

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING)
CALLED BY THE OIL CONSERVATION)
DIVISION FOR THE PURPOSE OF)
CONSIDERING:) CASE NO. 10736
APPLICATION OF MW PETROLEUM)
CORPORATION/APACHE CORPORATION)

REPORTER'S TRANSCRIPT OF PROCEEDINGS
EXAMINER HEARING

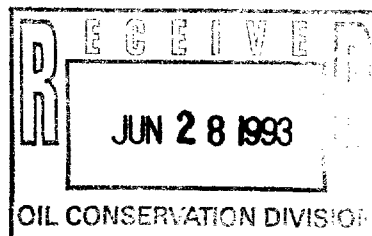
BEFORE: Michael E. Stogner, Hearing Examiner

June 3, 1993

Santa Fe, New Mexico

This matter came on for hearing before the
Oil Conservation Division on June 3, 1993, at the Oil
Conservation Division Conference Room, State Land
Office Building, 310 Old Santa Fe Trail, Santa Fe, New
Mexico, before Lisa Danner-Suggs, Certified Court
Reporter No. 257, for the State of New Mexico.

ORIGINAL



I N D E X

June 3, 1993
 Examiner Hearing
 CASE NO. 10736

APPEARANCES

PAGE 3

MW PETROLEUM CORPORATION/APACHE
 CORPORATION'S WITNESS:

CECI SEARLS LEONARD

Examination by Mr. Carr 4

Examination by Examiner Stogner 19

REPORTER'S CERTIFICATE

25

E X H I B I T S

		ID	ADMTD
Exhibit 1.	Structure Map Indian Basin Field	7	19
Exhibit 2.	Production Curve Federal C #1	7	19
Exhibit 3.	Production Log	10	19
Exhibit 4.	Structural cross-section A'-A prime (South-North)	12	19
Exhibit 5.	Acreage Factor Calculation	13	19
Exhibit 6.	Chevron/Oryx Waiver Letter	17	19
Exhibit 7.	Notice of Hearing	17	19

CUMBRE COURT REPORTING

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A P P E A R A N C E S

FOR THE APPLICANT: CAMPBELL, CARR, BERGE, & SHERIDAN P.A.
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Santa Fe, New Mexico 87504-2208
BY: WILLIAM F. CARR, ESQ.

FOR MARATHON OIL
COMPANY:

KELLAHIN & KELLAHIN
117 N. Guadalupe
Santa Fe, New Mexico
BY: W. THOMAS KELLAHIN, ESQ.

1 EXAMINER STOGNER: Let's go back on the
2 record and call next case 10736 which is the
3 application of MW Petroleum Corporation/Apache
4 Corporation for an unorthodox gas well location in Eddy
5 County, New Mexico. Call for appearances.

6 MR. CARR: May it please the Examiner, my
7 name is William F. Carr with the Santa Fe law firm
8 Campbell, Carr, Berge, and Sheridan. I represent MW
9 Petroleum Corporation/Apache Corporation in this case.
10 And I have one witness.

11 EXAMINER STOGNER: Are there any other
12 appearances in this matter?

13 MR. KELLAHIN: Mr. Examiner, I'm Tom
14 Kellahin of the Santa Fe law firm of Kellahin and
15 Kellahin appearing on behalf of Marathon Oil Company. I
16 do not have any witnesses.

17 EXAMINER STOGNER: Any other appearances?
18 Will the witness please stand to be sworn.

19 (witness sworn)

20 CECI SEARLS LEONARD,
21 the witness herein, after having first been duly sworn
22 upon her oath, was examined and testified as follows:

23 EXAMINATION

24 BY MR. CARR:

25 Q. Would you state your name for the record

1 please?

2 A. My name is Ceci Searls Leonard.

3 Q. Where do you reside?

4 A. I live in Houston, Texas.

5 Q. By whom are you employed and in what
6 capacity?

7 A. I'm employed by Apache Corporation as a
8 senior staff reservoir engineer.

9 Q. What is the relationship of Apache
10 Corporation to MW Petroleum Corporation?

11 A. MW Petroleum Corporation is a wholly owned
12 subsidiary of Apache acquired from Amoco.

13 Q. Have you previously testified before this
14 Division?

15 A. Yes, I have.

16 Q. At the time of that prior testimony, were
17 your credentials as a petroleum engineer accepted and
18 made a matter of record?

