

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

6 18 November 1987

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Mesa Grande Resources, CASE
10 Inc., for compulsory pooling, Rio 9257
11 Arriba County, New Mexico.

12 BEFORE: David R. Catanach, Examiner

13
14
15 TRANSCRIPT OF HEARING

16
17
18 A P P E A R A N C E S

19
20 For the Division: Jeff Taylor
21 Attorney at Law
22 Legal Counsel to the Division
23 State Land Office Bldg.
24 Santa Fe, New Mexico 87501

25 For the Applicant: James G. Bruce
Attorney at Law
HINKLE LAW FIRM
P. O. Box 2068
Santa Fe, New Mexico 87504

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

KATHLEEN MICHAEL

Direct Examination by Mr. Bruce	4
Cross Examination by Mr. Catanach	8
Cross Examination by Mr. Taylor	8
Recross Examination by Mr. Catanach	9

ALAN P. EMMENDORFER

Direct Examination by Mr. Bruce	12
Cross Examination by Mr. Catanach	18

KATHLEEN MICHAEL

Recross Examination by Mr. Catanach	22
-------------------------------------	----

E X H I B I T S

Mesa Grande Exhibit One, Map	5
Mesa Grande Exhibit Two, Plat	5
Mesa Grande Exhibit Three, Correspondence	6
Mesa Grande Exhibit Four, Structure Map	13
Mesa Grande Exhibit Five, Cross Section A-A'	13
Mesa Grande Exhibit Six, Production Map	15
Mesa Grande Exhibit Seven, AFE	15

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

MR. CATANACH: Call next Case Number 9257.

MR. TAYLOR: Application of Mesa Grande Resources, Inc., for compulsory pooling, Rio Arriba County, New Mexico.

MR. CATANACH: Are there appearances in this case?

MR. BRUCE: Mr. Examiner, my name is Jim Bruce with the Hinkle Law Firm, representing the applicant. I have two witnesses to be sworn.

MR. CATANACH: Are there any other appearances in this case?

Will the witnesses please stand and be sworn in?

(Witnesses sworn.)

KATHLEEN MICHAEL,

being called as a witness and being duly sworn upon her 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. BRUCE:

Q Would you please state your full name and city of residence?

A My name is Kathleen Michael and I live in Tulsa, Oklahoma.

Q And what is your occupation and who are you employed by?

A I'm a petroleum landman for Mesa Grande Resources.

Q Have you previously testified before the OCD as a petroleum landman?

A Yes, I have.

Q And are you familiar with the land matters involved in Case 9257?

A Yes.

MR. BRUCE: Mr. Examiner, are the witness' credentials acceptable?

MR. CATANACH: They are.

Q Would you please state briefly what Mesa Grande seeks by its application?

A Mesa Grande is seeking pooling all mineral interests in the Gallup formation in the Gavilan Mancos Oil Pool in -- underlying all of Section 14, Township 25

1 North, Range 2 West, to be dedicated to a well named Crusa-
2 der No. 1, to be drilled at a legal location.

3 We're also requesting consideration of
4 the cost of drilling and completing the well, allocation of
5 costs, and actual operating costs and charges for supervi-
6 sion.

7 We are requesting that we be named opera-
8 tor of the well and that a penalty be assessed all non-par-
9 ticipating working interest owners.

10 Q Would you please refer to Exhibit Number
11 One and describe its contents briefly?

12 A Yes. Exhibit Number One is an area map
13 which -- of Section 14 and the entire section is colored.
14 The entire section is to be dedicated to this well under the
15 pool rules for the Gavilan Mancos Oil Pool, and it also
16 shows the surrounding sections with the wells that are al-
17 ready drilled there.

18 Q Who does Mesa Grande seek to force pool,
19 and I would refer you to Exhibit Number Two?

20 A Okay. Exhibit Number Two is a leasehold
21 ownership plat. It shows the leasehold ownership for each
22 of the leases to be committed to the Crusader No. 1 Well.

