CASE 6176: READ & STEVENS, INC. FOR AN UNORTHODOX LOCATION, LEA COUNTY, NEW MEXICO

Case No.

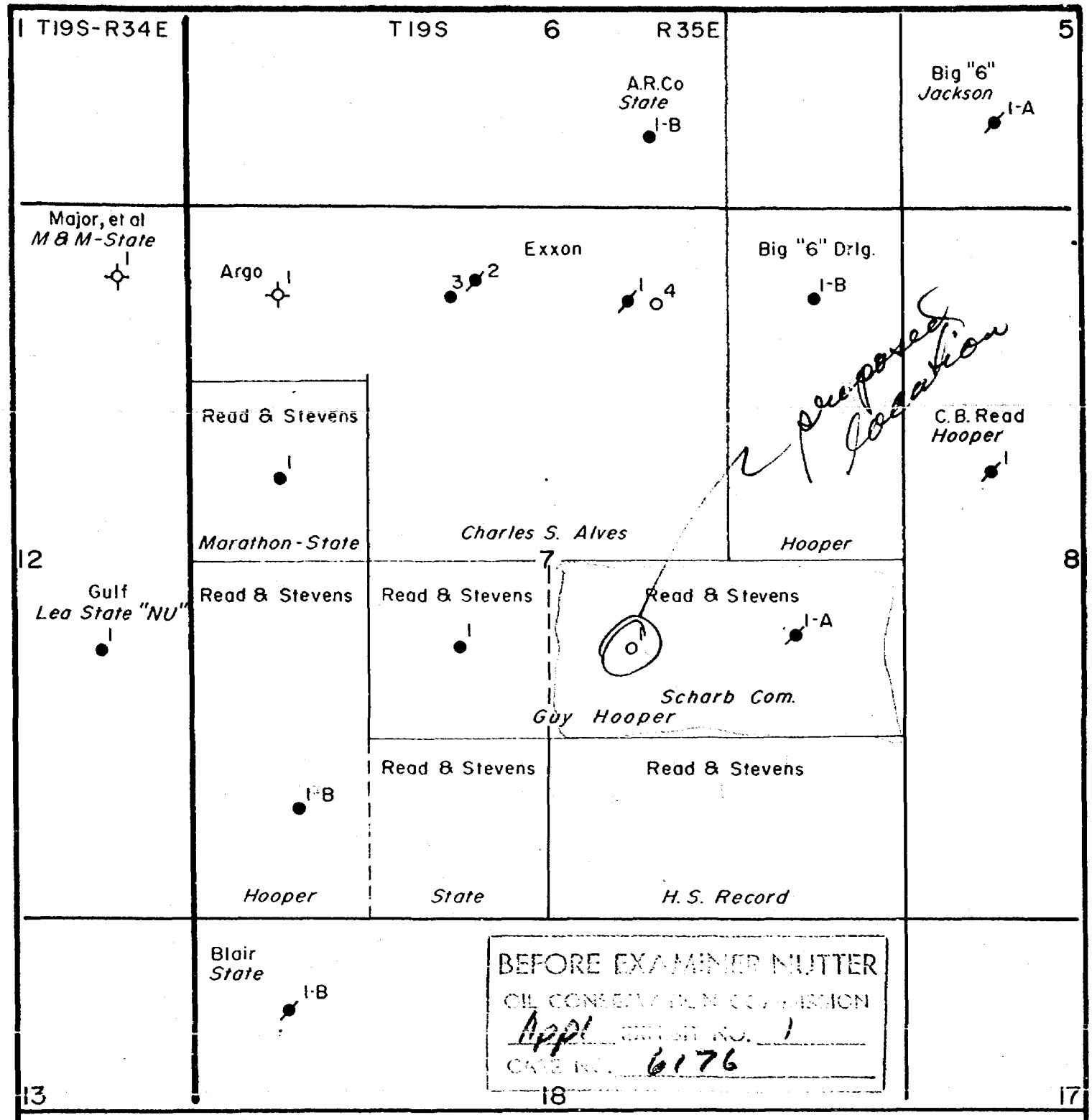
6176

Application

Transcripts

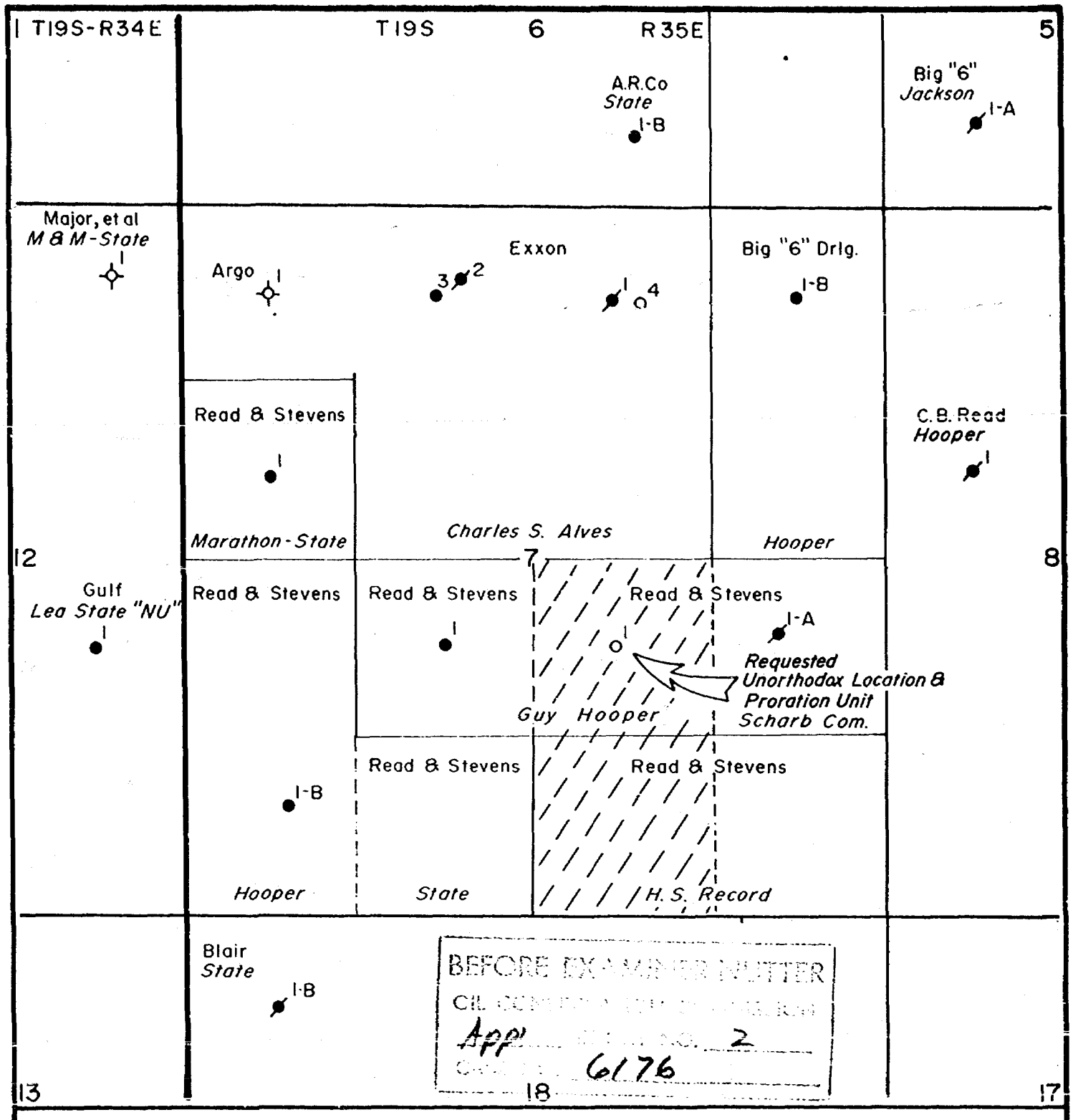
Small Exhibits

ETC.



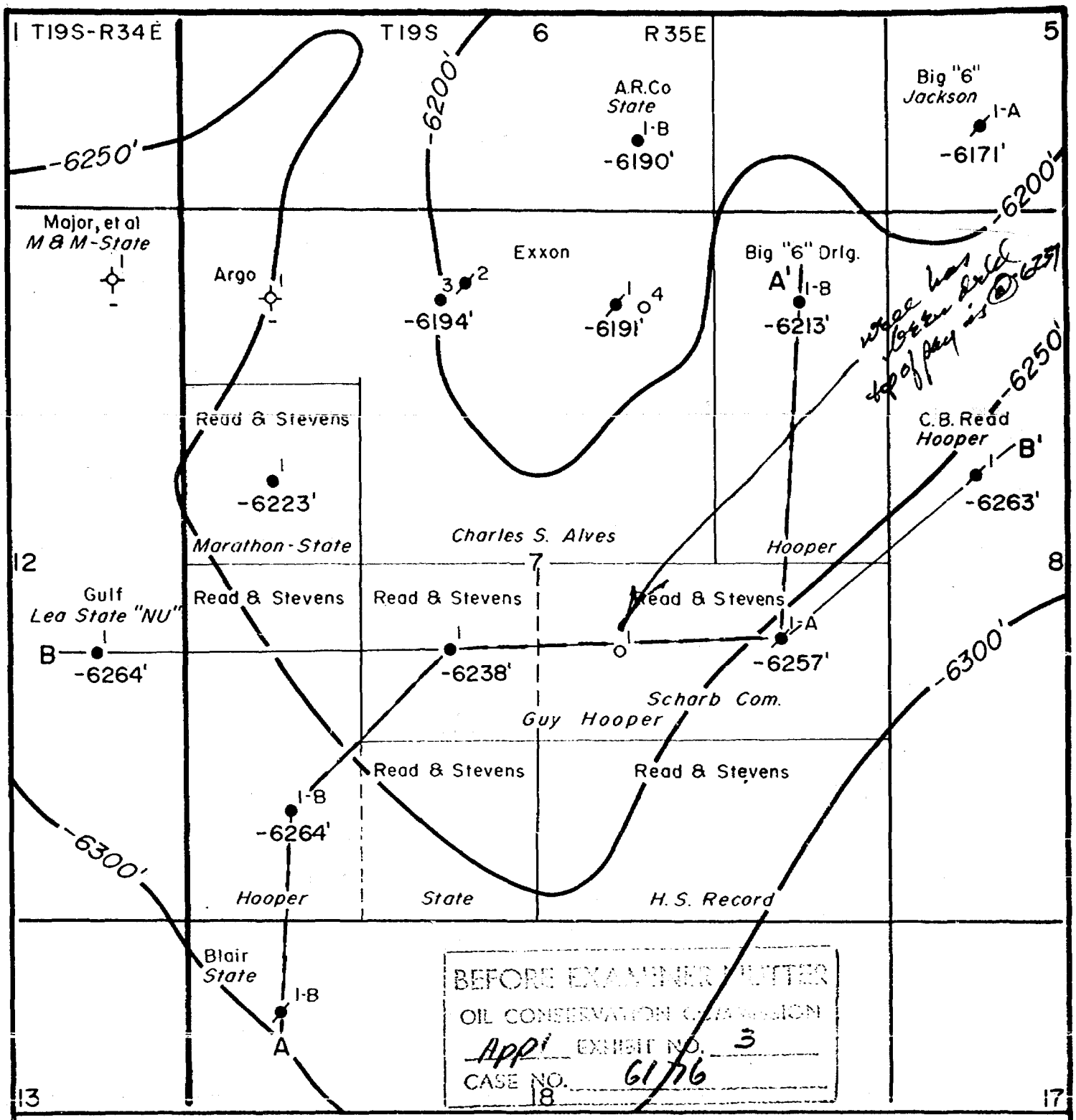
OWNERSHIP MAP

FIELD SCHARB (BONE SPRINGS)		County LEA	State NEW MEXICO
Engineer W. P. A.	Drwn. By H's	Date 3-6-78	File READ & STEVENS
SIPES, WILLIAMSON & AYCOCK, INC.		Ref. No. 8.1842	EXHIBIT
Consulting Engineers	Midland - Houston, Texas		



