

Case No.

487

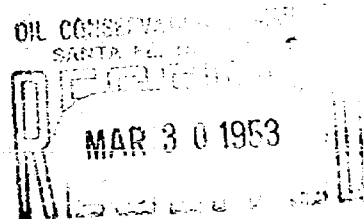
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CASE 487: C. H. Sweet application for un-
orthodox location in SE SE 23-185-37E
(in the Hobbs Pool)

BEFORE THE
OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO

Santa Fe, New Mexico
March 17, 1953

TRANSCRIPT OF HEARING
CASE NO. 487



ADA DEARNLEY & ASSOCIATES
COURT REPORTERS
ROOM 105-106, EL CORTEZ BLDG.
PHONES 7-9645 AND 5-9546
ALBUQUERQUE, NEW MEXICO

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

March 17, 1953

In the Matter of)
Case 487)

TRANSCRIPT OF HEARING

MR. SPURRIER: The next case on the docket is case 487.

(Notice of Publication read by Mr. Graham)

MR. SPURRIER: Is there anyone to appear in this case.

If not, I will read a letter into the record submitted by W. D.
Girand, Jr. of Neal and Girand, representing C. H. Sweet:

"Oil Conservation Commission,
Santa Fe, New Mexico.

Attention: Mr. R. R. Spurrier

Gentlemen:

Confirming my phone conversation of this date,
please consider this letter our request for an in-
definite continuance of Case No. 487, being the
application of C. H. Sweet for permission to drill
an unorthodox well in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 23,
Township 18 South, Range 37 East, N.M.P.M., Lea
County, New Mexico,

We are waiting on further performance of another
well in the area before determining whether we wish
to continue to prosecute this application as amended
at the hearing."


MR. SPURRIER: Is there any objection to Mr. Girand's
motion. If there is no objection, the case will be continued in-
definitely.

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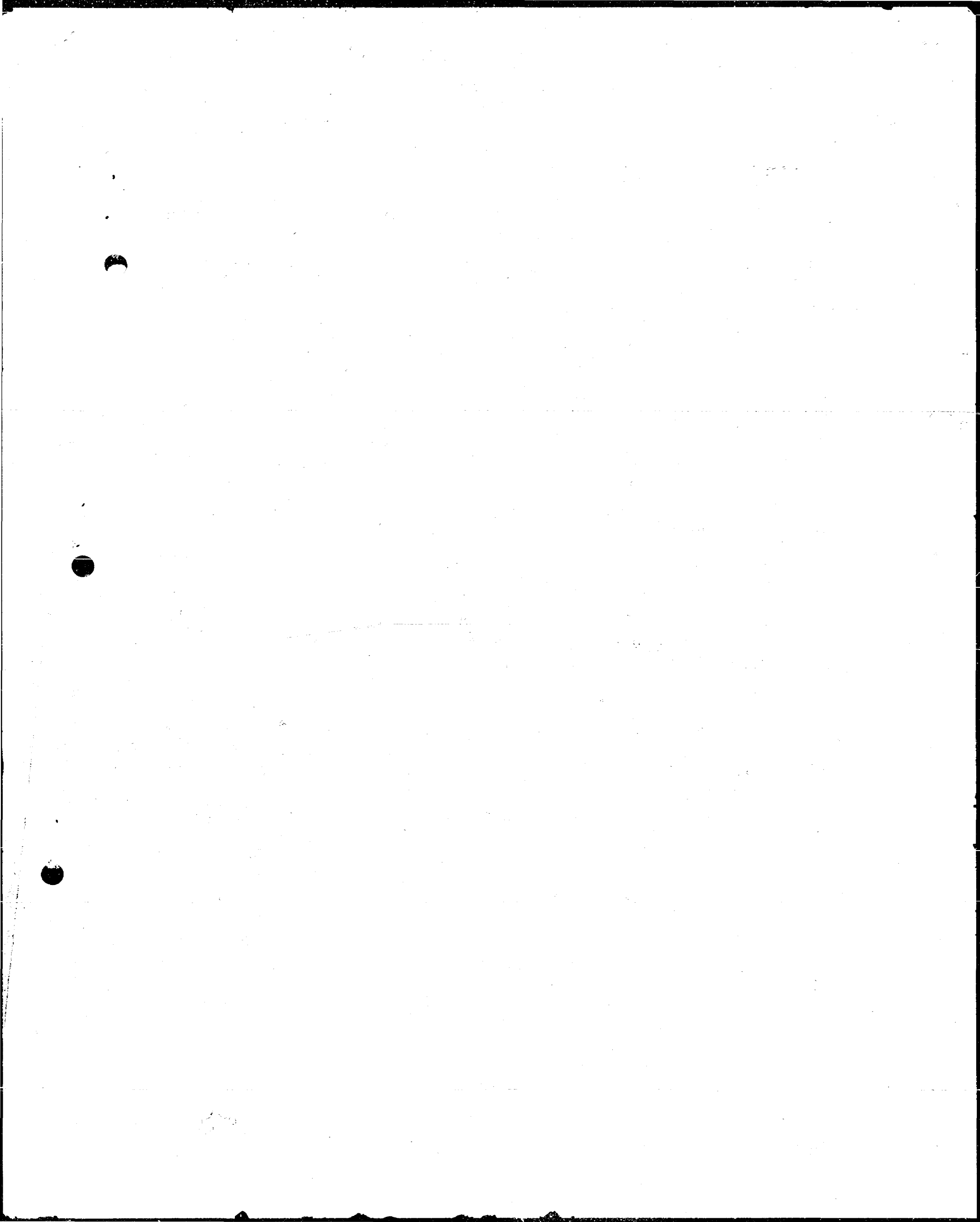
MR. SPURRIER: Now, for the reason that cases 521 and 522 are of general interest, we will move those up on the docket. We will take case 521 as the next case on the docket.