23 At the bottom is a working interest
24 breakdown that shows the working interest on a well basis
25 and the interest that we are seeking to pool are the inter-

1 ests of Mesa Grande, Limited at just over 34 percent; Moun-
2 tain States Natural Gas at 3.125; Helmerich & Payne at 2.67;
3 and David Beach Estate, 1.34 percent.

4 Q Would you please describe your efforts to
5 get the nonconsenting interest owners to join in the well?

6 A Yes. We contacted on September 18th,
7 1987, and that letter is not included in Exhibit Three, but
8 it's referred to in the letter dated October 20th, and we
9 contacted all the working interest owners. We proposed the
10 well and sent them an AFE and an operating agreement at that
11 time.

12 On October 20th we sent a revised Exhibit
13 A to the operating agreement and notified the working inter-
14 est owners at that time that those who had not joined the
15 well would be force pooled.

16 On October 28th, and that's the top let-
17 ter, we sent a certified notice of the hearing date to each
18 of the nonconsenting working interest owners.

19 Q And are certified return receipts attach-
20 ed as part of Exhibit Three?

21 A Yes, they are.

22 Q And approximately what percentage of wor-
23 king interest has committed to the well?

24 A Almost 59 percent.

25 Q Do you have a recommendation as to the

1 amount which should be paid to Mesa Grande for supervision
2 and administrative charges?

3 A Yes. We are recommending \$3500 per month
4 for a drilling well and \$400 per month for a producing well.

5 Q Are these amounts in line with those nor-
6 mally charged by Mesa Grande and other operators of wells of
7 this type in this area?

8 A Yes, they are.

9 Q And what penalty to you recommend against
10 nonconsenting interest owners?

11 A We're recommending a penalty of 200 per-
12 cent.

13 Q And will the geologist discuss this fur-
14 ther?

15 A Yes, he will.

16 Q Were Exhibits One through Three prepared
17 by you or compiled from company records?

18 A Yes, they were.

19 Q And in your opinion will the granting of
20 this application be in the interests of conservation and the
21 prevention of waste?

22 A Yes.

23 MR. BRUCE: Mr. Examiner, I
24 move the admission of Exhibits One through Three.

25 MR. CATANACH: Exhibits One

1 through Three will be admitted into evidence.

2 MR. BRUCE: I have nothing fur-
3 ther.

4
5 CROSS EXAMINATION

6 BY MR. CATANACH:

7 Q Ms. Michael, you don't have a breakdown
8 of the royalty interest. Is that the same as the working
9 interest or how does that work here?

10 A The royalty interest? No, but the
11 leases that are involved in this well have an appropriate
12 pooling clause so as long as the working interests are com-
13 mitted, the mineral interest will be committed, also, the
14 royalty interest.

15 Q Ms. Michael, is this all a Federal lease,
16 this whole section?

17 A No, as a matter of fact, only the 40-acre
18 tract which is the northwest quarter of the southeast quar-
19 ter is Federal. The remainder of the section is fee.

20
21 CROSS EXAMINATION

22 BY MR. TAYLOR:

23 Q What are the numbers in the Exhibit Num-
24 ber Two, --

25 A Yes.

1 Q -- the leasehold ownership plat on the
2 north half of the northern quarter sections? There are some
3 numbers, NM-6393 and 9396, what are those?

4 A Oh, those are our file numbers.

5 Q All right, but down here --

6 A Sorry, didn't mean to confuse you.

7 Q Okay, so -- so in the -- in the southeast
8 quarter, the USA NM-01355 is the Federal lease number for
9 that quarter quarter.

10 A That's right, yeah. At the bottom of the
11 east half and west half those names are the lease names for
12 the fee owners.

13 Q Fee owners.

14 A But we have actually about 80 (not clear-
15 ly heard.)

16 Q And this in the -- in the quarter quarter
17 that's Federal, the NM-6300, is that also a file number?

18 A Yes, it is.

19 Q Thank you.

20 A You're welcome.

21

22 RE CROSS EXAMINATION

23 BY MR. CATANACH:

24 Q Ms. Michael, you said there was -- what
25 -- what document did you say that committed the royalty in-

1 terest owners?