19 A. Yes, they were.

20 Q. Are you familiar with the application filed
21 in this case on behalf of MW Petroleum Corporation/Apache
22 Corporation?

23 A. Yes, I am.

24 Q. And have you made an engineering study of
25 the portion of the Indian Basin Upper Penn gas pool

1 which is the subject of this application?

2 A. I have.

3 MR. CARR: Are the witness's qualifications
4 acceptable?

5 EXAMINER STOGNER: They are.

6 Q. (BY MR. CARR) Ms. Leonard, would you
7 briefly summarize for Mr. Stogner what you seek with
8 this application?

9 A. MW is seeking approval by the NMOCD to drill
10 an unorthodox location, in section 35, township 21,
11 south range, 23 east. That location being 800 feet
12 from the west and south lines of section 35.

13 Q. What is the name of the proposed well?

14 A. The well is the Federal C #2.

15 Q. And what are the primary formations which
16 you project in the well?

17 A. The Upper Penn and Indian Basin fields.

18 Q. And what are the current spacing rules in
19 effect for this gas field?

20 A. The field is spaced on 640 acres. The legal
21 setbacks are 1650 from the unit boundaries.

22 Q. So with the location 800 feet out of the
23 south and west line, you're encroaching on the owners
24 to the south and west?

25 A. That's correct.

1 Q. Have you prepared certain exhibits for
2 presentation here today?

3 A. Yes, I have.

4 Q. Would you refer to what has been marked as
5 MW/Apache Exhibit Number 1, identify this and review it
6 for Mr. Stogner?

7 A. Exhibit Number 1 is a structure map on top
8 of the Penn reservoir. It shows the existing well on
9 the section 35, the Federal C lease, the Number 1
10 Well. It also indicates all the producing wells and
11 the working operators of those sections adjacent to
12 section 35.

13 Q. This exhibit also contains a trace for a
14 subsequent cross-section, does it not?

15 A. That's correct.

16 Q. Basically, what is the slope of the
17 formation in this area?

18 A. Up structure is towards the west and down
19 structure is towards the east.

20 Q. Let's move to Exhibit Number 2. Would you
21 identify that, please?

22 A. Exhibit Number 2 is a production curve of
23 the Federal C #1. The Federal C #1 was producing
24 approximately five million a day for 1992 until water
25 production began in October of '92. Production has

1 since declined to a current rate of 1.9 million a day
2 and water production is at 600 barrels of water a day.

3 Q. So this is a production profile for the
4 existing well on the 640 acre unit?

5 A. That's correct.

6 Q. Is this water curve typical for wells in
7 this field?

8 A. It is at this point right now. There is
9 less pressure in the field and the wells are able to
10 tolerate much less water than they have been in the
11 past.

12 Q. What is the current producing rate for the
13 well?

14 A. 1.9 million a day and 600 barrels of water a
15 day.

16 Q. Could you summarize for Mr. Stogner how MW
17 proposes to operate this spacing unit if the
18 application is approved?

19 A. We intend to attempt a workover in the
20 Federal C #1 to shut off the water in the Federal C
21 #1. We feel that that is a very high risk workover,
22 very low probability of success. It is possible that
23 during that workover attempt we will lose the well
24 altogether.

25 With this application -- with approval of

1 this application, we will be immediately ready to drill
2 a replacement well to the Federal C #1. In the event
3 that the workover is successful, then we will simply
4 postpone drilling of the Federal C #2 until such time
5 as we need to. It is not expected that the workover
6 will have long-term success. Generally speaking, in
7 this reservoir, they do not.

8 Q. When you say if the workover is successful,
9 what would be a successful workover in your opinion?

10 A. Restoring the well to approximately 4.5
11 million a day.

12 Q. You've indicated you believe that is
13 unlikely?

14 A. I believe it's unlikely, yes.

15 Q. How soon do you anticipate attempting this
16 actual workover?

17 A. The latest, Monday of next week, June 7.

18 Q. And if after you work the well over, it
19 remains a poor producer, what would you propose to do?

20 A. After drilling a successful replacement
21 well, the Federal C #2, we would propose to abandon
22 Federal C #1.

23 Q. So at no time would you be proposing the
24 simultaneous dedication of wells on this spacing unit?

25 A. No. We will not do that.

1 Q. In terms of effectively producing the
2 reserves from this field, can you simply not produce a
3 spacing unit and still return and recover the reserves?