REPORTER'S CERTIFICATE

I, ADA DEARNLEY, Court Reporter, hereby certify that the foregoing pages, numbered 1 and 2, constitute a complete and accurate record of the proceedings before the Oil Conservation Commission of New Mexico, in case No. 487, on March 17, 1953, to the best of my knowledge, skill and ability.


REPORTER

ADA DEARNLEY & ASSOCIATES
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ALBUQUERQUE, NEW MEXICO



BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

TRANSCRIPT OF HEARING

CASE NO. 487

FEBRUARY 17, 1953

E. E. GREESON
ADA DEARNLEY
COURT REPORTERS
BOX 1302
PHONES 5-9422 AND 5-9546
ALBUQUERQUE, NEW MEXICO

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

February 17, 1953

In the Matter of:

Application of C. H. Sweet for permission to
drill well in unorthodox location 1315 N of
S line and 5 feet W of E line (SE SE) 23-18S-
37E, NMPM, Lea County, in the Hobbs Pool.

No. 487

TRANSCRIPT OF HEARING

(Mr. Graham reads the notice of publication.)

MR. GIRAND: If the Commission please, I would like for
the record to show Neal and Girand appearing for the applicant
C. H. Sweet. I would like to make this introductory remark that
notice has been given to all of the adjacent leasehold owners
of leases adjacent to this property, being the Samedan Oil Com-
pany, the Continental Oil Company, the Skelly Oil Company, Stano-
lind Oil and Gas Company, who are owners and holders of leases
adjacent to the drilling site. Those notices were sent out on
January the 28th, and we have received no reply, either consent-
ing or objecting to our proposed unorthodox location. I would
like to have Mr. Donnell sworn, please.

W. R. DONNELL,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

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By MR. GIRAND:

Q State your name, please.

A W. R. Donnell.

Q Where^{do}/you live? A Midland.

Q What business are you engaged in?

A Consulting geologist.

Q With the firm of Donnell and Berger?

A Yes.

Q Consulting geologists? A Yes.

Q Have you ever testified before the Commission?

A Yes, sir.

MR. GIRAND: Is the Commission satisfied with the qualifications of the witness?

MR. SPURRIER: Yes, they are acceptable.

Q You were employed by C. H. Sweet for the purpose of fixing a well-site on the southeast, southeast of Section 23, Township 18, Range 37 East?

A Yes.

Q Did you prepare a written report in that matter?

A Yes, sir.

MR. GIRAND: I would like to have this marked as an Exhibit.