2 A Well, in the fee leases there is a pool-
3 ing clause which allows the working interest owners in those
4 leases to commit those leases to a pooled area, so that once
5 the working interest is committed, the mineral interest is
6 also automatically committed, too, or pooled.

7 Q What is Mesa Grande's association with
8 Mesa Grande, Limited?

9 A Mesa Grande Resources is the operating
10 entity and Mesa Grande, Limited, basically is the owner of a
11 lot of the leases. Resources does also own some leasehold
12 interest separate from Limited, but Limited is basically a
13 partnership that provides the financing.

14 Q And you can't reach agreement with them?

15 A Well, Limited Partnership is undergoing
16 some changes as well and they're doing some refinancing and
17 one of the partners in that partnership, which was a bank in
18 Houston, has sold their interest and we're in the middle of
19 the changeover and they haven't exactly established what
20 they're going to participate in and what they're not.

21 I believe that they will participate but
22 they just don't have the authority to sign the AFE yet.

23 Q I see.

24 A And if they don't, there are procedures
25 in the agreement that McGinnis (sic) is still -- we're still

1 working out some of the details but there are procedures for
2 their interest to be offered to the other partners within
3 the partnership.

4 Q Were you ever able to get hold of Moun-
5 tain States Natural Gas?

6 A No, but then we didn't expect to.

7 Q Okay, how about the other -- the other
8 two working interest owners, did you -- were you able to
9 held of them?

10 A Yes, we were.

11 Q And they just refused to join or --

12 A Yeah. The David Beach Estate wants to be
13 nonconsent, and Helmerich and Payne, I think, just did not
14 ever respond.

15 Q You proposed overhead rates of \$3500 a
16 month while drilling and \$400 a month while producing, is
17 that correct?

18 A Yes.

19 Q That's based on -- on actual experience
20 in the area?

21 A Yes.

22 Q Do you operate Gavilan Mancos wells in
23 this area?

24 A Oh, yes.

25 Q And none of the working interest owners

1 have objected to those rates?

2 A No. As a matter of fact, those rates are
3 lower than some of the other wells that we have in the area.

4 MR. CATANACH: I think that's
5 all I have of the witness. She may be excused.

6

7 ALAN P. EMMENDORFER,
8 being called as a witness and being duly sworn upon his
9 oath, testified as follows, to-wit:

10

11

DIRECT EXAMINATION

12 BY MR. BRUCE:

13 Q Mr. Emmendorfer, will you please state
14 your full name and city of residence.

15 A Yes. My name is Alan P. Emmendorfer. I
16 live in Broken Arrow, Oklahoma.

17 Q And who are you employed by and in what
18 capacity?

19 A I work for Mesa Grande Resources as a pe-
20 troleum geologist.

21 Q And have you previously testified before
22 the OCD as a geologist and had your credentials accepted?

23 A Yes, I have.

24 Q And are you familiar with the geologic
25 matters involved in this case?

1 A Yes, I am.

2 MR. BRUCE: Mr. Examiner, is
3 the witness acceptable?

4 MR. CATANACH: He is.

5 Q Mr. Emmendorfer, would you please refer
6 to Exhibit Four and describe it for the Examiner?

7 A Exhibit Number Four is a structure map
8 for the Gavilan area and surrounding area. It is a struc-
9 ture map mapped on the top of the Niobrara "A" or top of the
10 Gallup, which is the producing interval within the Gavilan
11 Mancos Oil Pool.

12 The contour interval is 50 feet and high-
13 lighted in yellow is Section 14, which is the proration
14 unit, the subject of this, and I've staked, drawn in there,
15 the location of the Crusader No. 1.

16 The purpose of the structure map was just
17 to relate the location of the well and the drilling block to
18 the general structure of the -- of the Gavilan Dome area.
19 Notice that it is close to the top of the dome itself.