OWNERSHIP MAP
with unorthodox location and proration unit

FIELD SCHARB (BONE SPRINGS)		County LEA	State NEW MEXICO
Engineer W. P. A.	Drwn. By H's	Date 3-6-78	File READ & STEVENS
SIPES, WILLIAMSON & AYCOCK, INC. Consulting Engineers Midland - Houston, Texas		Ref. No. 8.1842	EXHIBIT



BEFORE EXAMINER UTTER
OIL CONSERVATION COMMISSION
Appl EXHIBIT NO. 3
CASE NO. 6176

STRUCTURE

TOP OF SCHARB PAY

Geology by: E.K. David

FIELD SCHARB (BONE SPRINGS)		County LEA	State NEW MEXICO
Engineer W. P. A.	Drwn. By H's	Date 3-6-78	File READ & STEVENS
SIPES, WILLIAMSON & AYCOCK, INC.		Ref. No. 8.1842	EXHIBIT
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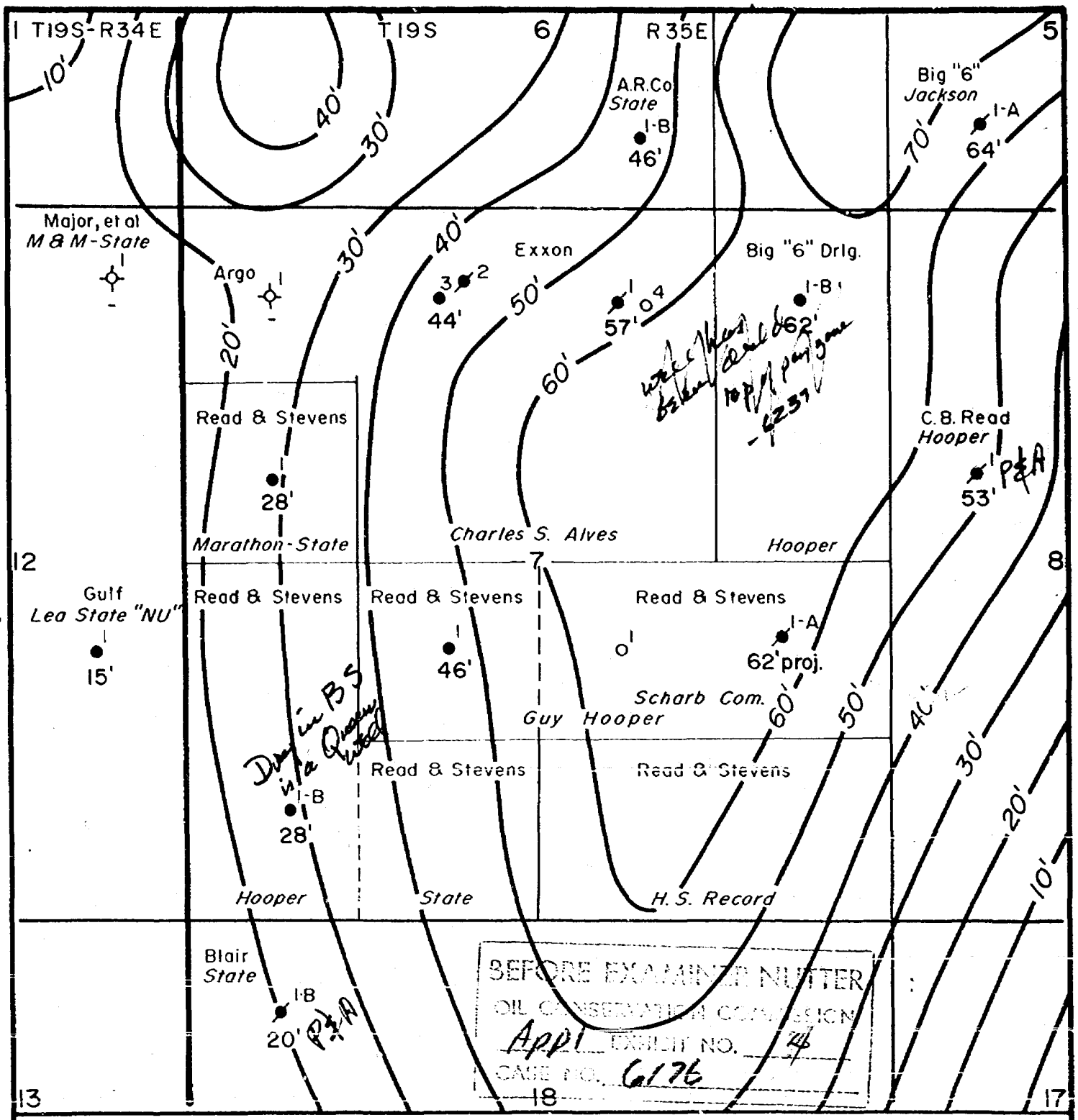


ISOPACH

SCHARB CLEAN CARBONATE

Geology by: E.K. David

FIELD SCHARB (BONE SPRINGS)		County LEA	State NEW MEXICO
Engineer W. P. A.	Drwn. By H's	Date 3-6-78	File READ & STEVENS

SIPES, WILLIAMSON & AYCOCK, INC.
Consulting Engineers — Midland - Houston, Texas

Ref. No. 8.1842

EXHIBIT

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
March 8, 1978

EXAMINER HEARING

IN THE MATTER OF:	)	
Application of Read & Stevens, Inc., for an unorthodox location, Lea County, New Mexico.	)	CASE 6176

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

For the New Mexico Oil Conservation Commission: Lynn Teschendorf, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant: Donald G. Stevens, Esq.
Attorney at Law
Roswell, New Mexico

I N D E X

EXHIBIT INDEX

MR. NUTTER: Call the next case, Case 6176.

MS. TESCHENDORF: Case 6176, application of Read & Stevens, Inc., for an unorthodox location, Lea County, New Mexico.

MR. STEVENS: Mr. Examiner, I am Don Stevens an attorney from Roswell representing the applicant in this case and we have one witness to be sworn.

(THEREUPON, the witness was sworn.)

WILLIAM P. AYCOCK

was called as a witness by the applicant, and having been first duly sworn, testified upon his oath as follows, to-wit:

DIRECT EXAMINATION

BY MR. STEVENS:

Q. Would you state your name, address, profession, and your relationship to the applicant in this case, please?

A. My name is William P. Aycock and I live in Midland, Texas, and I represent Mr. Read and Mr. Stevens, Read & Stevens, Inc., in this matter.

Q. Have you previously testified before this Commission and had your qualifications accepted by the Commission?

A. Yes, sir, I have.

MR. STEVENS: Are the witness' qualifications acceptable, Mr. Examiner?

MR. NUTTER: Yes, they are.

Q. (Mr. Stevens continuing.) Would you briefly state what the applicant seeks in this case, please?

A. The applicant seeks an unorthodox location for its Scharb communitized Well No. 1 located in the northwest quarter of the southeast quarter of Section 7, in order to develope the remaining oil reserves properly and protect correlative rights of all parties therein.

Q. And that is in Township 19 South, Range 35 East in Lea County?

A. Correct.

Q. In what respect is this location unorthodox?

A. It's unorthodox because a standard eighty-acre location would be in the southwest quarter of the southeast quarter rather than in the northwest quarter of the southwest quarter.

Q. Are all wells in the field under the field rules required to be drilled on the northeast quarter or the southwest quarter of a quarter section?

A. I don't recall any such specification but I could check. I have the pool rules right here.

Rule No. 2 of the special rules and regulations for the Scharb Bone Springs Oil Pool state that each well completed or re-completed in the Scharb Bone Springs Oil Pool shall be located on a standard unit containing approximately eighty

acres comprising the north half, south half, east half, or west half of a single governmental quarter section, provided however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections of the unit.

So, it could be anywhere within -- according to this rule -- it could be anywhere within any of these halves. There is no prohibition for running the proration unit either west or east or north or south.

Q. Referring, then, to what has been marked as Exhibit Number One would you explain it, please?

A. Exhibit Number One is an ownership map drawn on a large scale so that it is illustrative of the various operators in the portion of the Scharb Bone Springs Pool that would be affected by the drilling of this well at an unorothox location.

I would point out, Mr. Nutter, that the Exxon Corporation, Big Six Drilling Company, and Read & Stevens, and Gulf Oil Corporation would be the only operators that could be affected in this portion of the Scharb Bone Springs Pool; all of those operators having production approximately a half a mile of the proposed location.

Q. And the red well is the --

A. That is the proposed unorthodox location, yes.

Q. Referring, then, to what has been marked as Exhibit

Number Two, would you explain that please?

A. Exhibit Number Two is exactly the same as Exhibit Number One except that the unorthodox requested north-south proration unit in the well location are specifically set out on this exhibit.

Q. Referring, then, to what has been marked as Exhibit Number Three?

A. Exhibit Number Three is a geological structure map. The original data was supplied by Mr. Read from work done by E. K. David as illustrated here. I did my own work on all of the wells in Section 7 and compared them to what Mr. David had and used his work simply because of time. My numbers would agree with his within a foot or two in every case.

