

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

APPLICATION OF STEVENS OPERATING )	
CORPORATION FOR AN UNORTHODOX OIL )	
WELL LOCATION CHAVES COUNTY, )	CASE NO. 10387, 10388
NEW MEXICO. )	Consolidated
APPLICATION OF STEVENS OERATING )	
CORPORATION FOR AN UNORTHODOX OIL )	
WELL LOCATION, CHAVES COUNTY, )	
NEW MEXICO. )	
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REPORTER'S TRANSCRIPT OF PROCEEDINGS  
EXAMINER HEARING

BEFORE:     DAVID R. CATANACH, Hearing Examiner  
                 September 19, 1991  
                 9:00 a.m.  
                 Santa Fe, New Mexico

This matter came for hearing before the Oil Conservation Division on September 19, 1991, at 9:00 a.m. at the State Land Office Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico, before Linda Bumkens, CCR, Certified Court Reporter No. 3008, in and for the County of Bernalillo, State of New Mexico.

FOR: OIL CONSERVATION  
DIVISION

BY: LINDA BUMKENS CCR  
Certified Court Reporter  
CCR NO. 3008

## I N D E X

1		
2	September 19, 1991	
	Examiner Hearing	
3	CASE NO. 10387 & 10388	
4		
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6	WITNESSES	
	<u>JACK AHLEN</u>	
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## A P P E A R A N C E S

16	FOR THE DIVISION:	ROBERT G. STOVALL, ESQ.
17		General counsel
		Oil Conservation Commission
18		310 Old Santa Fe Trail
		Santa Fe, New Mexico
19		87501
20	FOR STEVENS OPERATING	
21	CORPORATION:	CAMPBELL, CARR, BERG &
		SHERIDAN P.A.
22		BY: MR. WILLIAM F. CARR, ESQ.
		110 North Guadalupe
23		Santa Fe, New Mexico

1 JACK AHLEN,  
2 the Witness herein, being previously duly sworn, was  
3 examined and testified as follows:

4 DIRECT EXAMINATION

5 BY MR. CARR:

6 Q. Will you state your name and place of  
7 residence?

8 A. Jack Ahlen. Roswell, New Mexico.

9 Q. By whom are you employed?

10 A. Steven Operating Corporation.

11 Q. And in what capacity?

12 A. Consulting geologist.

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

15 A. Yes, sir, I have.

16 Q. Were your credentials as an expert witness  
17 in petroleum geology accepted and made a matter of  
18 record at that time?

19 A. Yes, they were.

20 Q. Are you familiar with the wells that are  
21 the subject of each of the two cases that have been  
22 consolidated here for hearing?

23 A. Yes, I am.

24 Q. And are you familiar with the subject pool  
25 and the surrounding acreage?

1 A. Yes, I am.

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

4 EXAMINER CATANACH: They are.

5 Q. (By Mr. Carr) Mr. Ahlen, will you briefly  
6 state what Stevens Operating Corporation seeks in  
7 these applications?

8 A. We seek two unorthodox locations for  
9 drilling of Devonian wells in the Lone Wolf South  
10 Devonian Pool.

11 Q. What are the well spacing requirements in  
12 the South Lone Wolf Devonian Pool?

13 A. Well spacing in that pool is 160-acre  
14 proration units, and offsets of 660 feet from the  
15 section lines and quarter quarter lines.

16 Q. Have you prepared certain exhibits for  
17 presentation here today?

18 A. Yes, I have.

19 Q. Would you identify what has been marked as  
20 Exhibit Number 1? Identify this and review it for  
21 the Examiner.

22 A. Exhibit 1 is a copy of a Midland Map  
23 Company land map, blown up somewhat, to illustrate  
24 the immediate vicinity of the South Lone Wolf  
25 Devonian Pool which is located in Chaves County,

1 Township 13 South, Range 29 east.

2           The discovery well is located in Section 28  
3 being in the northeast quarter of the section. The  
4 number three well was subject to a previous hearing  
5 and it is also located in Section 28. It is to  
6 produce out of the proration unit in the southeast  
7 quarter of Section 28.

8           The number five McClellan well is located  
9 in the southwest quarter of Section 27 immediately  
10 adjacent, and the number six well that we are  
11 proposing is in the northwest quarter of Section 28.

12           The two proposed locations are still the  
13 subject of an administrative decision as to which  
14 one to drill first. We would prefer to drill the  
15 Number 6 first. However, the Number 5 is  
16 differently located than advertised, and I would  
17 like to correct that for the record.

18           We are requesting a location 280 feet from  
19 the west line and 1700 feet from the south line of  
20 the Number 5 well.