(Marked Exhibit No. 1, case 487, for identification.)

Q I hand you an instrument marked Exhibit 1 in case 487. Will you take this report and advise the Commission whether or not that is the written report that you made to Mr. Sweet in regard to the location of the well to test the sand and drifts.

A Yes.

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Q Would you read the report into the record, please?

A "The requested location 1315 feet North of the South line and 5 feet West of the East line of Section 23, Township 18 South, Range 37 East, Lea County, New Mexico, is situated on the Southwest flank of the Northwest-Southeast trending, Hobbs Anticline. The accompanying plat is a detail contour map of the immediate area, contoured on the top of the San Andres.

"A well drilled at a normal location on the 40 acre tract of the Northeast quarter of the Southeast quarter of the Southeast quarter of Section 23 would anticipate the San Andres formation at a sea level datum of -560. Since the dip of the western flank of the Hobbs structure is relatively steep a well drilled at the proposed location will encounter the San Andres at a sea level datum of approximately -535 or some 25 feet above the expected San Andres at a normal location. (See plat)

"It was originally believed that the oil-water contact for the uppermost Hobbs producing zone in this area was at a sea level datum of -510. The basis for this belief was established in the Shell #1 State Sloan "E", a well drilled 990 feet North of the Sweet #1-A Shell State. The Shell #1 State Sloan "E" encountered the top of the San Andres formation at a sea level datum of -510 and after a penetration of 30 feet, the first test taken in this formation encountered water. Subsequent drilling in the area and a detailed study of the Hobbs porous zones, now show that a 30 foot penetration of the San Andres will encounter a second porous zone which is known to carry water at a sea level datum of -427 in the Sweet #1-A Shell State. The lack of water in the upper Hobbs zone at a sea level datum of -513 was established with the completion of the Sweet #3-A Shell State. This well completed at a total depth of 4191 (-513) in the upper San Andres zone, found no water in a section acidized from 4183 to 4191. It therefore can be concluded that the water found in the Shell #1 State Sloan "E" came from a lower porous zone and that the water-oil contact in the uppermost porous zone in this section of the Hobbs Pool has not been established.

The Hobbs Pool has long been known as an excellent water drive field and while present drilling has found no water in the upper zone, it is useless to ignore the fact that water can be expected in this zone by any well located structurally lower than wells now producing. Since the upper porous zone of the Hobbs field in this area has a thickness of only 8 to 12 feet, 25 feet of structural relief could easily be the difference between a commercial producing well and a dry hole.

"In view of the facts that:

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(1) While no definite water has been found in the Hobbs upper porous zone in this section of the field - it is certain that since Hobbs is a prime example of a water drive field, water will be encountered in this zone at some lower point on a structure.

(2) Due to the steep dip of the western flank of the Hobbs structure a well drilled at the proposed location will be some 25 feet higher and much less likely to encounter water in the upper zone than a well drilled at a normal location on the 40 acre subdivision in question, (See Plat)

(3) Requests for similar locations have been granted in the past. (See Samedan #4-C on plat)

It is urgently requested that a special permit be granted to drill a well to test the upper San Andres porous zone on the 40 acres comprising the NE/4 of the SE/4 of the SE/4 Section 23, Township 18 South, Range 37 East at a location of 1315 feet from the south line and 5 feet west of the east line of said Section 23."

Q Mr. Donnell, as a matter of fact, is it your opinion that for the drilling of a well, unorthodox well, that it will be structurally lower than in the location you have designated here?

A Definitely. I think that the contours show that definitely. We have pretty good control right there in that area. It will be definitely lower.

Q The probability of encountering water in great quantities will be greater in the pay horizon than drilling in the orthodox location?

A Yes, that is right.

Q In designating this location, you did follow a pattern established by the Samedan Oil Company in their State 4 well?

A Yes.

Q It is on state land too, is it not?

A That is correct.

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MR. GIRAND: I believe that is all.

MR. SPURRIER: Anyone else have a question of this witness?

MR. KELLAHIN: I represent the Samedan Oil Company. I would like the record also to show Oliver Seth of Seth & Montgomery representing Samedan Oil Company. I have a few questions.