The well has been drilled as we know the Commission is aware and the top of the Scharb Bone Springs pay zone is approximately at minus sixty-two thirty-seven, which places it virtually flat, structurally, as it was contoured before the fact to the Read and Stevens Hooper communitized No. 1, which is the well located in the northeast quarter of the southwest quarter of Section 7.

Q. Does this structure as shown on your Exhibit Three is it determinative of the production found in the Scharb Bone Springs Field?

A. It's one of the factors. It is not determinative and the experience has indicated that in this portion of the

Bone Springs Pool something in the range of thirty feet of gross pay is necessary and structure is only determinative as we will show on the subsequent exhibit as to the fact that certain pay thicknesses are apparently associated with certain geographic locations and certain structure.

Structure, as such, is not a single determinative factor, no, sir.

Q. Referring to the next exhibit, Exhibit Four, would you show how this is to relate?

A. This is also Mr. David's work which I utilized for time. Once again, I am prepared to offer substantiation with my own numbers that -- if the Commission wishes to delve that far into it.

The well actually came up with fifty-two feet of inidated clean carbonate formation at that location which would not make it in agreement with the work presented here.

However, I would call the Commission's attention to the fact that the Read & Stevens Hooper 1A well, which is the well located in the northeast quarter of the southeast quarter of Section 7, had a projected gross thickness because the well did not penetrate the entire thickness of the Scharb Bone Springs reservoir when it was drilled. It penetrated about half of it we are guessing but we don't know for sure.

MR. NUTTER: You know, I don't think I am following your exhibit, Mr. Aycock. The top of the Scharb pay is

Exhibit Three or is that Exhibit Four?

A. Exhibit Three.

MR. NUTTER: Okay, that's marked Exhibit Four on mine. Then, the carbonate is Exhibit Four?

A. Yes, sir.

MR. NUTTER: That's marked Exhibit Three and so I will reverse these.

A. I apologize to Mr. Nutter for that.

Q. (Mr. Stevens continuing.) I apologize to Mr. Nutter for that.

MR. NUTTER: So, we are not on the carbonate pay and that is Exhibit Four?

A. Yes. I think before we depart from all of the maps it is worth while to note that in the north half of the north half of Section 7 you have got three wells that have already drilled -- well, you have actually got five wells.

Exxon has drilled and completed the No. 1 and No. 2 Alves and has abandoned both of them for mechanical reasons and has drilled a replacement well for the No. 2.

The data that I have available indicates that they are currently about to drill or are drilling a replacement well for the No. 1.

All of those wells are not on standard eighty acre proration units. They are on a distance that is almost appropriate for forty acres. In other words the proration

units run north and south there as the applicant is requesting in this case in conformance with the pool rules that we have already quoted you.

Q. What's the affect of the new data of your new wells and the quality that would be expected in your present well as opposed to what might be expected in an orthodox location in the southwest of the southeast?

A. Well, if you delve into it you will see that the wells on the south and the edge -- the edge wells including the well over here in Section 8, the Read Hooper 1, which you just see on the edge of the map, the Blair State down here in Section 18 have been plugged and abandoned and I'll later present the figures on the cumulative production on that.

This 1B well is completed in the Queen formation, in the Quail Queen Pool, and is not completed in the Bone Springs and was tested in the Bone Springs pay and found to be non-commercial. It produced about seven or eight barrels a day prior to the well being plugged back to the Queen and successfully completed in the Queen formation.

MR. NUTTER: That's the Read & Stevens --

A. Hooper No. 1B, which would be in the southwest of the southwest of 7.

MR. NUTTER: That was dry in the Bone Springs?

A. Yes, sir.

MR. NUTTER: And it is a Queen well?

A. Yes, sir. It was a non-commercial well because of the pay quality. It did not produce a lot of water but it produced oil at an unattractive rate, seven or eight barrels a day.

MR. NUTTER: It shows twenty-eight feet of Queen carbonate.

A. Well, it does have twenty-eight feet of Queen carbonate but it doesn't have net pay equivalent to that as I'll show later, Mr. Nutter. I have another exhibit which will go intc that.

In my opinion it would not be a prudent decision to drill a well certainly at all in the southeast of the southeast and probably not in the southwest of the southeast of 7 simply because we have -- we know from the structural location and pay development that you would possibly, you would run a very high risk, of not securing a commercial well.

You are talking about over a four hundred thousand dollar well at today's prices at this depth. So, you are talking about a very substantial investment required here to drain the remaining reserves.

It would appear that the most logical thing to do to drain those reserves and to adequately protect the rights of all parties would be to drill the well at this location

and run the proration unit in the north-south direction.

The 1A well was approaching being a non-commercial well at the time that it became mechanically unfeasible to produc~~ing~~. It was producing in the range of eight barrels of oil a day.

So, you would deduce from that experience as well as the other that a well in the southeast, or a twin well to that one, would not be a prudent location for an operator to drill a four hundred thousand dollar well.

MR. NUTTER: Now, you mentioned that it became mechanically unfeasible to produce it. You also used the word mechanics up here on the Exxon lease. What kind of mechanics are involved?

A. My understanding of -- in the case of the Read & Stevens well, they were attempting a well servicing job and they dropped the tubing and they actually perforated the casing when the tubing was dropped. There was no way that they could get it back.

My understanding to what has happened to Exxon is that the salt section has collapsed the long string and they were mechanically unable to get the wells back.

MR. NUTTER: It's true mechanics?

A. Yes, sir. It is not reservoir depletion.

MR. NUTTER: Now, this 1A well did have the north half of the southeast of 7 dedicated to it, did it not?

A. Yes, sir, I believe so.

MR. NUTTER: Now, they are proposing to dedicate the west half of the southeast to the well?

A. Yes, sir

MR. NUTTER: Why the change in the acreage dedication?

A. Well, I think it is prudent to protect -- there is some oil that should be recoverable under the south half. How much, I don't know, or anyone could tell without drilling a well. But I don't think it would be -- I think the rights of those parties would best be protected by allowing them to participate in this well rather than excluding them.

I don't think that you would want to make a decision to drill a four hundred thousand dollars well on their acreage.

On the other hand, I think this 1A well having approached the economic limit at its location prior to the mecahnical failure causing its abandonment would indicate that the east half was probably largely effectively depleted. So, that the most prudent course would appear to be to protect everyone and run it in a north-south direction which seems to roughly agree with the way the gross pay contour lines are running here and the well quality as well.

Q. (Mr. Stevens continuing.) It is your opinion, then, that the proposed location would be superior to the southwest southeast orthodox?

A. Yes, sir, I think it would be very risky.

Q. But is the entire southeast quarter in your opinion underlain by some oil?

A. Yes, sir, all of the data we have says that it should be.

Q. Referring, then, to what has been marked as Exhibit Number Five, would you explain it, please?

A. Exhibit Number Five is the porosity log of the Read and Stevens Scharb communitized No. 1 Well.

I would call the Commission's attention that on close examination you will find that there is a descrepancy in depth such that the figures that I have presented in terms of top of pay could not be verified and this is because there is a substantial difference in the wire-line measurements and the drill pipe measurements.

The operator has made every attempt to determine what the true depth is and he believes that the best depth is the one to be determined from drill pipe measurements because it has been measured twice and found to be in agreement.

The wire-line measurements are off about twenty feet and the data that has been presented to you, Mr. Nutter, has relied upon as far as the subsurface elevation top of pay has relied upon the drill pipe measurements rather than the wire-line measurements as presented on the log.

I do think it is noteworthy that you have a very high quality pay section here and the fifty-two feet is my interpretation of the gross clean carbonate here. The others might differ slightly from that but I think it is quite apparent that you have been fortunate enough to secure what appears to be a very attractive, commerically attractive, section in the drill stem test that is summarized at the bottom in the case that there is a substantial reservoir pressure remaining and that they did recover oil cut mud and oil in their sampler such that you would anticipate that this would be a commercial well.

MR. NUTTER: In other words the top of the pay as indicated on Exhibit Three being a minus sixty-two fifty-seven --

A. Sixty-two thirty-seven, Mr. Nutter.

MR. NUTTER: I am talking about the 1A?

A. Oh, yes, sir, okay.

MR. NUTTER: The 1A was sixty-two thirty-seven and the log here --

A. Is of the well for which we are applying.

MR. NUTTER: This is the log on the new well?

A. Yes, sir.

MR. NUTTER: Okay, I thought that this was on the old?

A. No, sir. This was logged over the weekend and I

didn't have time to integrate this into my exhibits is the reason that we are presenting the log to you to give you the most up-to-date data.

MR. NUTTER: This log was run March 2nd of this year?

A. Yes, sir.

Q. (Mr. Stevens continuing.) Referring to Exhibit Six, would you explain it, please?

A. Exhibit Six is a cross section AA Prime which you will note from the inset map runs in the northeast-southwest diection and it is intended to show the proposed location prior to it having been logged being how it would fit into the overall reservoir development.

You will notice that not only from tests and production, which will be presented subsequently, that it would appear to be in a very execellent position -- of course, being between two previously commercial wells there would be very little question from the east-west standpoint that it would be well located.

I think that you can also see that the Gulf Well -- the Blair Well, pardon me, on the south end had a very thin pay section and it has been plugged and abandoned. You have incomplete penetration of the pay on the rest of the wells on this cross section except for the third well from the left side which is a Read & Stevens Hooper communitized 1

and the Big Six Drilling Company Hooper Bl. That well is erroneously indicated to be plugged and abandoned in the symbol at the top of the page for which I apologize. That well is still an active producer according to the information that I have. I don't know why that was indicated that way.

Q. Referring to Exhibit Number Seven would you explain that please?

A. Exhibit Number Seven has two common wells -- Exhibit Number Six, you will notice, the Read & Stevens communitized Hopper 1 and the Read and Stevens 1A and it shows from almost from east to westthe Hopper Standard Well is slightly northeast of the east-west line on which to others lie and you will also notice that the Gulf well has a section that is considerably different from the others whereas you have a massive formation on the rest of the wells on this cross section to the degree that they were logged. The Gulf well has the section divided in two and the upper portion of the Bone Springs was not commercially developed. That's the well on the far left, and has only the bottom portion of the Bone Springs formation that was commercial and for which the well was produced.

We do have on the Read & Stevens Well you will notice that we do have shown the drilling breaks and the drill stem test and the sampler information even though we didn't have a log on it.

Q. Referring to Exhibits Nos. 8A through D, would you explain those?

A. Eight A through Eight D are rate time graphs of the oil-water and gas production for the Big Six Hooper B Well, which as you will recall from the map is in the northeast of this section.