21       Q.    Could you explain why you have had to move  
22 the locations?

23       A.    Yes, sir. On staking of the location it  
24 was determine that there was an archaeological site  
25 within the area of the drilling pad, and our

1 archeological expert recommended that we move the  
2 locations so that we would not interfere, otherwise  
3 we might have to spend a significant amount of money  
4 in mitigating that particular site with BLM.

5 Q. And we're talking about the Number 5?

6 A. We're talking about the Number 5.

7 Q. Did you encounter similar problems with the  
8 Number 6 well?

9 A. Yes, sir, we did.

10 Q. And could you review those?

11 A. On the Number 5, the current location is  
12 such that we no longer have an archeological  
13 problem, and you'll note that this is a federal  
14 lease, so this is a requirement. The Number 6  
15 location that was advertised also had archeological  
16 problems, and almost regardless where we located  
17 that well, we would have an archeological problem,  
18 but in the interest of getting to the highest place  
19 on the structure as determined by our 3-D seismic,  
20 we decided we would attempt to mitigate the  
21 archeological problem on the site and spend some  
22 money to cause it to be mitigated, and our preferred  
23 location for the Number 6 well is 100 feet from the  
24 west line and 660 feet from the north line.

25 The alternate location, if we cannot

1 satisfy the Bureau of Land Management, is 330 feet  
2 from the west line and 500 feet from the north  
3 line.

4 EXAMINER CATANACH: I'm sorry. 330 feet from  
5 the west line and what?

6 THE WITNESS: 500 feet from the north line.

7 Q. (By Mr. Carr) Well, Mr. Ahlen, both of  
8 these wells are encroaching on the acreage to the  
9 west, and in the case of the Number 6, potentially  
10 to the northwest; is that right?

11 A. Yes, sir.

12 Q. And if we go to the west in Section 28,  
13 that acreage is originally developed and dedicated  
14 to a well in this pool; is that right?

15 A. Yes, sir. However, it is the same operator  
16 and the same owners.

17 Q. And the only other owner that you are  
18 encroaching on would be McClellan Oil; is that  
19 right?

20 A. Yes, sir. And McClellan is the party that  
21 we acquired the farm out from.

22 Q. And later in this presentation we do have  
23 waivers from McClellan for each of these new  
24 locations; is that right?

25 A. Yes, sir, we do.

1 Q. All right. Why don't we move to the  
2 Exhibit Number 2 and review the structure map for  
3 the Examiner.

4 A. Yes, sir. Exhibit Number 2 is an  
5 illustration of the structure top of the Devonian in  
6 which the 3-D seismic control is utilized to show  
7 the structural configuration in the area. The  
8 contour interval is 50 feet.

9 This seismic map is a summation of two  
10 separate geophysical maps that were done by two  
11 separate geophysicist in this area, and so it is  
12 somewhat simplified. There on the field maps there  
13 are additional structure contours, and the Number 5  
14 location is drilled at that unorthodox location in  
15 an attempt to get closer to the structural contours  
16 that will produce.

17 The Number 6 well, the preferred location,  
18 is at the crest of a small structure within this  
19 complex feature. There is actually a saddle area to  
20 the southwest of that location that would prevent  
21 oil in that particular small structure from  
22 migrating to the well that is producing in the  
23 Number 1 McClellan. Therefore, if that particular  
24 location is not drilled, there would be some added  
25 oil left behind that we could not recover. That is



1 the preferred location because it is the very top of  
2 that small little structure.

3 The alternate location will not be ideally  
4 located to drain all the oil in that particular  
5 structure. This is the same structure map that I  
6 presented approximately six weeks ago when we were  
7 talking about the Number 3 McClellan.

8 Q. And that was also not an unorthodox  
9 location?

10 A. Yes, sir.

11 Q. Are you ready to go to the logs that are  
12 included in your packet of exhibits?

13 A. Yes, I am.

14 Q. That's Exhibit Number 3. Would you  
15 identify that, please?

16 A. Exhibit Number 3 is a copy of a portion of  
17 the log on the discovery well, the Stevens Operating  
18 Corporation McClellan Fed. Number 1 well, which is  
19 located 2190 feet from the north line and 990 from  
20 the east line of Section 28 Township 39 South, Range  
21 29 East.

22 It is a composite log of both the open hole  
23 and the cased hole log. The open hole log did not  
24 go deep enough to illustrate the Devonian, the top  
25 of the Devonian formation or the reservoir itself,

1 so that is why I have compositely the two logs.