By MR. KELLAHIN:

Q Mr. Donnell, in referring to your plat showing the contour lines, would you state to the Commission what controls you used?

A Yes.

Q You stated you had good controls--state what they were.

A We used electric logs and also samples of well cuttings and we used the top of the white line which is considered the top of the San Andres in that area. It is a clean-cut point. We have wells there to the east and to the southeast and to the northwest.

Q Did you use then the tops of the formations as determined by those wells?

A That is right.

Q Then you projected them down here into the Sweet location, is that correct?

A Yes.

Q There are no controls in that immediate area?

A Not to the west, no, but you have a pretty good pattern set there between your lines.

Q According to your testimony, Mr. Donnell, you said that this was a steep dip. Is that reflected on the contour intervals shown on your map?

A Yes, sir, it is pretty deep dip. You have roughly 40 feet there in a quarter of a mile.

Q Approximately, could you say approximately what percentage dip it is?

A What percentage.

Q Have you figured it out on a percentage basis?

A I don't quite follow.

Q I mean degree, I am sorry, what is the degree of the dip?

A No, I didn't figure it out on that.

MR. SPURRIER: You could figure it?

MR. GIRAND: Yes.

A Yes.

MR. GIRAND: it is a matter of mathematics. He can figure it out.

MR. SPURRIER: Let him figure it.

MR. KELLAHIN: I will withdraw the question.

Q At what contour level then, based on your map, do you expect to encounter production?

A What was that?

Q At what contour level then, based on your map, do you expect to encounter production?

A We expect to encounter it there at a -35.

Q You set your proposed location above 540, is that correct?

A That is right.

Q Based on that in reference to your Exhibit A, what productive area would you have there?

A What productive area?

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Q Yes.

A You mean what thickness?

A Yes.

A You wouldn't -

Q (Interrupting) I mean between your contour level, productive area on surface acreage basis.

A Well, we don't know exactly because we don't know what the oil water contact is in the upper zone. What we are trying to do is to go in there and get as high as possible to insure production.

Q You do testify that you would not expect to get it in a normal location then?

A It is quite possible that we wouldn't know. You couldn't say that you wouldn't because we don't know.

Q Then, is it your testimony that in your opinion the productive area would like somewhere between 330 feet from the line and the line?

A I would think that you had a much better possibility of encountering commercial production, yes, sir.

Q Mr. Donnell, in regard to the proposed location, could you give the Commission an idea of what area you would expect to drain?

A No.

Q You have testified that there is a steep slope, are you familiar with drilling operations?

A Somewhat, yes.

Q Could you say how much percentage of deviation it would take assuming you are going to drill to 4200 feet to get your

well off the lease?

A Well, of course, that is not my problem exactly. Our problem is to locate the most favorable spot on the 40 acres.

Q You are assuming, of course, that you could drill a straight hole, is that correct?

A No, I am not assuming anything. All I say is that that is the best location to drill.

Q What insurance can you give us that the well at the bottom of the hole would be on the Sweet lease?

A Well, I would say that was a problem for the driller, not the geologist.

Q Is it not true, Mr. Donnell, that on a rotary drill the bit would be inclined to go up structure?

A What is that?

Q Isn't it true that on rotary drilling the bit is inclined to go up structure, not down?

A In some formations, that is the case.

Q How much deviation would it take to get over on the Samedan lease?

A It would take a very small deviation.

Q You have referred to the Samedan #4 as being the precedent for this location?

A Yes.

Q Is that adjoining another lease or are you familiar with that?

A What is that?

Q Are you familiar with the Samedan lease?

A Yes, sir.

Q Is that one lease or are there other properties involved there? Is it not what you would consider an inside location?

A That is right, it is an inside location.

Q Which is not the same as your situation, is it?

A No.

Q You own the property to the north, do you not? I mean the applicant owns the property to the north?

A Yes.

Q In getting on this location did you consider the possibility of pooling the productive acreage with that tract?

A Do what?

Q Did you consider the possibility of pooling your present location, the productive area therein with the tract to the north as a means of securing your proportionate share of the oil under that lease?

A I don't quite follow you there.