The Read & Stevens Hooper A, which is the well immediately to the east of the requested location, the Read & Stevens Marathon State communitized which is in the southwest of the northwest of this section, and the Exxon Corporation Charles F. Alves lease which is all of the north half with the exception of the east half of the northeast and the southwest quarter of the northwest quarter.

I will call the Commission's attention to the fact that there are all on logrythmic scales but they are staggered to show the relative well performance as of recent time.

With Mr. Nutter's indulgence, if you will stagger them you will see, I think, that the Hopper A was an abnormally poor well as compared to the others in terms of performance at the time the mechanical failure occurred.

The cumulative production is indicated on each one of them and we will go into that further but you can see that it is half of the nearest well that I have chosen to protray here; much less than that, something on the order of ten percent of the Big Six Drilling Company's Hooper B Well.

MR. NUTTER: Now, these are lease totals aren't they?

A. Yes, sir, but these are one-well leases except the Alves, it is a two-well total. There are four wells, total, drilled on the lease and it is my understanding that there is only one well currently active until the No. 4 Well is active and complete.

MR. NUTTER: And all of the others although they are lease totals are --

A. They are one-well leases, yes, sir. That's actually a three-well total on the Alves lease and even if you divide it by three you can see that it is still on a well average is way in excess of what the Read & Stevens well and the Read & Stevens 1A had produced and was producing at the time the mechanical failure caused its abandonment.

So, what I am trying to present here for the Commission inspection is the fact that the 1A well was abnormally poor as compared to the nearby wells in the Scharb

The logs looked pretty good but the performance was not nearly as good as what would have been anticipated from the log analysis alone.

MR. NUTTER: When was this taken off of production?

A. The last production, I believe, was in March of last year, Mr. Nutter. I can check that for you. I have copies and if you would like for me I have actual tabulations

of the -- and if you would like for me to I can get it out of my briefcase but I believe it was in March of 1977, was the last production on the thing but I will be glad to check that.

MR. NUTTER: At that time it was making, it looks like, in the last month's production report it would have been less than two hundred barrels for that month?

A. Yes, sir. What I am saying is I think a reasonable production rate would have been a rate of eight or nine barrels a day is what you would have anticipated that it should have produced on a sustained basis. And you will see that nine barrels a day would be two seventy a month. So, that's in the range of where -- there is quite a range of variation there and the last month is probably meaningless but you have got one month there at about nine barrels a day and one at about seven and a half or eight barrels a day average from the graph.

Q. (Mr. Stevens continuing.) Refer to Exhibit Number Nine and explain it, please?

A. Exhibit Number Nine is the land map with the cumulative recovery as of October 1st, 1977, which is the latest data that I have readily available and the estimated ultimate recovery from the extrapolation from the decline curves to an economic of fifty barrels per well per month.

Once again, this will illustrate that the cumulative

and estimated ultimate recovery for the other wells in the Bone Springs with the exception of the Read Hooper Standard 1 over in Section 8 over to the far east and the Blair State have been in excess of what the estimated ultimate recovery -- of course, I made it the same but it was essentially at the economic limit here.

So, you are talking about a well that has produced twenty-five percent to ten percent of what other wells nearby indicate they have produced or will produce before they are abandoned.

This is the reason in my opinion that it was a very prudent decision to locate the well in the northwest-southeast quarter of Section 7 rather than in the southwest of the southeast of Section 7, which would have been the normal place to locate it.

Q. Referring you to Exhibit Number Ten, would you explain it?

A. Exhibit Number Ten is a summary of all of the wells that we have discussed in the nearby portion of the Scharb Bone Springs Pool in which I have shown the completion date, the interval and a summary of potential test data and a summary of the log interpretations data including porosity and indicated average porosity and mean water saturation and also the net pay thickness and ratio -- net effect of pay to gross pay and original oil in place and stock tank

barrels per acre and in stock tank barrels per eighty acres estimated ultimate recovery from extrapolation from performance curve and the estimated oil recovery factor and I call Mr. Nutter's attention to the fact that several of the wells have produced in excess, if they were only draining eighty acres, they produced at exceedingly high recovery factors.

So, this would indicate that there are two parameters that are important here; one, is the age of the well. The earlier wells, the other things being equal, will have recovered more and the other is pay quality.

You can see somewhere in the range of twenty to thirty percent of the original oil in place appears to me to be a reasonable expectation and you have already seen numbers way in excess of that. The Big Six well has already recovered sixty percent of the -- or the EOR is sixty percent of what the oil in place would be if the logs adequately represent the eighty acres that the well is draining.

So, it is obviously, probably, draining more than that over the life of the production and I think that is verified by the fact that we got twelve hundred and fifty pound reservoir pressures on the drill stem test for the well for which this application is made indicating that there is pressure communication over a large area here.

That makes it even more important that each area that is underlain by commercial production participate in

the common reservoir. Then, it would, if we had a more typical situation with regard to carbonate where the drainage areas were mor limited.

Q. If there is drainage as you have just testified in the northwest-southeast and if that well were not so completed that oil might be drained by other wells in the field?

A. I would anticipate that it would be over an extended period of time.

Q. This, then, would result in the loss of correlative rights to this northwest quarter of the southeast quarter and how about the southwest quarter of the southeast quarter?

Would it protect the correlative rights of the owners in the west half of the southeast?

A. I think it would if the proration unit were run in the north-south direction I think it would tend to protect their correlative rights to their best degree practically and commercially possible.

Q. My question was, if you drilled in the southwest quarter of the southeast quarter would that correctly protect the correlative rights of those owners?

A. Likely not, because you would get a well that would not adequately participate in the production of the remaining reserves in the reservoir, probably.

You would still experience drainage to other leases

in the field. In other words, you would have to drill at a location where you would anticipate getting a well of sufficient quality to allow you to participate adequately in the remaining reserves. That would not be the case in the southwest quarter of the southeast quarter of Section 7, in my opinion.

Q. If you were in this proration unit in the north half of the southeast quarter as it once was would this protect the correlative rights of the owners in the southwest quarter?

A. No, it wouldn't. They wouldn't have any protection whatsoever. The Hooper 1A well appeared to be essentially depleted that I would infer that the likelihood that the commercial reserves under the northeast of the southeast had been recovered. So, if you ran it in a east-west direction you would be allowing those people to participate in reserves that had already been -- would have appeared to have been already recovered and it did not appear to be participating in a field-wide drainage to the extent that the other wells did.

Q. That would also result in the south half of the southeast having no recovery whatsoever?

A. Right.

Q. Would the granting of this application also tend to prevent waste?

A. Yes, sir, I think so, because without the well being drilled somewhere in the north half I don't think it would have been a prudent decision to drill a four hundred thousand dollar well.

I think the direction in which the proration unit is run is a matter of judgment for the Commission on which way the correlative rights of the various parties can be protected.

Q. Do you have any further statements of opinions to express?

A. No, sir.

Q. Were Exhibits One through Ten prepared by you or under your direction?

A. Yes, they were with the exception of the fact that I have previously indicated that the geological maps used were from Mr. David's work and I am prepared to verify my -- I can justify insofar as wells in the immediate portion of the field that appear to me to be germane to this application. I did not do it on a field-wide basis and for that reason we used Mr. Davis work since it was available.

MR. NUTTER: Who was Mr. David?

A. He was a geological consultant that Mr. Read retained early before he even applied for the application, Mr. Nutter, to the Commission on what to do.

MR. NUTTER: Do you agree on his conclusions on what

to do.

MR. NUTTER: Do you agree with his conclusions on here except where you have noted that you have some differences here?

A. Yes. He did not attempt to come up with a net effective isopach in what he calls the Scharb clean carbonate which would be equivalent to what I call the gross pay thickness on Exhibit Ten. It differs by a foot or two but that foot or two is a matter of judgment on what the actual lithological boundaries are.

MR. STEVENS: We would like to move at this time, Mr. Examiner, the introduction of Exhibits one through Ten.

MR. NUTTER: Exhibits One through Ten will be admitted in evidence.

MR. STEVENS: We have no further questions in this case.

MR. NUTTER: Are there any questions of Mr. Aycock? He may be excused. Do you have anything further, Mr. Stevens?

MR. STEVENS: Nothing further, Mr. Examiner.

MR. NUTTER: Does anyone have anything further that they wish to offer in Case Number 6176?

We will take the case under advisement.

(THEREUPON, the case was concluded.)

REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

Sidney F. Morrish, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6176 heard by me on 3/8, 1978.

....., Examiner
New Mexico Oil Conservation Commission

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 · SANTA FE
87501

DIRECTOR
JOE D. RAMEY

LAND COMMISSIONER
PHIL R. LUCERO

STATE GEOLOGIST
EMERY C. ARNOLD

March 21, 1978

Re: CASE NO. 6176
ORDER NO. R-5672

Mr. Donald G. Stevens
Attorney at Law
Post Office Box 1797
Santa Fe, New Mexico 87501

Applicant:

Read & Stevens, Inc.

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

Other

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 6176
Order No. R-5672

APPLICATION OF READ & STEVENS, INC.,
FOR AN UNORTHODOX GAS WELL LOCATION,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 8, 1978, at Santa Fe, New Mexico, before Examiner, Daniel S. Nutter.

NOW, on this 14th day of March, 1978, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Read & Stevens, Inc., seeks approval of an unorthodox gas well location 1980 feet from the South line and 1980 feet from the East line of Section 7, Township 19 South, Range 35 East, NMPM, to test the Bone Spring formation, Scharb-Bone Spring Pool, Lea County, New Mexico.

(3) That the W/2 SE/4 of said Section 7 is to be dedicated to the well.

(4) That a well at said unorthodox location will better enable applicant to produce the oil underlying the proration unit.

(5) That no offset operator objected to the proposed unorthodox location.

(6) That approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of the gas in the subject pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That an unorthodox gas well location for the Bone Spring formation is hereby approved for the Read & Stevens, Inc., Scharb Com Well No. 1 located at a point 1980 feet from the South line and 1980 feet from the East line of Section 7, Township 19 South, Range 35 East, NMPM, Scharb-Bone Spring Pool, Lea County, New Mexico.