20 There is also cross sectional trace A to
21 A", which I will discuss in the next exhibit.

22 Q Will you please move on to the cross sec-
23 tion marked Exhibit Five and discuss its contents?

24 A Exhibit Number Five is a cross section
25 using induction logs from four wells within the Gavilan Man-

1 cos Oil Pool. It's a structural cross section hung on sea
2 level. I've also noted on the cross section the approximate
3 location of the Crusader Federal No. 1 in relation to these
4 existing wells.

5 The important thing I wanted to show was
6 the continuation of the interval of the Niobrara A, B, and C
7 zones, which is where the main production comes from in the
8 Gavilan Mancos, and where those zones are perforated.

9 Also I have noted under each of the logs
10 the completion date, the different potential of each of
11 these wells within the Gavilan Mancos interval and the
12 cumulative production of the formation up to October 1st,
13 1987.

14 Also listed is completion information on
15 the Dakota interval within the Hellcat (sic) and the Reading
16 and Bates Howard Federal No. 43-15, which are also completed
17 in -- dually completed, I should add, with the Gavilan
18 Mancos in these wellbores.

19 I think that the closest well to the
20 subject Crusader Well is the Reading & Bates Howard Federal
21 No. 43-15. I'd like to point out that the cumulative
22 production from that well within the Gavilan Mancos,
23 although it was completed in March of '86 for an IP of 99
24 barrels of oil per day and 225 MCF a day, the wellw as a
25 very poor producer and has produced only a little over 3000

1 barrels of oil to date.

2 Q Will you please move on to Exhibit Six
3 and discuss the production of the wells in this area?

4 A Exhibit Six is a 9-section production map
5 surrounding the Section 14 proposed Crusader Well and only
6 the wells that have penetrated the Gallup are listed on the
7 well-- or on this map.

8 As noted, there are a few wells to the
9 southwest of Section 14 that are also dually completed with
10 -- in the Dakota with the Gavilan Mancos.

11 Section 10, Reading & Bates has staked
12 another well, the Davis 24-10.

13 The purpose of this production map is to
14 show the wide variations in the productive nature of the
15 wells within the Gavilan Mancos surrounding Section 14, 25
16 North, 2 West.

17 Q Would you please refer to Exhibit Number
18 Seven and discuss the cost of the proposed well?

19 A Exhibit Seven is an AFE for the Crusader.
20 There is a small error that I'd like to point out before I
21 discuss it.

22 Under the drilling costs we have a day
23 work of two days at \$4800 a day and it shows it to be \$8800,
24 and whether you use a pencil or a calculator that should
25 come out to \$9600 and if we could get that changed, that

1 would make me happy.

2 Also, then, that would reflect the total
3 dry hole cost to be \$200,878, and with the completion --
4 completion costs of \$298,013, the new total estimated well
5 cost should be \$498,891.

6 Q Is the proposed well cost in line with
7 those normally encountered in drilling wells to this depth
8 in this area of Rio Arriba County?

9 A Yes, it is. Mesa Grande drilled a well
10 in August within the Gavilan Mancos Pool and we have recent-
11 ly completed it and waiting on production test, and the AFE
12 was for a few thousand dollars more than the 498,000 that we
13 have on this AFE, and the Accounting Department tells me
14 that we're on line with those costs. So it is reasonable
15 for the area.

16 Q What penalty to you propose against non-
17 consenting interest owners?

18 A 200 percent.

19 Q What do you base that percentage on?

20 A Geological and drilling risks. Gavilan
21 Mancos Oil Pool is a reservoir that produces from fracturing
22 and matrix, a combination of fractures and matrix porosity.
23 The fracturing, the fracturing is very important in whether
24 you would get a commercial well or not and it is hoped that
25 in drilling a well at the location that I have picked, that

1 we will intersect the large fracture network and provide for
2 a commercially productive well.

3 I've noted on Exhibit Number Six, the
4 production map, that there's a wide variation in the produc-
5 tive capacity of some of these wells.