Q Well, Mr. Donnell, your present location would not drain the entire 40; according to your application a well in an orthodox location would not be productive then from that, assuming that the productive area is going to be something of a triangle up here in the northeast portion of that quarter. Have you considered pooling that portion with the 40 to the north rather than drilling a well in this location? Would it be feasible to do that?

A Maybe I am a little dense. I don't quite get what you are driving at.

Q I don't know how to make it any clearer.

A I am testifying on the geological advantages of this location.

Q You are not testifying after the production from this well?

A No.

Q Or the productive area?

A No.

Q Mr. Donnell, what contour goes through the 330 location?

A -560.

Q You say that you do not think that would be a productive area?

A I think that the chances would be much greater of encountering commercial production if you got up 20 feet higher on the structure.

Q Assuming that it would not be productive, that your chances are very low, assuming that a 330 location would not be productive, then would you say that the entire 40 acres is productive area?

A I would say that the possibility exists. Since you don't know the oil water content, there is no way of absolutely knowing.

Q Well if you don't know the oil water content, then why did you pick this location?

A To get as high on production as possible to decrease the chances of encountering that water.

Q Is it your testimony that in your opinion the entire 40 acres may be productive?

A I say the possibility exists. We don't know.

Q Referring to the Samedan B No. 1, it was your testimony that you encountered water in the San Andres?

A The what?

Q The Samedan B No. 1, didn't you testify that you encountered water in the San Andres?

A I don't believe I mentioned the Samedan B No. 1.

Q I am sorry. Mr. Donnell, in the application, the applicant stated that in all probability the applicant will be unable to encounter the San Andres pay in the normal location. Do you agree or disagree with that?

A I say that those chances are pretty good.

Q What do you mean, pretty good?

A That they won't encounter the pay. I guess you don't quite understand. We are more or less shooting in the dark right along with you all there. What we want to do is to increase our chances by betting up structure, of getting some more.

Q But in your application you say in all probability it would not be productive. Just for the sake of progress here, if we assume from the statement in the case that the normal production is not productive, would you say what surface area of that 40 acres would be considered productive?

A Well, we are just going around in circles.

Q Can't you answer that question?

A Well, I have said that we don't know how much of it is going to be productive.

Q I am asking you to assume that at the normal location,

it will not be productive. I am not asking you to testify that it won't be but assuming that it won't, can you say then what area of the 40 acres would be productive?

A I don't think we have enough information to say that.

MR. SETH: I believe the witness is deliberately evading the question. It is capable of a definite answer. I believe we are entitled to a definite answer from the witness. We asked for an estimate or approximation of the surface acreage.

MR. GIRAND: I have enjoyed the cross examination as much as the Commission has. We are dealing in a realm of unknowns. We are asking for a location here in a spot where the most likely chances of production can be encountered. We don't know, if we knew it was guaranteed and Mr. Donnell would guarantee production at an orthodox location, we wouldn't be in here. There is no guarantee. When you ask the man a hypothetical question, that assuming that half the acreage won't be productive or you won't produce below a contour line of -560, you look at the map and see what portion of a 40-acre subdivision might produce.

MR. KELLAHIN: That is the question I am asking, if the Commission please, why the applicant's own application stated in all probability they would not encounter production at a normal location. Now we are trying to fix the basis of that. What proportion of oil they are claiming. I think it is material to the case.

MR. GIRAND: For the purpose of the record, we are stating all the oil under the 40 acres that we can get anywhere we

can get it.

MR. SPURRIER: Are you testifying, Mr. Girand?

MR. GIRAND: No, I just answered his question.

MR. SPURRIER: The Commission believes that the witness probably has an opinion and we would like to have that opinion in this case.

A Well, I don't see how you could form a definite opinion when you don't know how much of that will be productive. We don't know where the oil and water contact is. If the oil water contact is at -560 you won't have but probably that triangle up there, that is productive. If the oil water is down at 58, possibly half, then could be. If lower than that, then the whole 40. By MR. KELLAHIN:

Q You are testifying if the oil water contact is at 550 only that small triangle up there in the corner would be productive, is that correct?

A Yes.

Q What portion of the 40 would that amount to approximately, can you give it to us in acreage?

A Well, if a quarter of it would be productive it would be ten acres. If a quarter of it were productive, it would be ten acres.