(2) That the W/2 SE/4 of said Section 7 shall be dedicated to the above-described well.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

PHIL R. LUCERO, Chairman

EMERY C. ARNOLD, Member

JOE D. RAMEY, Member & Secretary

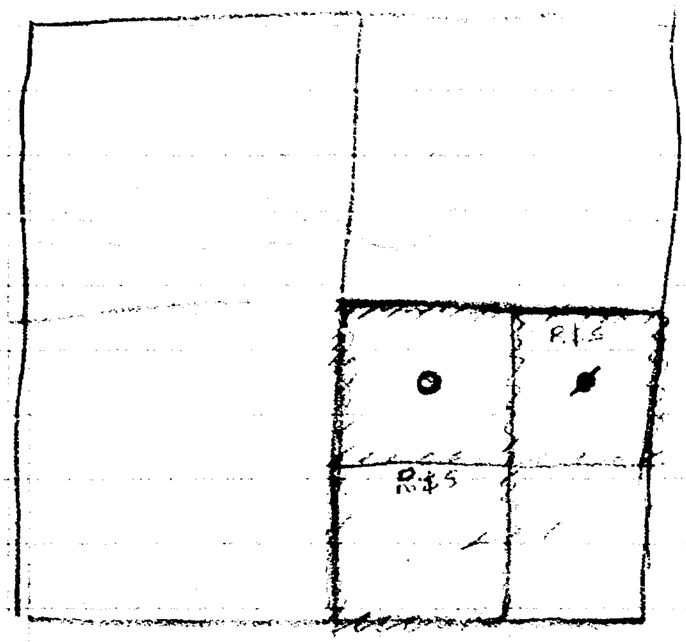
S E A L

jr/

Bass #

A.L. # Stevens

A.L. Hill Trust

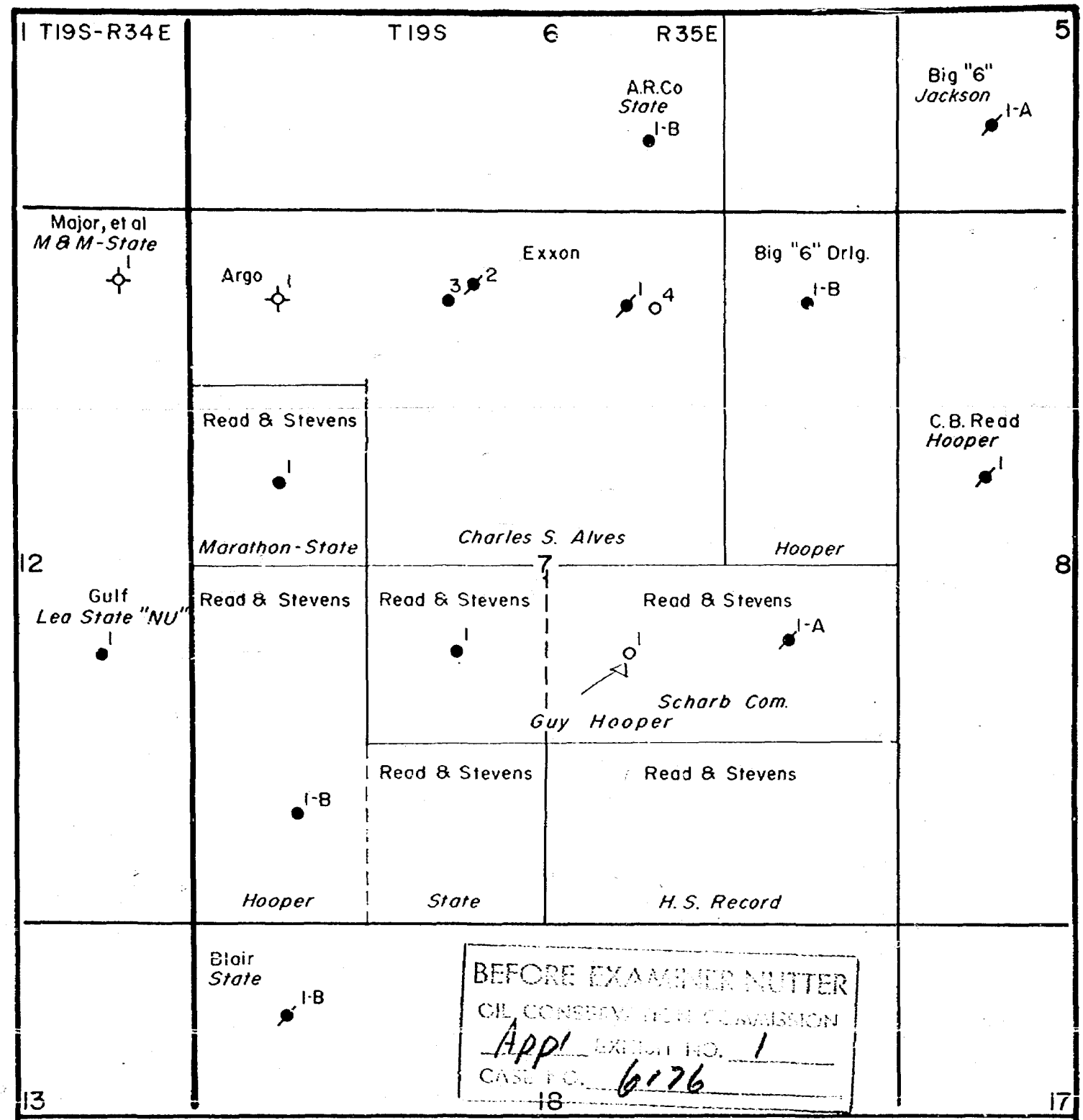


Gene Barnett w/ Trust Oil Dept of First Natl Bank of Dallas
214 744-8555

does not oppose the location but does oppose the rededication of acreage

N/2 SE/4 was dedicated to the old well in I

W/2 SE/4 is to be dedicated to the new well leaving the A.L. Hill Trust with a smaller share of the units



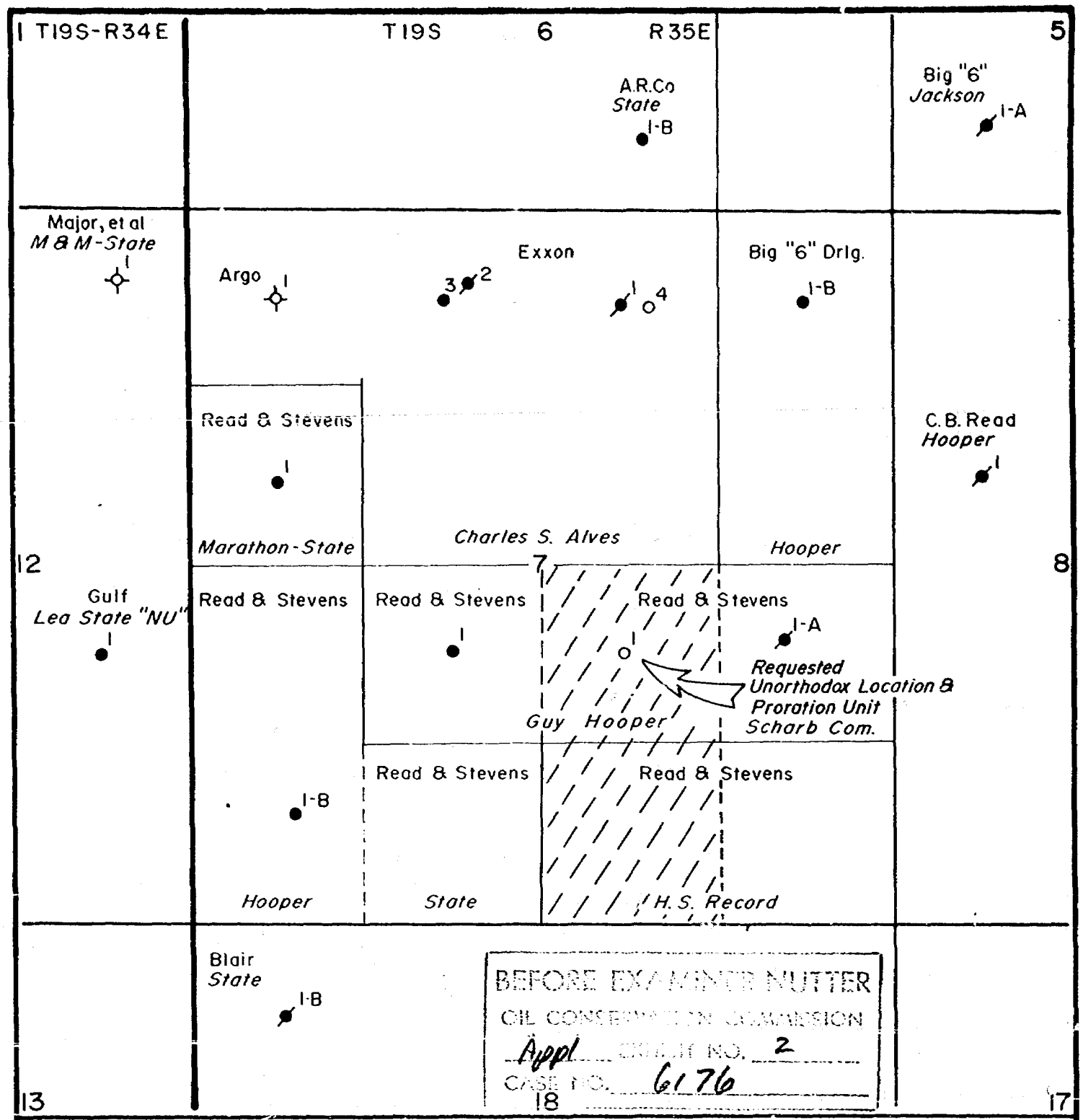
OWNERSHIP MAP

FIELD SCHARB (BONE SPRINGS)		County LEA	State NEW MEXICO
Engineer W. P. A.	Drwn. By H's	Date 3-6-78	File READ & STEVENS