2           The open hole survey is the compensated  
3 neutron liquid density gamma ray log that you see on  
4 here in the lighter print. The cased hole log is  
5 the heavier line, and it is the cased hole neutron  
6 log gamma ray log, and it shows the top of the  
7 Devonian formation at a datum of 6,000 -- minus  
8 6,019 feet.

9           It shows the zone that's producing. The  
10 maximum porosity illustrated is approximately  
11 13 percent, and the average porosity in the  
12 reservoir is probably closer to 10 percent. We did  
13 penetrate six feet into the pay zone before  
14 completing this well, and this is a very good well.

15       Q.    Would you identify what has been marked as  
16 Stevens' Exhibit Number 4?

17       A.    Stevens Exhibit Number 4 is a letter from  
18 McClellan Oil Corporation dated September 18th,  
19 which was yesterday, in reference to a case 10388.  
20 The unorthodox location of the Number 6 well.

21           It endorses the drilling of that well, and  
22 it requests that no penalty be assessed against a  
23 well drilled at that location, and the words are  
24 self-evident.

25       Q.    All right. Let's go now to Stevens'

1 Exhibit Number 5, and I'd ask you just to identify  
2 that for Mr. Catanach?

3 A. Exhibit Number 5 is a letter from McClellan  
4 Oil Corporation dated September 18th in reference to  
5 Case Number 10387 in support of this application.

6 Q. Mr. Ahlen, in your opinion, will approval  
7 of these applications result in the recovery of  
8 hydrocarbons that otherwise will not be recovered?

9 A. Yes, sir.

10 Q. Will approval of these applications enable  
11 Stevens Operating Corporation to most efficiently  
12 and effectively produce the reserves in this pool?

13 A. Yes, sir.

14 Q. Were Exhibits 1 through 5 either prepared  
15 by you or compiled under your direction?

16 A. Yes, they were.

17 MR. CARR: At this time, Mr. Catanach, we move  
18 the admission of Stevens Operating Corporation  
19 Exhibits 1 through 5.

20 EXAMINER CATANACH: Exhibits 1 through 5 will  
21 be admitted as evidence.

22 (Stevens Exhibits 1 through  
23 5 were admitted in evidence.)

24 MR. CARR: That concludes my direct  
25 examination of Mr. Ahlen.

## EXAMINATION

1  
2 BY MR. STOVALL:

3 Q. Are there any other orthodox locations in  
4 this pool so far?

5 A. No, sir.

6 Q. You didn't much like the rules, did you?

7 A. We proposed rules that the commission did  
8 not accept.

9 Q. Well, these wells would have actually  
10 fallen outside of those rules, wouldn't they?

11 A. No, sir.

12 Q. What was your proposal?

13 A. 330 offsets.

14 Q. Are you talking about one that's 100 foot?

15 A. The one that's 100 foot we would have had  
16 to come forward.

17 Q. And the other one is 200 foot?

18 A. The Number 3 would have been orthodox. The  
19 Number 5 would have been orthodox.

20 Q. Five?

21 A. Except -- okay, excuse me. Except for the  
22 BLM's requirement to mitigate archeological sites.

## EXAMINATION

23  
24 BY EXAMINER CATANACH:

25 Q. Mr. Ahlen, on your Exhibit Number 1. The

1 west half of Section 28 is operated by whom?

2 A. Stevens Operating Corporation has the  
3 option to drill in the northwest quarter as well as  
4 part of the southwest quarter. Marathon also has an  
5 interest in the southwest quarter.

6 Q. Okay. How about the east half?

7 A. East half. Both of those are Stevens  
8 Operating Corporation's.

9 Q. Okay. Let me see if I get this straight on  
10 the locations. The Number 5 well has been changed  
11 to 280 feet from the west line?

12 A. Yes, sir.

13 Q. 1700 feet from the south line?

14 A. Yes, sir.

15 Q. And that's for archeological reasons. The  
16 Number 6 well has been changed to 100 feet from the  
17 west line, 660 from the north line?

18 A. Yes, sir. That's the preferred location.

19 Q. That hasn't been approved by BLM?

20 A. Not as yet. We have not mitigated the  
21 archeological site. In other words, we've not taken  
22 care of it in such a manner that they will accept  
23 that location. One has to hire archeologists to go  
24 out there and clear the site. We were hoping that  
25 we can do that at a minimum expense. That is where

1 we would prefer to drill.

2 Q. What did the alternate location represent?

3 A. That is a problem-free location, but it is  
4 less favorable geologically.

5 Q. McClellan is the only offset operator who  
6 is effected by any of these locations?

7 A. That is correct.

8 Q. Now, McClellan's letters --

9 A. Support our application.

10 Q. They support all of them?

11 A. Yes, sir. They're our partner.

12 Q. This is a -- if I remember correctly --  
13 this is a very -- or a limited size pool -- a  
14 reservoir; is that correct?