MR. KELLAHIN: That is all.

RE-DIRECT EXAMINATION

By MR. GIRAND:

Q Mr. Donnell, your proposed well is still 1320 feet from the nearest Samedan well, is it not?

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A Yes.

MR. GIRAND: That is all.

MR. SPURRIER: What allowable would you expect from this well if the location were granted, Mr. Donnell?

A Well, I think that would be set by whatever the State allows on 40 acres.

MR. SPURRIER: In other words, an ordinary top unit allowable?

A Yes, I would think so.

MR. SPURRIER: For that depth?

A That is right.

MR. SPURRIER: Does anyone else have a question of this witness?

MR. KELLAHIN: I would like to ask another question if I may.

RE-CROSS EXAMINATION

By MR. KELLAHIN:

Q Are you familiar with the Sweet 3-A?

A Yes.

Q Is that completed in the San Andres?

A We penetrated the first zone of the San Andres, yes.

Q Is that closer to the proposed location than the Samedan No. 4 well to which you referred?

A Well, let's see, that would be 330, yes it would be.

Q It would be closer?

A Yes.

Q So the nearest well would be the Sweet, your own well?

Q Do you know why that well was not drilled farther up structure?

A Yes, we had pretty good control there. We figured that we would get in there and get that. What we are trying to do is skim the top of that thing. These are edge wells now. You have to go in there and treat them with kid gloves.

MR. KELLAHIN: That is all.

MR. SPURRIER: Any other questions of this witness?

MR. HILTZ: I would like to ask a few questions.

By MR. HILTZ:

Q Do you recognize the fact that in petroleum engineering practice that most people subscribe to the theory of ^{radial} radio drainage of oil from the well reservoir, isn't that correct?

A The what?

Q That a well in draining the oil from the reservoir, drains oil from what approximates a ^{radial} radio pattern?

A I am not an engineer, I don't believe --

Q You don't have to be an engineer to recognize that. Do you subscribe to that theory?

A It is an accepted theory.

Q Well, with a well in a location five feet from a line, wouldn't it be reasonable to assume that the large percentage of oil coming from your well would have to come from property offsetting to the east?

A Well, of course, we would get in a problem there, by 330, too, how much of that goes across a line.

Q 330 is an accepted location.

A Yes.

Q A well five feet from the line actually places you in the position of confiscating the other property.

A It puts you closer.

Q It gives you a drainage advantage at that location on the structure, doesn't it? Do you care to answer the question?

A Yes, it puts you closer to it.

Q That was not my question. I asked if it gives you a drainage advantage at that location on the structure?

A I wouldn't think it gave you any more advantage than the other guy across the fence had.

MR. HILTZ: That is all I have.

By MR. MACEY:

Q Has the fact been established that the upper porous zone in this area is a definite water drive?

A Has it been established?

Q Yes.

A I don't believe it is a definite fact that has been established, no. We haven't encountered any water in this area.

Q Do you know whether that holds true over the whole Hobbs Anticline where the upper zone is under the influence of the water drive, there is no communication between the upper and lower zone, is there?

A No.

Q Is it your opinion that it is under a water drive?

A I think we can assume that since the other zones are.

MR. SPURRIER: Anyone else?

By MR. GEORGE TRIMBLE:

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Q Was there a calculated risk in drilling your No. 3?

A Calculated risk?

Q I mean, was there a risk in drilling those wells?

A Yes, certainly there was.

MR. SPURRIER: Anyone else. If not, the witness may be excused. Thank you, Mr. Donnell. Anyone have any comments?

R. S. DEWEY: R. S. Dewey, representing Humble Oil and Refining Company. I listened to the testimony in this case, I can't say that the correlative rights of the other operators in this area will be adequately protected by granting of a full 40-acre allowable that is drilled within five feet of a lease line. The testimony did not disclose where the bottom of this well might be or any provision that might be taken to survey the course of the well that was drilled, or determine the location of the bottom of the hole. For that reason we are opposed to the granting of this petition.

MR. SPURRIER: Anyone else?