SIPES, WILLIAMSON & AYCOCK, INC.
Consulting Engineers
Midland - Houston, Texas

Ref. No. 8.1842

EXHIBIT



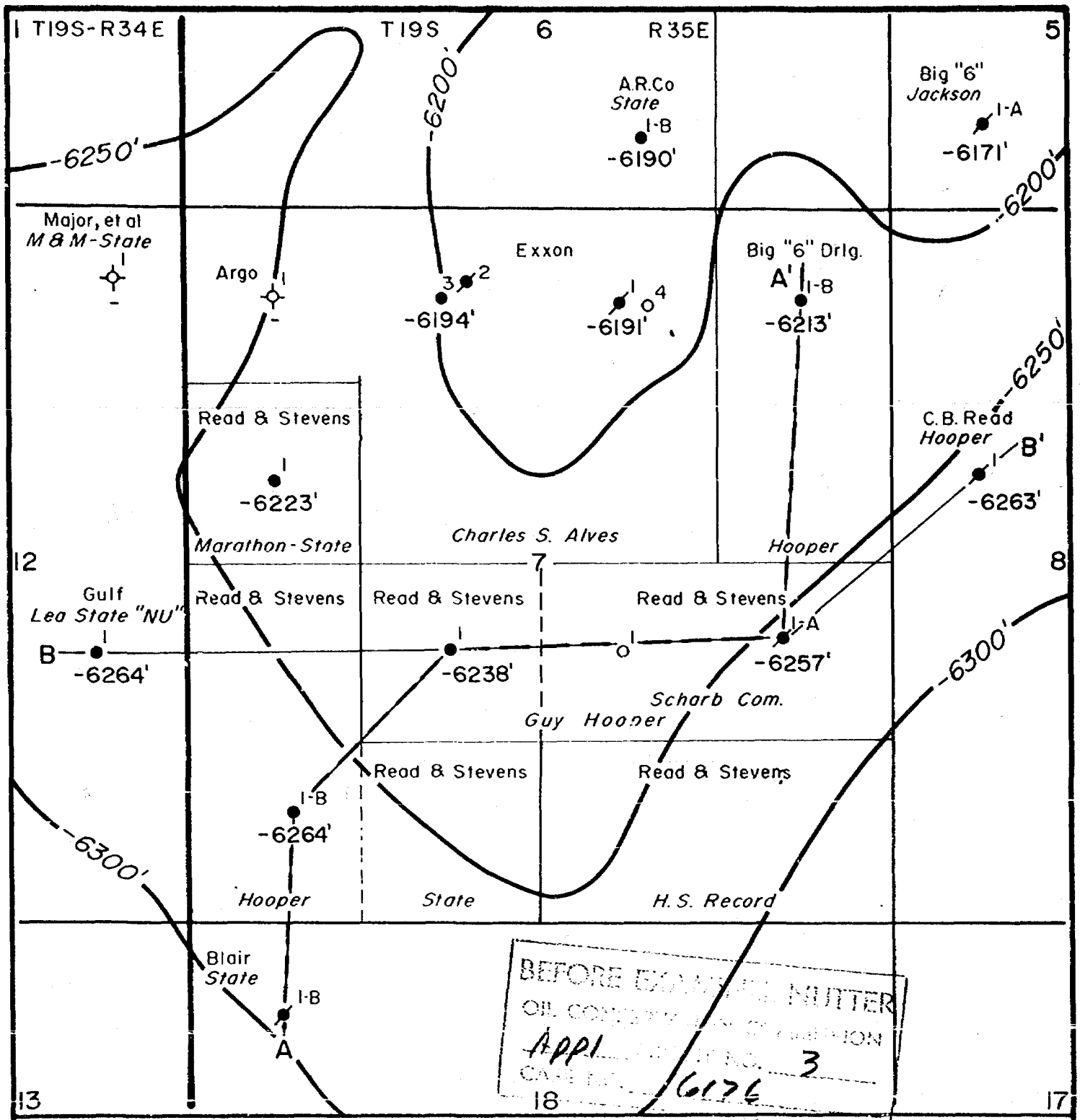
OWNERSHIP MAP
with unorthodox location and proration unit

FIELD SCHARB (BONE SPRINGS)		County LEA	State NEW MEXICO
Engineer W. P. A.	Drwn. By H's	Date 3-6-78	File READ & STEVENS

SIPES, WILLIAMSON & AYCOCK, INC.
Consulting Engineers — Midland - Houston, Texas

Ref. No. 8.1842

EXHIBIT

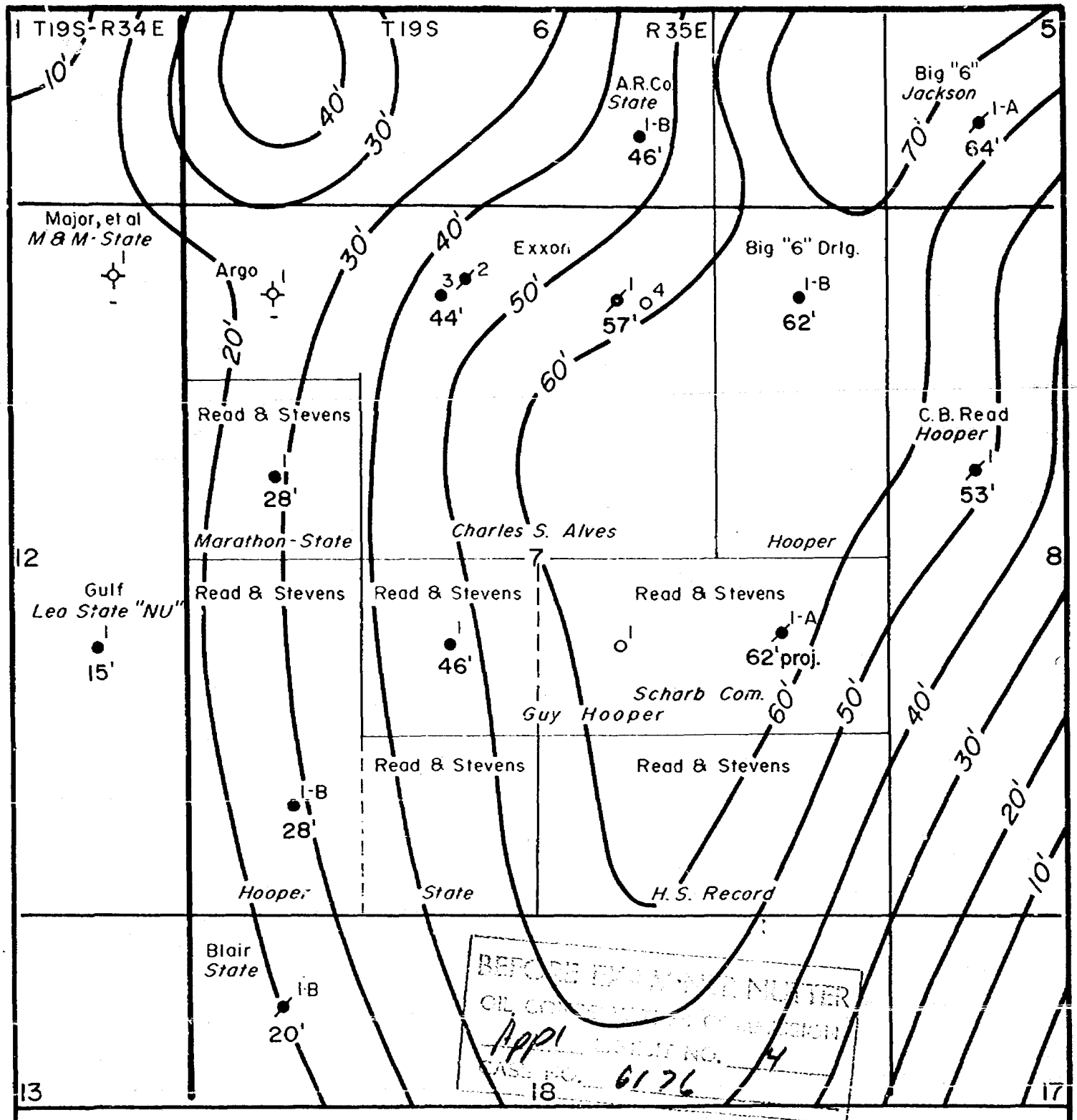


STRUCTURE

TOP OF SCHARB PAY

Geology by: E.K. David

FIELD SCHARB (BONE SPRINGS)		County LEA	State NEW MEXICO
Engineer W. P. A.	Drwn. By H's	Date 3-6-78	File READ & STEVENS
SIPES, WILLIAMSON & AYCOCK, INC.		Ref. No. 8.1842	EXHIBIT
Consulting Engineers	Midland - Houston, Texas		



ISOPACH

SCHARB CLEAN CARBONATE

Geology by: E.K. David

FIELD SCHARB (BONE SPRINGS)		County LEA	State NEW MEXICO
Engineer W. P. A.	Drwn. By H's	Date 3-6-78	File READ & STEVENS
SIPES, WILLIAMSON & AYCOCK, INC.		Ref. No. 8.1842	EXHIBIT
Consulting Engineers	Midland - Houston, Texas		

Sidewall Neutron
Gamma Ray

COMPANY READ & STEVENS, INC.

WELL SCHARB COM. #1

FIELD SCHARB (BONE SPRINGS)