4 A. No. This is a highly competitive
5 reservoir. And any rate that you do not produce, those
6 are reserves lost. So at any point in time that this
7 lease fails to produce, those are reserves lost to this
8 lease.

9 Q. So the timing of this application is to
10 enable you to avoid as much shutdown as possible?

11 A. That's correct.

12 Q. And if you are placed in a situation where
13 you have no well on this spacing unit capable of
14 producing, that would in effect, impair your
15 correlative right?

16 A. Yes, it would.

17 Q. Let's move to what has been marked MW/Apache
18 Exhibit Number 3. And again, I would ask you to
19 identify this and then explain what this exhibit shows
20 to the Examiner?

21 A. This exhibit is a production log that was
22 run on the Federal C #1. The log was run in early May
23 of 1993. And the log was our attempt to identify where
24 the gas and where the water's being produced from.

25 Q. You are on Exhibit Number 3, the one well

1 log. Could you identify -- what is the area shaded in
2 blue? What is that?

3 A. The area shaded in blue is where we believe
4 the water is being produced from or being introduced
5 into the wellbore. That is based on the hot gamma ray
6 that you see over on the left-hand side. And on the
7 open hole log, that is very, very clean dolomite. And
8 there is no hot gamma ray signature like you see on
9 this particular well log. This is usually indicative
10 of waters having flown through that rock. And we
11 believe that's our source of water production.

12 Q. Now what is the area shaded in red?

13 A. The area shaded in red is where we believe
14 most of the gas is entering into the wellbore. This is
15 the upper set of perforations in the well. This is
16 based upon the gradients. You will note that there is
17 an arrow pointing to a line that says "water gradient"
18 kind of on the right-hand side of the log.

19 And that is simply indicating that in the
20 wellbore there is largely water in the wellbore up
21 until the time you hit that red shaded area where you
22 see the gradient shift dramatically over to the left
23 and that's where we're seeing a much lighter gradient
24 due to gas entry to the wellbore.

25 Q. And that's at approximately 7400 feet?

1 A. That's correct.

2 Q. And you have utilized this figure as a basis
3 for determining a portion of the penalty calculation?

4 A. That's correct. We are using 7400 feet or
5 sub C level of a minus 3425 as our lowest known gas.

6 Q. Let's go now to the cross-section. The
7 trace for the cross-section is on your Exhibit Number
8 1. And I would ask you to review the information on
9 this exhibit for Mr. Stogner.

10 A. Exhibit 4 is a north-south cross-section
11 A'-A prime. The north well is the Federal C #1. On
12 there you'll see colored in red, on the right-hand side
13 of that log, that area that we believe is gas
14 productive. And then colored in blue is that area that
15 we believe to be the source of water. And this is
16 based on the production log. Also on this
17 cross-section, you'll see what we believe to be the
18 gross dolomite or original reservoir and Indian Basin
19 Pool, and that's colored pink.

20 The left-hand log is the Chevron operated
21 Bogleflats Number 1 of which Apache does have a 20
22 percent working interest. And you will see that we
23 believe that almost that entire dolomite column is gas
24 filled in the Chevron Well. In the middle is the trace
25 of the proposed Federal C #2. We're expecting about

1 150 feet of gross gas column. We will attempt a
2 completion in the top of this Upper Penn pool. That
3 way we can stay away from the water as much as
4 possible.

5 Q. How much higher do you think you'll be in
6 the proposed location than in the existing Federal C
7 #1?

8 A. We expect to be about 70 feet high to the
9 Federal C #1.

10 Q. And the objective is to stay away from the
11 water?

12 A. That's correct.

13 Q. Does MW/Apache recommend that the penalty be
14 imposed on this well if in fact the unorthodox location
15 is approved and the well drilled?

16 A. Yes, we do.

17 Q. Could you refer to what has been marked as
18 MW/Apache Exhibit Number 5 and review this for Mr.
19 Stogner?

20 A. Exhibit Number 5 is the calculation of the
21 MW proposed penalty for the Federal C #2. This
22 proposed penalty is 0.62 but it is the average of three
23 different calculations. The first of these
24 calculations is the amount of current productive
25 acreage over the spacing unit, 640 acres.

