what needed to be
6 done. They looked at the options and they discussed the
7 penalty and they told Hixon they were drilling at their own
8 risk, and they made a decision to go forward at their own
9 risk, knowing that the penalty could be imposed.

10 It was agreed at that time
11 that they ought to talk to Mobil about this and see what
12 could be worked out. They went on in the dark for more
13 than half the time it takes to drill a well because they
14 didn't even call Mobil. If they had called, I wouldn't
15 suggest to you that that would have changed what's happen-
16 ing here today.

17 But I think it's important
18 when we look at just what the basic facts are, they're
19 pretty simple. They drilled a well in the wrong spot and
20 most of the drilling time they were doing it at their own
21 risk. It isn't the fault of the Oil Conservation Division
22 that the well is there and it isn't the fault of Mobil and
23 it may not be the fault of anyone.

24 What we've got here are ques-
25 tions of drainage, questions of whether or not your rules

1 are effective, or not, how they're being implemented and
2 enforced, and I think part of the problem honestly is that
3 rules were designed focusing on the Gallup and we now have
4 an area where we're getting some good Dakota wells, and I
5 think that's a problem.

6 We've got some of the best
7 wells in the entire area. There has been testimony today,
8 and I think, perhaps, some confusing terminology, where
9 Mobil has suggested that because we now find an area where
10 we're getting some pretty good Dakota wells and maybe the
11 formation extends off to the south, that this might be an
12 appropriate place to declare a new pool. Not that the
13 formation isn't there, not that it isn't one formation, but
14 that the characteristics of it are different. There are
15 political boundaries elsewhere in this general area and
16 maybe this is another place where a different set of rules
17 and regulations are appropriate. For that reason rules for
18 a buffer area, accidental or not, may be important and may
19 avoid problems in the future for development in the area.

20 Hixon drilled their well be-
21 cause they wanted to maintain a top allowable unit and
22 that's a legitimate reason for drilling a well but it is
23 not in the particular unit top allowable because they're
24 draining from an offsetting operator, and we believe that's
25 what's going to happen here.

1 And they've come in and they
2 say, yes, there is some advantage and we're going to re-
3 commend three penalties, three basic ways.

4 The double circle amount is
5 something that they don't recommend because in fact it is
6 no penalty at all.

7 The ratio method, the second
8 one, where you just take how close they are to the offset-
9 ting acreage and divide 330 by 790 and then penalize them
10 42 percent, that's one of the proposals that they would
11 like you to accept. The problem is we offset to the south
12 and east and southeast and we've talked about how rapidly
13 the wells have declined in this area. As fast as they
14 decline, we consider that penalty to mean nothing at all
15 and we're concerned that the penalty based just on the
16 amount of encroachment when there are two wells on this
17 unit, is not going to protect the correlative rights of
18 Mobil to the south.

19 And then we get to a new and
20 unique approach, I think, of imposing a penalty. We've
21 talked about double circles and everything in terms of pro-
22 posing penalties in the last couple of years and never be-
23 fore have I heard an imposition of a penalty based on a 40-
24 acre spacing unit when we don't even consider that --
25 what's actually being drained and when we come in and say

1 we're going to look at the depth and how close it is to the
2 boundary, and that's going to affect the allowable, we're
3 somehow going to take off on that, not considering that
4 it can drain other tracts, what the impact would be on an
5 offsetting operator, and say, yes, that's the appropriate
6 way to go, I suggest we'd have some serious problems.

7 Depth bracket allowables are
8 set based on a spacing unit's size and a spacing unit's
9 size is based on drainage and you can't forget drainage and
10 run to the sides of a spacing unit and then impose a
11 penalty, (not clearly understood) and I think the penalty
12 would be absolutely arbitrary, capricious and unreasonable
13 and finally if you do this, I think it will cause drainage.

14 And then there really is, al-
15 though they didn't discuss it, a fourth option, and that is
16 to come in and say, all right, Mobil, you just can drill
17 330 feet south of the common boundary dividing these
18 tracts. I submit to you that that approach clearly
19 violates your duties as a commission. Everybody here has
20 talked about intersecting drainage patterns. Mr. Corbett
21 mentioned it, (unclear), and if you put two wells that
22 close together in this reservoir, one of those wells is un-
23 necessary. I submit to you that's waste. I submit to you
24 you're requiring inefficient, wasteful development and that
25 that violates your Act, your duties under the Oil & Gas

1 Act.

2 Now Mobil's here and they have
3 two choices they see to protect their correlative rights.
4 Both of them require coming to you not only now but prob-
5 ably in the future.

6 One is to come in and drill an
7 unnecessary well and get your approval to drill at an un-
8 orthodox location, try to offset drainage with counter-
9 drainage even if one of those wells is unnecessary.

10 The other is to come in here
11 and ask you to penalize the Missy No. 3, to restrict its
12 production in a meaningful way. We've had a lot of talk
13 about no flow boundaries and the process of discussing it
14 but we've had no calculations to tell everybody where they
15 are, but the fact of the matter is, we have come forward
16 and told you that if we have a well that isn't restricted
17 down to a level of approximately 80 barrels a day, we're
18 going to have to come in and drill that unnecessary well.
19 We're going to be, we believe, drained. We're going to be
20 in a position where the only thing we can do to protect our
21 correlative rights, to protect our interest owners, our
22 royalty owners down there, is to drill a well that by defi-
23 nition is waste.