COUNTY LEA STATE NM

LOCATION: 1980' FSL 1980' FEL

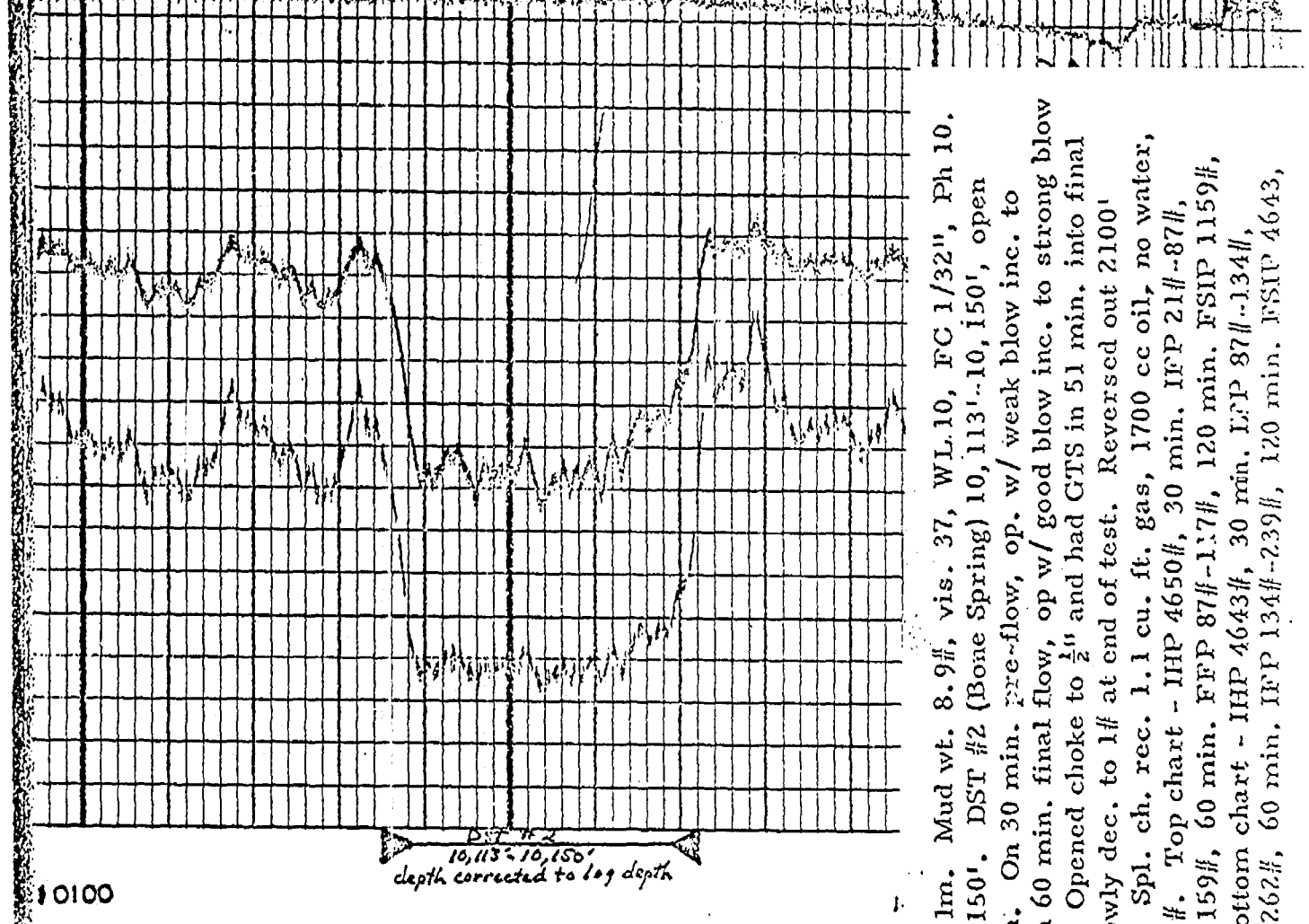
Other Services: DIFL/SP

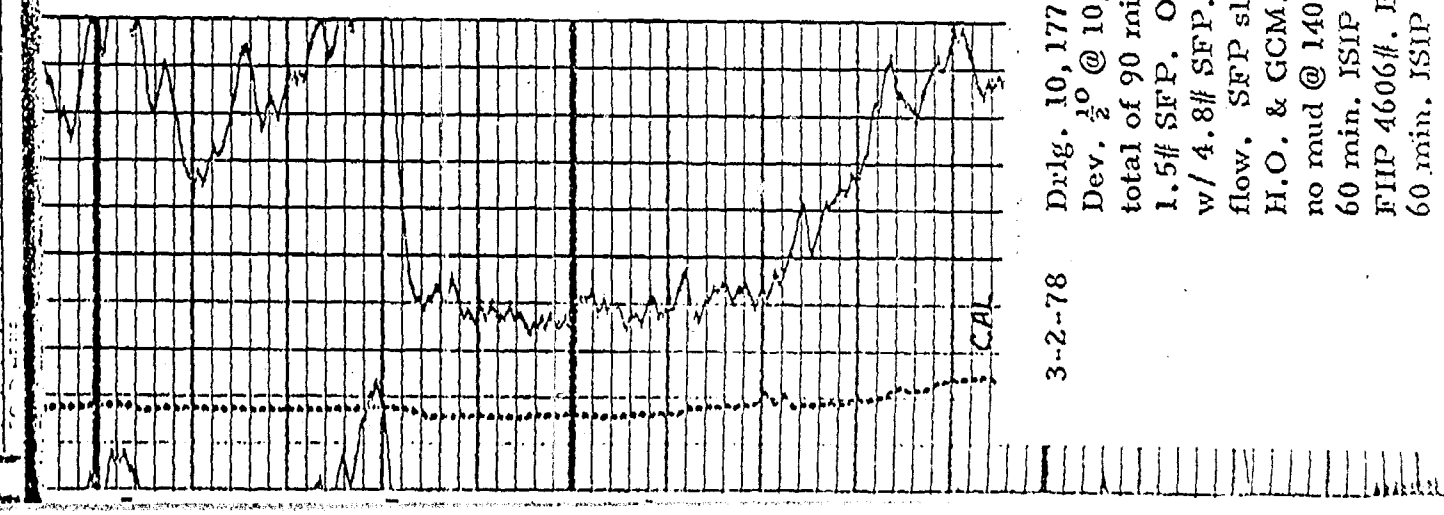
SEC 7 TWP 19S RGE 35E

Permanent Datum		Elev 3866.2	Elevations: KB 3879
Measured from	KB	12.8 Ft. Above Permanent Datum	DF
Log Measured from	KB		GL 3866.2

	3/2/78			
Driller	ONE			
Logger	10200			
Logged Interval	10223			
Csg. Interval	10222			
Type Driller	SURFACE			
Type Logger	8 5/8 @ 4000	@	@	@
Bit Size	3995			
Type Fluid in Hole	7 7/8			
	GEL/GMC			
Density and Viscosity	8.9 37			
Fluid Loss	10 8 cc	cc	cc	cc
Source of Sample	FLOWLINE			
Rm @ Meas. Temp.	.494 @ 70 °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	.37 @ 70 °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	— @ — °F	@ °F	@ °F	@ °F
Source of Rmf and Rmc	M —			
RM @ BHT	.25 @ 70 °F	@ °F	@ °F	@ °F
Time Circ.	9.5			
Max. Temp. Deg. F.	137 °F	°F	°F	°F
Equip. and Location	6124 HOBBS			
Recorded By	HANSEN/HERNDON			
Witnessed By	REDDY			

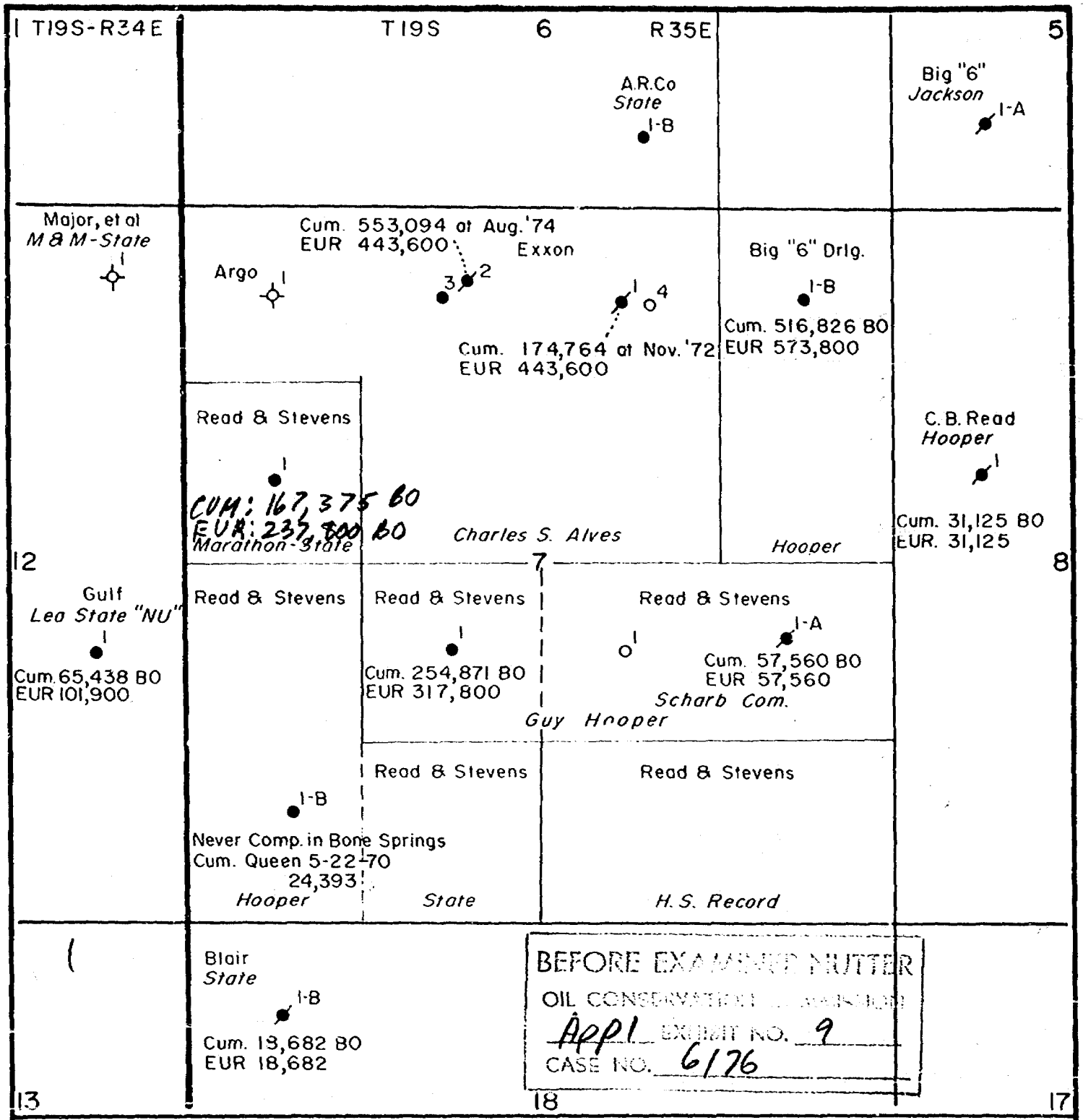
FIELD PRINT





3-2-78

Drlg. 10,177' lm. Mud wt. 8.9#, vis. 37, WL 10, FC 1/32", Ph 10.
Dev. ½° @ 10,150'. DST #2 (Bone Spring) 10,113'-10,150', open
total of 90 min. On 30 min. pre-flow, op. w/ weak blow inc. to
1.5# SFP. On 60 min. final flow, op w/ good blow inc. to strong blow
w/ 4.8# SFP. Opened choke to ½" and had GTS in 51 min. into final
H.O. & GCM. Slowly dec. to 1# at end of test. Reversed out 2100'
no mud @ 1400#. Spl. ch. rec. 1.1 cu. ft. gas, 1700 cc oil, no water,
60 min. ISIP 1159#, 60 min. FFP 87#-117#, 120 min. FSIP 1159#,
FIIP 4606#. Bottom chart - IHP 4643#, 30 min. FFP 87#-134#,
60 min. ISIP 1262#, 60 min. IFP 134#-239#, 120 min. FSIP 4643,
BHT 148°.