6 I noted before in Section 15 in Reading &
7 Bates Howard Federal 43-15 that the Gavilan Mancos is a very
8 poor producer, producing less than 10 barrels of oil per
9 day.

10 Also adjoining, or adjacent to Section 14
11 is the Meridian Hill Federal No. 1 Well in Section 24 that
12 did produce just under 10,000 barrels of oil.

13 It is doubtful that either of these wells
14 will pay out.

15 I've said that the intersection of a good
16 natural fracture system is essential in having a commercial
17 well. In intersecting fractured intervals we also run the
18 risk of losing a lot of drilling mud into the formation.
19 This not only runs up the cost of the well but it also has
20 the adverse affect that it could cause formation damage and
21 -- and ruin our -- lower the capacity of the well for
22 production in the future.

23 Q In your opinion is the granting of this
24 application in the interests of conservation, the prevention
25 of waste, and the protection of correlative rights?

1 A Yes, it is.

2 Q Were Exhibits Four through Seven prepared
3 by you or compiled from company records?

4 A Yes, they were.

5 MR. BRUCE: Mr. Examiner, I
6 move the admission of Exhibits Four through Seven.

7 MR. CATANACH: Exhibits Four
8 through Seven will be admitted into evidence.

9 MR. BRUCE: I have nothing fur-
10 ther at this time.

11

12 CROSS EXAMINATION

13 BY MR. BRUCE:

14 Q Mr. Emmendorfer, what's the well loca-
15 tion, proposed well location?

16 A Okay. Listed on the cross section at 790
17 from the north, 1650 from the west.

18 Q Did you have any control in trying to lo-
19 cate the fractures within the reservoir?

20 A Well, I -- I am the one that they came to
21 for my recommendation as to where to stake the well. We do,
22 we are confined by the drilling windows that are set up by
23 the OCD and we -- although those sometimes aren't the --
24 aren't the most optimal drilling locations, we have to live
25 by those, and found that we -- I think, from a geological

1 standpoint that we can live with this location which is a
2 legal location.

3 Q And do you propose to only complete in
4 the Gavilan Mancos Pool?

5 A At this time, yes. It's standard prac-
6 tice for operators to drill down to look at the Dakota for-
7 mation and then come back up and complete in the Gavilan
8 Mancos. We're not allowed by OCD laws to commingle the Gal-
9 lup and the Dakota any more. The Dakota is under the Gavi-
10 lan Greenhorn-Graneros-Dakota Oil Pool, although it is --
11 produces a large amount of gas, and the majority of the
12 operators feel like it's -- it's better to go after the oil
13 within the Gavilan Mancos formation now while we -- and
14 leave the Dakota because of a problem with the pipeline com-
15 panies. They've -- they have a hard enough time justifying
16 tying in casinghead gas without getting a large amount of
17 other gas, and so we've -- most of the operators tend to de-
18 lay completion of -- of the -- of the Dakota.

19 Also, since we are not allowed to commin-
20 gle, we would have to dually complete the well and that adds
21 up to cost quite a bit higher and at the moment we're not
22 interested in doing that.

23 Q I guess there's a direct correlation be-
24 tween the producing capacity in a well and the presence of
25 the fractures within the reservoir, is that correct?

1 A Yes. Like I stated earlier, that the
2 reservoir produces from a combination of matrix porosity and
3 fracture porosity, but it's the fracture porosity that pro-
4 vides most all of the permeability within the -- within the
5 well, and it's -- it's hard to quantify the amount of frac-
6 turing that you actually do intersect within the reservoir.
7 You can pick where you -- where you do intersect the frac-
8 tures within the wellbore but there really isn't any way
9 that we've been able to come up with to say that we've got X
10 number of fractures, we're going to have X barrels of oil.

11 Certain wells within the pool are
12 exceptional wells and others are notable for the fact that
13 they should be plugged and aren't. They're producing a very
14 small amount, amount of oil.