15 A. In our discovery well we drilled six feet  
16 in, and on our drill stem test we recovered a little  
17 bit of water, so we were afraid that we were very  
18 close to the oil\water contact. We do not know that  
19 for sure.

20 In completing the well -- the well has been  
21 completed producing water along with the oil, but  
22 the geometry of the reservoir is such that we  
23 produce considerable oil with the water, and we are  
24 continuing to produce considerable oil with the  
25 water. We have not yet seen a major coning affect.

1           We do not actually know where the oil\water  
2 contact is, but we suspect that is somewhere near  
3 our total depth, perhaps within 25 feet. So we are  
4 trying to optimize production in the pool by getting  
5 to the highest points on the pool and produce them  
6 so there will be no added oil left behind.

7           Q.    So the Number 5 well is -- that's moving  
8 towards the higher structural position than the  
9 other well?

10          A.    Yes, sir, that is correct.

11          Q.    You have an opinion as -- well, the  
12 Number 3 well, in your opinion, can adequately drain  
13 that structure?

14          A.    In previous testimony I have stated that  
15 one well can drill all of the oil in any particular  
16 pool, however, it might take a very long time to do  
17 that.

18               MR. STOVALL: How long is a long time in this  
19 particular pool?

20               THE WITNESS: Longer than you and I will be  
21 around.

22               MR. STOVALL: Assuming normal life expectancy,  
23 I assume?

24               THE WITNESS: Yes, sir.

25          Q.    (By Mr. Catanach) Do you believe there's

1 sufficient reserves underlying the southwest quarter  
2 of Section 27 to drill that Number 5 well?

3 A. That's a tough question. I would defer  
4 that to a petroleum engineer, if there were one. I  
5 have not computed reserves.

6 Q. Okay. And you mentioned something about  
7 the Number 6 well that -- can you kind of go over  
8 the geologic reasoning on that well again?

9 A. Yes, sir. The structure map that I have  
10 drawn is a simplification of two separate  
11 geophysical maps, and on one of these geophysical  
12 maps this represents a separate structure from the  
13 main structure in that there is a small mound or  
14 structural anomaly in the extreme northeastern  
15 portion of the field, and that there actually is  
16 counter regional dip, or there is a saddle between  
17 this location and the Number 1 and the proposed  
18 Number 3 well, and that oil would not be produced.

19 All that oil above that saddle datum would  
20 not be produced if this Number 6 well were not  
21 drilled at that most favorable location.

22 Q. And the Number 6 well, the preferred  
23 location, that is also moving toward the -- or the  
24 highest structural position?

25 A. Yes, sir.



1 Q. When are you going to know -- when are you  
2 going to be sure about the location for the Number 6  
3 well?

4 A. Before October 1st. This is the date when  
5 we must spud one of those two wells as a  
6 consideration of the farm out from McClellan.

7 Q. And Number 6 was your preferred well to  
8 drill first?

9 A. Yes, sir.

10 MR. STOVALL: Mr. Carr, do you have any  
11 opinion why they should not have to be re-advertised  
12 instead of moving to more unorthodox locations?

13 MR. CARR: The only people that would have  
14 standing to come in and object -- the only party --  
15 would be McClellan. And for that reason, the  
16 waivers that we have from McClellan, I think, would  
17 make additional notification a useless exercise, and  
18 I don't think it should be required.

19 It also would tend to delay the order and  
20 put us beyond the time period that we have in the  
21 farm out agreement within which we have to act. And  
22 for both of those reasons we would request the case  
23 be taken under advisement.

24 DIRECT EXAMINATION

25 BY MR. STOVALL:

1 Q. I've got a question, a geologic question,  
2 to Mr. Ahlen. Examiner Catanach asked you about  
3 reserves underlying the southwest quarter of 27, and  
4 you indicated that was an engineer's answer and you  
5 weren't an engineer and don't have that knowledge;  
6 is that correct? I'm just trying to summarize it,  
7 not color it?

8 A. I can give you a reasonable guess, but it  
9 wouldn't have the quality.

10 Q. Let me ask you first because my follow-up  
11 question has to do with, and I don't particularly  
12 want to have your guess. Is there enough rocks  
13 there that would lead you to believe that there is  
14 enough oil that they can justify the well? Is there  
15 enough reservoir-type rock from a geologic  
16 examination?

17 A. Well, a lot of this -- if I may move  
18 sideways before I respond. We feel as though the  
19 3-D seismic work that was done is highly accurate  
20 information. However, we have still to drill the  
21 Number 3 McClellan which will tell us how accurate  
22 that 3-D seismic is.