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Appl EXHIBIT NO. 9
CASE NO. 6176

INDICATED RECOVERY
Cumulative at 10-1-77 & Ultimate Recovery

FIELD SCHARB (BONE SPRINGS)		County LEA	State NEW MEXICO
Engineer W. P. A.	Drwn. By H's	Date 3-6-78	File READ & STEVENS
SIPES, WILLIAMSON & AYCOCK, INC.		Ref. No. 8.1842	FIGURE NO.
Consulting Engineers	Midland - Houston, Texas		

EXHIBIT NO. ___

PERTINENT PERFORMANCE AND LOG ANALYSIS DATA FOR
SELECTED WELLS IN THE SCHARB (BONE SPRING) POOL
LEA COUNTY, NEW MEXICO
READ & STEVENS, INC., APPLICATION FOR UNORTHODOX LOCATION FOR
SCHARB COMMUNITIZED NO. 1 WELL

EFFECTIVE DATE: OCTOBER 1, 1977

OPERATOR LEASE AND WELL NUMBER	COMPLETION DATE	COMPLETION INTERVAL	POTENTIAL TEST INFORMATION OIL, B/D AND METHOD	GOR	WATER, B/D	CUMULATIVE OIL RECOVERY AT 10-1-77	POROSITY, PERCENT	CONNATE WATER SATURATION, PERCENT	PAY THICKNESS NET	 GROSS	RATIO, NEP/G.P.	OOIP S.T. BBLS ACRE	 S.T. BBLS 80 ACRES	EUR, BBLS FROM PERFORMANCE	ESTIMATED OIL R.F. = EUR ÷ S.T. BBL/80 ACRES
BIG SIX DRILLING COMPANY															
Hooper B No. 1	9-08-63	10,111-131	480 F	-	-	516,826	7.6	18	41	62	0.66	12,481	998,480	573,800	0.57
EXXON CORPORATION															
Charles F. Alves No. 1	1-14-64	10,105-125 10,144-159	111 P	721	2	174,764[3]	5.8	28	37	56	0.66	7,605	608,369	443,600*	0.73
Charles F. Alves No. 2	7-24-64	10,109-136	154 F	669	-	553,094[4]	6.4	29	40	45	0.89	8,847	707,754	443,600*	0.63
GULF OIL CORPORATION															
Lea State NU No. 1	3-13-69	10,222-232	100 P	-	-	65,438	6.8	29**	11	13	0.85	2,608	208,613	101,900	0.49
READ & STEVENS, INC.															
Hooper No. 1	5-31-68	10,145-165	150 P	647	-	254,871	8.4	27	24	43	0.56	7,334	586,720	317,800	0.54
Hooper A No. 1[2,7]	4-11-69	10,127-132	164 P	TSTM	-	57,560	7.5	35	17	28	0.61	4,034	322,720	70,530	0.22
Hooper B No. 1[5]	1-05-70	10,214-221	-	-	-	-	5.0	52	6	24	0.25	707	56,560	-	-
Hooper-Standard No. 1[6]	4-09-64	10,140-176	75 P	438	150	31,125	5.8	28	26	52	0.50	5,384	430,720	31,125[6]	0.07[6]
Marathon-State No. 1	12-16-68	10,139-156	180 P	TSTM	-	167,375	10.8	19	21	27	0.78	8,979	718,320	237,800	0.33

[1]
[2]At an estimated economic limit of production of 50 barrels of oil per well per month at October 1, 1977.
[3]Well has been plugged and abandoned due to casing failure; cumulative oil production at October 1, 1977 = 57,560
[4]Last production November, 1972.
[5]Last production August, 1974.
[6]Well completed in Queen May 22, 1970. Never completed in Bone Spring.
[7]Last production April, 1970.
Pay not completely penetrated, they just drilled into it.
*Mean of three wells on Exxon Alves Lease that have been productive from the Bone Spring formation.
**No resistivity log run. No data available from which to calculate sw. Value shown estimated from median of that calculated from other wells.

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
APPL. EXHIBIT NO. 10
CASE NO. 6176

SIPES, WILLIAMSON & AYCOCK, INC.
1100 GIHLS TOWER WEST MIDLAND, TEXAS 79701
WM. P. AYCOCK, P.E./pk MARCH 6, 1978

CASE 6175: Application of Petroleum Corporation of Texas for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation through the open-hole interval from 3000 feet to 3258 feet in its Jenkins "B" Fed. Well No. 1 located in Unit E of Section 20, Township 17 South, Range 30 East, Grayburg-Jackson Pool, Eddy County, New Mexico.

CASE 6176: Application of Read & Stevens, Inc., for an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Scharb Com Well No. 1 located in the center of Unit J of Section 7, Township 19 South, Range 35 East, Scharb-Bone Spring Pool, Lea County, New Mexico.

CASE 6156: (Readvertised)

Application of Southland Royalty Company for an unorthodox location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its East Well No. 5A to be located 1120 feet from the North line and 1790 feet from the West line of Section 24, Township 31 North, Range 12 West, Blanco-Mesaverde Pool, San Juan County, New Mexico.

CASE 6177: Application of Texas International Petroleum Corporation for directional drilling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the directional drilling of a proposed gas well, the surface location of which would be 1650 feet from the South line and 1800 feet from the East line of Section 29, Township 20 South, Range 30 East, Golden Lane Field, Eddy County, New Mexico, in such a manner as to bottom said well in the Morrow formation within 100 feet of a point 1980 feet from the North line and 1985 feet from the West line of said Section 29, the N/2 of the Section to be dedicated to the well.

CASE 6178: In the matter of the application of the Oil Conservation Commission of New Mexico upon its own motion for an order creating and extending certain pools in Chaves, Eddy, Lea, and Roosevelt Counties, New Mexico, and the assignment of a discovery allowable in Eddy County, New Mexico.

(a) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the Alacran Hills-Atoka Gas Pool. The discovery well is the Read and Stevens, Inc. WR State Com Well No. 1 located in Unit X of Section 6, Township 21 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 27 EAST, NMPM
Section 6: Lots 9, 10, 15, 16 & SE/4

(b) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the West Malaga-Atoka Gas Pool. The discovery well is the HNG Oil Company Valdez 5 Com Well No. 1 located in H of Section 5, Township 24 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 28 EAST, NMPM
Section 5: E/2

(c) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the Palmillo-Wolfcamp Pool, and assign 43,300 barrels of discovery allowable to the discovery well, Southland Royalty Company Palmillo State Well No. 1 located in Unit G of Section 32, Township 18 South, Range 29 East, NMPM. Said pool would comprise:

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM
Section 32: NE/4

(d) CREATE a new pool in Chaves County, New Mexico, classified as an oil pool for San Andres production and designated as the Railroad Mountain-San Andres Pool. The discovery well is the Harlow Corporation Graves Well No. 1 located in Unit F of Section 11, Township 8 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 8 SOUTH, RANGE 28 EAST, NMPM
Section 11: NW/4

(e) EXTEND the Angell Ranch-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

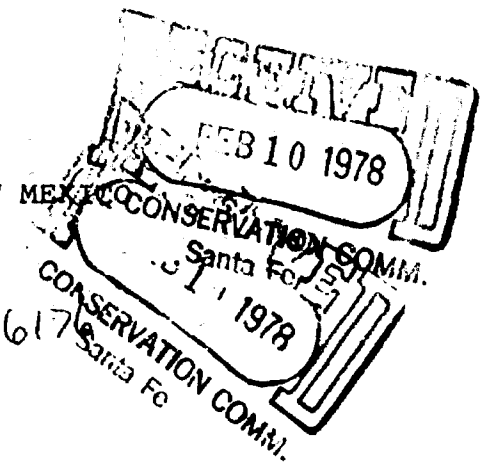
TOWNSHIP 19 SOUTH, RANGE 28 EAST, NMPM
Section 31: All

(f) EXTEND the Avalon-Strawn Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 27 EAST, NMPM
Section 31: S/2
Section 32: S/2

BEFORE THE

OIL CONSERVATION COMMISSION OF NEW MEXICO



APPLICATION OF READ & STEVENS, INC., FOR AN ORDER APPROVING AN UNORTHODOX OIL WELL LOCATION, SCHARB BONE SPRING POOL, LEA COUNTY, NEW MEXICO

Case 617

A P P L I C A T I O N

COMES NOW, Read & Stevens, Inc., and applies to the Oil Conservation Commission of the State of New Mexico for the approval of an order authorizing an unorthodox oil well location designated the Read & Stevens #1 Scharb Com. located 1980 feet from the South line and 1980 feet from the East line of Section 7, Township 19 South, Range 35 East, Scharb Bone Spring Pool, Lea County, New Mexico, as an exception to the field rules of said Pool. In support thereof Applicant would show the Commission:

1. Applicant is the owner of the right to drill for, develop and produce from the Bone Spring formation in W/2 SE/4 Section 7, above Township and Range and is drilling to an approximate depth of 10,200 feet.

2. Unless Applicant is granted approval of an unorthodox location as proposed herein, it will be denied its right to obtain its just and equitable share of the hydrocarbons underlying its lands.

3. Approval of the Application will result in the recovery of hydrocarbons that probably would not otherwise be recovered, will prevent waste, and correlative rights of the other owners in the area will be protected.

THEREFORE Applicant requests that this matter be set for hearing before the Commission, or before the Commission's duly appointed examiner on Wednesday, March 8, 1978, and that after notice and hearing as required by law, the Commission enter its order approving an unorthodox location for Bone Spring production as requested above.

Respectfully submitted,

Donald G. Stevens
Attorney for Applicants

BEFORE THE

OIL CONSERVATION COMMISSION OF NEW MEXICO

APPLICATION OF READ & STEVENS, INC., FOR AN ORDER APPROVING AN UNORTHODOX OIL WELL LOCATION, SCHARB BONE SPRING POOL, LEA COUNTY, NEW MEXICO

Case 6176

A P P L I C A T I O N

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1. Applicant is the owner of the right to drill for, develop and produce from the Bone Spring formation in W/2 SE/4 Section 7, above Township and Range and is drilling to an approximate depth of 10,200 feet.

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Respectfully submitted,

Donald G. Stevens
Attorney for Applicants

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO 6176

Order No. R- 5672

APPLICATION OF READ & STEVENS, INC.
FOR AN UNORTHODOX GAS WELL LOCATION,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 8, 1978, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this ____ day of March, 1978, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Read & Stevens, Inc., seeks approval of an unorthodox gas well location 1980 feet from the South line and 1980 feet from the East line of Section 7, Township 19 South, Range 35 East, NMPM, to test the Bone Spring formation, Scharb-Bone Spring Pool, Lea County, New Mexico.

(3) That the W/2 SE/4 of said Section 7 is to be dedicated to the well.

(4) That a well at said unorthodox location will better enable applicant to produce the ~~gas~~ oil underlying the proration unit.

(5) That no offset operator objected to the proposed unorthodox location.

(6) That approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of the gas in the subject pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That an unorthodox gas well location for the Bone Spring formation is hereby approved for the Read & Stevens, Inc., Scharb Com Well No. 1 ~~for a well to be~~ located at a point 1980 feet from the South line and 1980 feet from the East line of Section 7, Township 19 South, Range 35 East NMPM, Scharb-Bone Spring Pool, Lea County, New Mexico.

(2) That the W/2 SE/4 of said Section 7 shall be dedicated to the above-described well.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.