15 Q Okay. Do you anticipate encountering the
16 vertical -- or the fractures with your well location?

17 A Yes, I do. As can be seen, I had a whole
18 section of land to stake the well in and from my geological
19 studies I felt that the northwest quarter, and particularly
20 in the north half of the northwest quarter, was -- was --
21 had the best chances of intersecting the natural fracture
22 system at its optimum within Section 14.

23 But we have no way of knowing, of course,
24 until we drill, and even then until we get the well on
25 production, whether we have a commercial well or not.

1 Q Has Mesa Grande recently drilled wells in
2 this area?

3 A Yes. In Section 5, 25 North, 2 West, we
4 drilled the Prowler No. 2 and it is -- will be -- it's
5 staked as a Gavilan Mancos Field development well. We drill-
6 led that in August. This month, November of '87, it was
7 completed and this week it is undergoing production tests to
8 get an IP.

9 Q Okay, were those drilling costs pretty
10 much in line with the proposed drilling costs for this well?

11 A Yes, they were. Our original AFE for
12 that well was \$508,160 for the total estimated well cost
13 and, as I noted earlier, the Accounting Department told me
14 just the other day that -- when I was preparing for this
15 hearing, that we are in line with those costs and looks like
16 we're going to bring the well in for under -- under that es-
17 timated cost.

18 Q Okay.

19 MR. CATANACH: I think that's
20 all the questions I have of the witness.

21 He may be excused.

22 I have a couple more questions
23 for Ms. Michael.

24

25

1 KATHLEEN MICHAEL,

2 being recalled and remaining under oath, testified as fol-
3 lows, to-wit:

4
5 RECROSS EXAMINATION

6 BY MR. CATANCH:

7 Q Ms. Michael, you said you didn't have the
8 original letter sent to -- sent to the working interest own-
9 ers on --

10 A No, I don't.

11 Q Why is that?

12 A Well, basically it was just accidentally
13 omitted.

14 Q Okay, but do -- do you have that some-
15 where?

16 A Oh, yeah, sure.

17 Q Okay, can I -- I ask you to get -- send
18 me a copy of that letter?

19 A I'd be more than happy to.

20 Q Okay. Thank you.

21 MR. CATANACH: I think that's
22 all I have.

23 Is there anything further in
24 Case 9257?

25 If not, it will be taken under
advisement.

(Hearing concluded.)

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 was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9257 heard by me on November 18, 1987;

David R. Catanach, Examiner
Oil Conservation Division

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date NOVEMBER 18, 1987 Time: 8:15 A.M.

NAME	REPRESENTING	LOCATION
MARVIN L. ZOLLER	BTA OIL PRODUCERS	MIDLAND, TX.
Art Emsley	Standard Oil	Houston, TX
Jim Sikos	STANDARD OIL	HOUSTON TX
Stephen E. Dunley	STANDARD OIL	Houston, TX
Peter W. Jones	Campbell & Black	Santa Fe
Bub Hulen	Byrum	Santa Fe
W. Perry Pearce	Montgomery & Andrews	Santa Fe
Kathy Michael	Mesa Grande Resources	Tulsa, OK
Alan Emmerdoff	Mesa Grande Resources	Tulsa, OK
W. D. Kellolin	Kellolin Kellolin Aubrey	Santa Fe
J. Bruce	Hinkle Law Firm	SF
Hugh Ingram	CONOCO INC.	HOBBS
Randy Boone	TENNECO	MIDLAND, TX.
Michael Decker	TENNECO OIL	DENVER, CO.
TIMOTHY HOWER	TENNECO OIL	DENVER, CO.

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARINGSANTA FE, NEW MEXICOHearing Date NOVEMBER 18, 1987 Time: 8:15 A.M.

NAME	REPRESENTING	LOCATION
John Roe	Dugan Prod. Corp	Farmington
KEVIN C HERINGER	TENNECO OIL CO	DENVER
JIM L. BARR	PENNZOIL	Houston
LONNIE L WHITFIELD	PENNZOIL	HOUSTON
DICK ELLIS	SELF	DENVER
C. KENNEDY	INT.	ALB Q