23 If the 3-D seismic is right on the money,  
24 then the location for the Number 5 will be probably  
25 right on the economic limit of a commercial well.

1           However, if the 3-D seismic has some errors  
2 in it, and our location for the Number 3 turns out  
3 to be higher than expected from the data, then it  
4 will be a significantly economic well. It will more  
5 than return the investment involved, and as you well  
6 know, seismic data is subject to interpretation, and  
7 many people have drilled dry holes on the basis of  
8 structural anomalies and supposed highs. So with  
9 the quality of the data, we feel as though we're  
10 pretty close. Does that answer your question?

11           MR. STOVALL: It wiggles around it enough, but  
12 I think I know what our opinion is.

13                               REEXAMINATION

14 BY MR. CATANACH:

15           Q.    Mr. Ahlen, just one more question. With  
16 three wells penetrating that structure, the Number  
17 1, the 3, and the 5, don't you have a greater chance  
18 of speeding up the coning process, or drawing up the  
19 water?

20           A.    I don't think so, not in this particular  
21 reservoir.

22           Q.    Why is that?

23           A.    Because we'll be able to withdraw it out at  
24 a rate such that we don't do much coning. We will  
25 attempt to complete the wells in such a manner that

1 they -- and produce them in such a manner -- that  
2 they will not cone.

3 MR. STOVALL: Choke them back you mean?  
4 Reduce the rates?

5 THE WITNESS: Yes, sir.

6 MR. STOVALL: Does it -- again, probably  
7 getting into an engineering area -- but what is the  
8 effect of having these three wells distances they're  
9 talking about in terms of the potential coning  
10 effect? I mean, does it increase it or decrease it  
11 as far as pressure?

12 THE WITNESS: I think they're far enough away  
13 so that they probably will not influence each other  
14 on the short term.

15 Q. (By Mr. Catanach) Mr. Ahlen, besides  
16 Stevens and McClellan, are there any other working  
17 interest owners involved in these wells?

18 A. They're all part of the Stevens group,  
19 yes. Samadan is a partner, and Robert Thornton is a  
20 partner. Stevens has several partners in this  
21 operation.

22 MR. STOVALL: Are they actually interest  
23 owners in the acreage, or are they investors in the  
24 well drilling expenses and take a share from that?

25 THE WITNESS: McClellan is both, Samadan is an

1 investor in the particular operation as is Robert  
2 Thornton and Stevens Operating Corporation.

3 MR. STOVALL: With respect to the unorthodox  
4 locations, I think Mr. Carr is correct that in as  
5 much as the encroachment is essentially to the  
6 interest, parties who have interest in the wells and  
7 the offsetting tracts, probably additional notice  
8 will not serve any valid purpose in terms of  
9 notifying anybody?

10 EXAMINER CATANACH: Okay. All right. That's  
11 all I have. Anything else?

12 (No response).

13 There being nothing further, Case 10387 and  
14 10388 will be taken under advisement.

15 (The foregoing case was concluded at the  
16 approximate hour of 9:35 a.m.)

17  
18  
19  
20 I do hereby certify that the foregoing is  
21 a complete record of the proceedings in  
22 the Examiner hearing of Case No. 10387, 10388  
heard by me on September 19 1991.

23 David R. Catanach, Examiner  
24 Oil Conservation Division  
25

1 STATE OF NEW MEXICO       )  
                                      ) ss.  
2 COUNTY OF BERNALILLO     )


3 REPORTER'S CERTIFICATE

4 BE IT KNOWN that the foregoing transcript of  
5 the proceedings were taken by me, that I was then  
6 and there a Certified Shorthand Reporter and Notary  
7 Public in and for the County of Bernalillo, State  
8 of New Mexico, and by virtue thereof, authorized to  
9 administer an oath; that the witness before  
10 testifying was duly sworn to testify to the  
11 whole truth and nothing but the truth; that the  
12 questions propounded by counsel and the answers of  
13 the witness thereto were taken down by me, and that  
14 the foregoing pages of typewritten matter contain a  
15 true and accurate transcript as requested by counsel  
16 of the proceedings and testimony had and adduced  
17 upon the taking of said deposition, all to the best  
18 of my skill and ability.

19 I FURTHER CERTIFY that I am not related to  
20 nor employed by any of the parties hereto, and have  
21 no interest in the outcome hereof.

22 DATED at Bernalillo, New Mexico, this day  
23 November 11, 1991.

24 My commission expires  
25 April 24, 1994

  
LINDA BUMKENS  
CCR No. 3008  
Notary Public