1 As I stated earlier, we believe that all
2 that area up dip of -3425 is gas bearing. That is on
3 the structure map. And that is 440 acres. So 69
4 percent of the section is believed to be gas
5 productive. We also used the two circle method. And
6 where we take a 440 acre circle, that 440 acre being a
7 productive acreage in the unit. And we locate the
8 center of the 440 acre circle at the unorthodox
9 location. We draw another 440 acre circle with its
10 center at the nearest legal location. And determine
11 the amount of area outside the spacing unit that would
12 also be outside the center of the 440 acre circle that
13 would be drawn at the legal location.

14 In approximately 30 percent of the 440 acre
15 area circle at the unorthodox location is outside of
16 the legal location circle. That would mean that 70
17 percent of the proposed drainage pattern is within the
18 correlative rights of the gas unit.

19 The final methods used to come up with the
20 penalty factor is what we call the distance ratio
21 method which is simply the setback that we're asking
22 for over the legal setback. That would be 800 feet
23 divided by 1650 feet. That is 48 percent of the
24 distance. The average of all three factors is 0.62.

25 Q. Now this 0.62, that is a production factor

1 that you're recommending?

2 A. Yes.

3 Q. Is this a prorated pool?

4 A. This is a prorated pool.

5 Q. And you would apply this 0.62 factor to be
6 allowable for the well?

7 A. That's correct, sir.

8 Q. So you would be producing 62 percent of the
9 allowable?

10 A. Yes.

11 Q. That's what you're recommending you would be
12 authorized to do?

13 A. Yes.

14 Q. Now, the offsetting operators towards whom
15 you are moving this well are who?

16 A. They are Oryx to the south, Marathon to the
17 west, and then Chevron to the south and west.

18 Q. Have you reviewed this proposal which each
19 of the offsetting operators?

20 A. On a number of occasions.

21 Q. And have you reviewed this proposed penalty
22 with each of those operators?

23 A. Yes, sir.

24 Q. What is the status of the relationship with
25 Oryx?

1 A. We have a waiver letter from Oryx in which
2 they agree to drilling of the unorthodox location and
3 the penalty factor of 0.62 and the acreage factor of
4 0.62.

5 Q. And what about Chevron?

6 A. We also have the same -- a similar waiver
7 letter signed by Chevron.

8 Q. And what is your relationship as you
9 understand it at this time with Marathon?

10 A. I last discussed the well and the acreage
11 factor with Marathon on June 1st. And they stated that
12 although they would not oppose the well or the acreage
13 factor that we're asking for, that they would make an
14 appearance before the NMOCD.

15 Q. And who did you talk to with Marathon?

16 A. I talked to Dave Petro.

17 Q. That was Monday of this week?

18 A. That was Tuesday.

19 Q. Now MW/Apache has drilled wells in this gas
20 pool at unorthodox locations in the past, have they
21 not?

22 A. Yes, we have.

23 Q. What were the names of those wells?

24 A. The Smith-Girdle Gas Com #2 and the HOC #2.

25 Q. Were penalties imposed on the producing

1 capability of each of those wells?

2 A. Yes.

3 Q. And is the penalty formula or proposal that
4 you're presenting here today the same formula that was
5 used in imposing the penalty on each of those wells?

6 A. Yes, it is.

7 Q. What is the status of each of those wells at
8 this time?

9 A. Both of those wells are currently
10 temporarily abandoned.

11 Q. Could you identify what has been marked as
12 MW/Apache Exhibit Number 6?

13 A. That's the waiver letter that Chevron signed
14 agreeing to both the drilling of the well and the
15 penalty factor.

16 Q. And then attached to that is also the Oryx
17 waiver letter?

18 A. Yes, that's correct.

19 Q. Has notice of this hearing been provided to
20 all offsetting operators?

21 A. Yes, sir.

22 Q. Could you identify what has been marked as
23 MW Exhibit Number 7?

24 A. MW's Exhibit Number 7 is the notice of
25 hearing that I mailed to all -- actually I mailed it

1 to all the working interest owners.

2 Q. This letter is actually addressed to Oryx?

3 A. Yes.

4 Q. The same letter went to all offsetting
5 operators?

6 A. That's correct.

7 Q. Are return receipts attached to this Exhibit
8 7 or copies of the return receipts shown to indicate
9 that in fact the notice letter was received?