MR. HOLLOWAY: Mr. J. B. Holloway, Tide Water Associated Oil Company. We would like to concur in the observation made by Mr. Dewey. I might add that the granting of this application can possibly set a precedent and make the oil business in New Mexico more hazardous than it should be. You never know whether someone is going to be able to come in and complicate your property or not.

MR. SPURRIER: Anyone else?

MR. RAY: C. J. Ray with The Texas Company. The evidence in this case to our opinion hasn't shown that the applicant

will be able to bottom his well under his own property, nor has he made any provision for a survey, and due to the precedent that would be established by the granting of such a permit, the Texas Company would like to oppose the granting of this application.

MR. KELLAHIN: We would like to call one witness.

G E O R G E E. T R I M B L E,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. KELLAHIN:

Q State your name.

A George E. Trimble.

Q By whom are you employed?

A Samedan Oil Corporation.

Q What is your position?

A District petroleum engineer for the West Texas-New Mexico District.

Q You are the petroleum engineer?

A District petroleum engineer.

Q What educational qualifications have you had?

A I graduated from Pennsylvania State College in 1942. I have been responsible for the petroleum engineering work for the past seven years.

Q What was your degree?

A Bachelor of Science, in petroleum and natural gas engineering.

Q By whom have you been employed during the last 7 years?

A By The Texas Company, Bradford Oil Corporation, and Samedan.

Q In what positions?

A I was with The Texas Company, petroleum engineer. Before resigning my position, I was assistant to the District Engineer in Midland. With the Bradford Oil Company I was in charge of all drilling and production. With Samedan, I am responsible for all petroleum engineering in West Texas and New Mexico

Q Mr. Trimble, in your experience as a petroleum engineer, are you familiar with the tendency of rotary drill as to the direction it may take in the drilling?

A Yes, I am.

Q What is that?

A It is an established fact in general that in shallow dips the tendency for a rotary haul is to travel up structure. When the dip becomes in excess of probably 75 to 80 degrees the bit has a tendency to go down structure.

Q With reference to the applicant's Exhibit A in this case, if that be true, in which direction would the bit go in reference to your Samedan lease?

A If this hole were drilled the chances would be greater that the deviation would be up structure or toward the Samedan Oil Corporation lease.

Q The applicant's application state they expect to encounter the San Andres pay at 4200 feet. Would five feet or more be an excessive deviation in that event?

A No, in my opinion it would be physically impossible regardless of the number of surveys taken to drill the hole and give the Samedan Oil Corporation the assurance that the hole

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would be on the lease. The percentage error in that hole, if it started out 115 of one degree from the surface in a northeasterly direction, the bottom of the hole would be on the property line, an error of 1/10 of one per cent approximately.

Q With reference to applicant's Exhibit A, again looking at their proposed location and from testimony that a normal location would probably not be productive, their application rather than the normal location probably would not be productive, can't you estimate the productive area they would encounter in that location?

A I will have to go along with Mr. Donnell, that couldn't be pointed out now. If you don't have the reserve 330 feet back from the property line, there is only one place the reserve could come from.

Q Where would that be?

A Samedan State C Lease.

Q Is it the generally conceded opinion that normally an oil well drains radially?

A I accept that theory to be correct.

Q If that be true, the oil would come from the Samedan lease, is that correct?

A In my opinion.

CROSS EXAMINATION

By MR. GIRAND:

Q How far would you have to locate the hole, in your opinion, in order not to bother the Samedan lease?

A That would be your problem.

Q Can you express an opinion on it?

A Yes, I could.

Q Will You?

A I would say 105 feet would be your minimum distance.

MR. GIRAND: THAT IS ALL.

MR. SPURRIER: Anyone have a question of this witness?

MR. DEWEY: I would like to ask the witness a question.

By MR. DEWEY:

Q In the Hobbs Field common reservoir, although the other operators are somewhat further removed than Samedan, wouldn't they be affected also?

A In my opinion, they would.

MR. SPURRIER: Anyone else? If not, the witness may be excused.

MR. GIRAND: I would like to make one statement. I would like to amend my application and ask that the location be changed to a point west 125 feet from the east line and 1315 feet north of the south line. If the Commission will entertain that amendment, I would appreciate it.

MR. SPURRIER: How far from the south?

MR. GIRAND: 125 feet west of the east line.