24 For that reason we believe
25 that the only fair thing to do in a situation where you've

1 got a first well to produce in a standard location and you
2 now have an unorthodox location protecting it.

3 This is an accepted penalty
4 that we propose. Now this is a burden for Hixon but their
5 well, even with an 80-barrel restriction is going to pay
6 out in approximately a year. We are concerned that be-
7 cause there's been a mistake, because there has been good
8 faith on their part, the Commission may be involved or feel
9 involved in the mistake, and somehow or other the real
10 issue here is going to be lost and that is drainage, and we
11 still are going to come out that the effective way to
12 handle it is to impose the penalty that we recommend. If
13 you do that, we submit you're going to carry out your
14 duties under the Oil and Gas Act, you're going to prevent
15 waste, and you're going to protect correlative rights, and
16 we ask you to affirm what the Examiner did when he heard
17 this case and impose a penalty of 80 barrels a day on the
18 Missy No. 3.

19 Thank you.

20 MR. LEMAY: Thank you, Mr.
21 Carr.

22 Mr. Kellahin.

23 MR. KELLAHIN: Gentlemen, we
24 need a unique solution for a unique problem. This is not
25 the typical unorthodox location case that comes before you

1 where the applicant has not yet drilled the well. There is
2 no pretense that anyone here is playing closeology. If
3 anything that has occurred, Hixon has helped Mobil prove up
4 the lease to the south because, as Commissioner Humphries
5 has said, there is apparently no indication or belief that
6 this pool simply stops at the township line.

7 But isn't it interesting how
8 many times Mr. Carr used the phrase "drainage"? As best I
9 can tell, and I've sat through the Examiner case and the
10 Commission case and we have shared and exchanged technical
11 data resulting from subpoena and otherwise, and there
12 wasn't one engineer that came in here with any kind of
13 drainage calculation that I've ever seen.

14 The rule, if you examine it,
15 doesn't have any application to the Dakota that we're
16 dealing with and while we have talked about different
17 solutions, it's the Commission's choice, within your dis-
18 cretion, to give us a solution that none of us may have
19 discussed with you yet.

20 My client would allow and
21 would encourage Mobil to drill in Section 1 or 2, 330 feet
22 away from us without penalty and without our well being
23 penalized. The spacing unit applies for an allowable of
24 382 barrels and we'll play by -- by those terms. It gives
25 them that opportunity. We propose that to them and we will

1 do that.

2 You can see by the size of
3 their unit there's a significant amount of that unit that
4 is totally undeveloped. They still have all the
5 flexibility of exercising a great many options. But
6 they're concerned about drainage and they want that Hixon
7 Missy No. 3 Well to be restricted to 80 barrels a day while
8 they figure out when and if they're going to drill this
9 well.

10 The Commission rules give for
11 correlative rights the opportunity to Mobil to protect its
12 correlative rights by drilling their own well. That does
13 not mean that we're supposed to shut in the Missy 3 Well
14 while they get their well into production and then set up
15 some allowable based upon deliverability of these two
16 wells. The fact that they have failed to exercise their
17 correlative rights is not our fault.

18 Mr. Carr says he would like to
19 abide by the rules as they exist and as difficult as they
20 are make logic of. If you abide by the 790 rule, we'll
21 apply that rule in the calculation, but isn't it interest-
22 ing how many times he used the words "two wells". Rule 6
23 of these rules allows two wells. There's nothing in there
24 that penalizes anyone or requires them to divide their
25 deliverability or capacity to produce among those two

1 wells.

2 He argues that it's no penal-
3 ty at all if you let the Missy 3 produce at 187 barrels of
4 oil a day. Well, our engineer says it is. It's a mean-
5 ingful penalty to him and his company when he recognizes
6 that that penalty is going to cost the interest owners a
7 million dollars.

8 It's meaningful to me. I
9 suggest it's meaningful to all the people that would
10 participate in this well.

11 The only new theory I think
12 we've seen that is being proposed to you is Mobil's theory
13 that you can take an honest mistake by Hixon and by the
14 Division and compound that into what I think is a punitive
15 penalty. He wants to take the 790 setback, put that into
16 the calculation, and then, for some unexplained reason,
17 divide that in half between two wells that are allowed to
18 be on the spacing unit. If that's permitted under the
19 rules, you can't find it in Rule 6. It's an extraordinary
20 penalty. We think it is totally unnecessary and ask you
21 that you allow the Missy No. 3 well to be put in a
22 producing status that is in fair competition to all inter-
23 est owners.

24 And how do I explain to Mr.
25 Kuchara and the other employees of Hixon that they have to

1 live and endure an 80-acre -- an 80 barrel a day allowable
2 before they can flow the well. They're going to have to
3 shut it in and produce it in spurts.

4 I can't see how that's fair
5 and I hope that you don't.

6 Thank you.

7 MR. LEMAY: Thank you, Mr.
8 Kellahin.

9 Is there anything further in
10 Case Number 9666 -- 9661?

11 I'm going to request that
12 counsel on both sides prepare draft orders and submit those
13 to us.

14 We'll take the case under
15 advisement. Thank you, gentlemen.

16

17 (Hearing concluded.)

18

19

20

21

22

23

24

25

C E R T I F I C A T E

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

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