10 A. Yes, sir.

11 Q. Why is Kerr-McGee Corporation also included?

12 A. Kerr-McGee is a working interest owner in
13 the Marathon operated well.

14 Q. Have you provided notice to all operators
15 and working interest owners of offsetting?

16 A. Yes, I have.

17 Q. In your opinion, will approval of this
18 application and the imposition of the penalty that you
19 have recommended be in the best interest of
20 conservation and prevention of wastes and the
21 protection of correlative rights?

22 A. Yes, I believe that that's correct.

23 Q. Were exhibits 1 through 7 prepared by you or
24 compiled under your direction?

25 A. Yes, they were.

1 MR. CARR: Mr. Stogner, at this time we
2 would move the admission of MW/Apache Exhibits 1
3 through 7.

4 EXAMINER STOGNER: Exhibits 1 through 7 will
5 be admitted into evidence.

6 MR. CARR: And that concludes my direct
7 examination of Ms. Leonard.

8 EXAMINER STOGNER: Your discussions with the
9 offsets -- in fact, you even mentioned that you had
10 been in communication with the offset for quite some
11 time -- was this penalty or this assessment of this
12 penalty on voluntary basis discussed with them and were
13 they acceptant of it?

14 THE WITNESS: We discussed it on numerous
15 occasions. Originally, I proposed an acreage factor of
16 0.68 and I was disagreed with on that acreage factor.
17 We discussed in principle, what we could all agree
18 with. And we agreed to the 0.62. Originally, I took
19 that highest known water and used all the area up dip
20 of that as the productive acreage.

21 EXAMINER STOGNER: And that was obviously
22 satisfactory to the offsets since they're not here
23 objecting today.

24 THE WITNESS: Yes, sir.

25 EXAMINER STOGNER: Now the 0.62 acreage

1 factor allowable would go into effect when the C #2
2 well is put into production; is that correct?

3 THE WITNESS: Yes, sir.

4 EXAMINER STOGNER: Should the successful
5 recompletion of the Number 1 Well, that would be
6 carried on the books as 100 percent or a zero factor
7 one?

8 THE WITNESS: Yes sir.

9 EXAMINER STOGNER: When you said recomplete
10 the Number 1, what does Apache propose to do or try to
11 do to the Number 1?

12 THE WITNESS: If you'll turn to our Exhibit
13 Number 3 which is the production log, in that center
14 tract you'll see the perforation marks. And they are
15 denoted by like a dark black line. You've got it right
16 there. It's the production log.

17 Right at 7400 feet, you'll see that there's
18 a gap between the two perforation intervals. We intend
19 to run in there with three tubing bridge plugs, cap it
20 with cement and attempt to just produce from the upper
21 set of perforations.

22 EXAMINER STOGNER: With your knowledge of
23 the area, should this be successful, how long do you
24 think it will be before those perforations in the
25 recompletions would experience water?

1 THE WITNESS: Personally, I don't think it
2 would take very long, probably six months or less. The
3 well was cemented with very little cement. It was acid
4 stimulated pretty satisfactorily upon completion. I
5 don't think we've got good isolation in terms of --
6 between those two sets of perforations behind pipe.

7 This is one porous zone, so I think within
8 the reservoir itself or behind pipe we're going to see
9 the water just encroach upon the upper set of
10 perforations.

11 EXAMINER STOGNER: Should there be a time
12 limit on this authorization?

13 THE WITNESS: I could certainly see the need
14 for that. In terms of the penalty factor or the
15 acreage factor.

16 EXAMINER STOGNER: Was this discussed with
17 the offsets.

18 THE WITNESS: No, sir it wasn't.

19 EXAMINER STOGNER: You have anything further
20 Mr. Carr?

21 MR. CARR: Nothing further.

22 EXAMINER STOGNER: I have no other questions
23 of Ms. Leonard. You may be excused. I'm sorry. Mr.
24 Kellahin?

25 MR. KELLAHIN: I have no questions of the

1 witness, Mr. Examiner.

2 EXAMINER STOGNER: Are you sure?

3 MR. KELLAHIN: Yes. I've been told not to
4 question the witness.

5 EXAMINER STOGNER: Fine. Is there anything
6 further, Mr. Carr? Or would you all like some closing
7 arguments?

8 MR. CARR: May it please the Examiner, I
9 believe Mr. Kellahin has a statement to present on
10 behalf of Marathon.

11 EXAMINER STOGNER: Mr. Kellahin?

12 MR. KELLAHIN: Mr. Examiner, Marathon has
13 asked me to deliver their statement to you this
14 morning. Rather than read it to you, I have copies of
15 it. I've given Mr. Carr a copy already. I would like,
16 with your permission, to have the court reporter simply
17 type it into the transcript as Marathon's closing
18 position. It expresses their position with regards to
19 the penalty. And I submit it to you for your
20 consideration.

21 MR. CARR: We have no objection to it being
22 included as part of the transcript in this case.

23 EXAMINER STOGNER: And so it shall be
24 included:

25

1 MARATHON OIL COMPANY STATEMENT OF POSITION
2 CASE NUMBER 10736 BEFORE THE NEW MEXICO OIL
3 CONSERVATION COMMISSION
4 APACHE WELL FEDERAL C #2
5 UNORTHODOX WELL HEARING, JUNE 3, 1993

6 Marathon is one of several major operators
7 in Indian Basin Field. Production is primarily from
8 the Upper Penn Reservoir which is best classified as a
9 mature water drive system. Approximately 30 percent of
10 the original productive acreage has been lost due to
11 aquifer influx.

12 Marathon Oil Company supports management
13 practices to assure maximum recovery of gas from the
14 Upper Penn Reservoir in Indian Basin Field. Marathon
15 believes that optimum recovery can only be achieved
16 through unified operations in the field, which is best
17 accomplished with unitization. Unitization efforts to
18 date have been unsuccessful. Short of unitization,
19 recoveries can be maximized through peak
20 deliverabilities from leases located near the current
21 gas-water contact, such as the Federal "C" Lease.

22 Correlative rights for all leases must be
23 protected. The current hearing on the Apache
24 unorthodox well is being held to insure that all nearby
25 lease owners are given the opportunity to voice their
26 opinion on the drilling of this unorthodox well.
27 Marathon, at this time, does not know if the current

1 basis for setting acreage factors using the three
2 common calculation methods is the most accurate and
3 represents the best means for protecting correlative
4 rights. Marathon is evaluating other alternatives that
5 may protect correlative rights for all leases to a
6 greater degree of accuracy.

7 MR. KELLAHIN: That completes what I had,
8 Mr. Examiner.

9 EXAMINER STOGNER: This appears to be a copy
10 of a fax; is that correct, Mr. Kellahin?

11 MR. KELLAHIN: Yes, sir.

12 EXAMINER STOGNER: Dated today, and -- oh,
13 it was sent here at our fax number.


14 EXAMINER STOGNER: Yes, sir. It was very
15 kind of you to receive it.

16 EXAMINER STOGNER: You are welcome for the
17 utilization of our fax machine, Mr. Kellahin. Is there
18 anything further in this case?

19 MR. CARR: Nothing further, Mr. Examiner.

20 EXAMINER STOGNER: Case 10736 will be taken
21 under advisement.

22 I do hereby certify that the foregoing is
23 a complete record of the proceedings in
24 the Examiner hearing of Case No. 10736
25 heard by me on 3 June 1993.

 , Examiner
Oil Conservation Division

1 CERTIFICATE OF REPORTER

2
3 STATE OF NEW MEXICO)

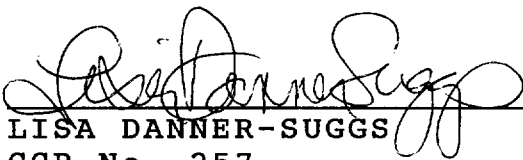
4) ss.

5 COUNTY OF SANTA FE)

6 I, Lisa Danner-Suggs, Certified Court
7 Reporter and Notary Public, HEREBY CERTIFY that I
8 caused my notes to be transcribed under my personal
9 supervision, and that the foregoing transcript is a
10 true and accurate record of the proceedings of said
11 hearing.

12 I FURTHER CERTIFY that I am not a relative
13 or employee of any of the parties or attorneys involved
14 in this matter and that I have no personal interest in
15 the final disposition of this matter.

16 WITNESS MY HAND AND SEAL, June 14, 1993.

17
18
19 
20 LISA DANNER-SUGGS
CCR No. 257