MR. KELLAHIN: I think the case ought to be readvertised and re-heard due to this amendment.

MR. GIRAND: I can't see any surprise. There shouldn't be any physical facts existing on a point 125 feet that didn't exist at 105 feet. They came prepared to meet 5 feet.

MR. SCOTT: W. A. Scott, Shell Oil Company. I would

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PHONES 7-9645 AND 5-9546
ALBUQUERQUE, NEW MEXICO

like to concur with Mr. Kellahin in requesting that any amendment to the present application be set for rehearing.

MR. SPURRIER: The commission feels that the case should be readvertised in view of the amendment which you have requested. The case will be continued for a month but we think it should be readvertised.

MR. GIRAND: I believe under your order, if the Commission please, you have a right to enter any appropriate order.

MR. SPURRIER: Yes.

MR. GIRAND: (Continuing) Should our application be denied in part, I believe the advertisement would be good should the Commission see fit not to grant what we ask for but grant something that would be a compromise or equitable in the premise. For that reason, I don't believe the readvertisement would be entirely necessary. I don't know of anything else we have to offer. We are just trying to get down where we can find some oil.

MR. KELLAHIN: They ask for a ^{five-}foot location. Now they come in and change the location for which we are not prepared. The other companies may be interested. I think it should be re-advertised.

MR. SPURRIER: We feel that the thing can be handled by continuation which doesn't necessarily mean re-hearing.

MR. SCOTT: I would like to state for the record in the original case that both the applicant C. H. Sweet, and the offset operator to the east, Samedan Oil Corporation, are operating their properties under farm-out contract from Shell Oil. And therefore, we have an interest on each side of the line. Under

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these circumstances we don't intend to introduce any evidence either in support of or in opposition to the present application. However, I would like for the record to show that as a matter of basic principles and in line with the State's well regulated formula of development at the present time we are opposed to the five-foot unorthodox location as submitted by the applicant.

MR. SPURRIER: Anyone else?

MR. WOODWARD: John A. Woodward, Amerada Petroleum Corporation. In view of the amendment to Mr. Sweet's application that has now been made, some of the remarks contained in this statement may not be applicable. However, we feel an important enough principle is involved to warrant making the following statement.

Amerada Petroleum Corporation is a producer of oil and gas in the Hobbs Field, Lea County, New Mexico. It is opposed in principle to any unwarranted deviation from the spacing pattern established for the field.

Applicant in this case states that he will not, in all probability, encounter the San Andres pay if he is required to drill an orthodox location on the SE/4 SE/4 of Section 23. He therefore requests permission to drill a well five feet from the east line and five feet from the north line of this quarter section.

This application is of importance to every producer in the field, for if granted, it would create a precedent making uniform spacing throughout an oil pool in this state impossible.

The problem presented by this application is not unique. Oil fields are notorious for the fact that they do not conform to section lines, quarter section lines or other governmental subdivisions drawn out upon the surface of the land. In fact,

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each pool is enclosed by tracts of land that are partly inside and partly outside the pool.

What circumstances will justify the drilling of an unorthodox location on one of these marginal tracts has been left to the sound discretion of the Commission. It is not contended that circumstances do not exist which would justify a well location closer than 330 feet to a boundary line.

It is contended, however, that if a producer must drill a "fence corner" location 5 feet from the north and east lines of a proration unit in order to give him a reasonable chance to recover the oil and gas in place under his land, the chances are also reasonably good that he hasn't enough production in place to pay for the cost of his well.

At this point we would like to state that we do not believe any producer is entitled, as a matter of right, to any more than the oil and gas that underlies his land, and if this application is granted and a portion of tract is found unproductive for geologic reasons, then the Commission in its discretion should reduce the allowable as if this drill site were located on a fractional proration unit.

However, the only way this applicant could pay for his well is by draining his neighbor's land. But such drainage would itself be a basis for an unorthodox offset location to prevent confiscation.

The importance of this application to every producer in the pool is this: If permission is granted to drill an unorthodox location to recover the small amount of oil and gas apparently

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in place under applicant's land, then no amount of production is too small to justify unorthodox locations on other marginal tracts, and a sizeable number of fence corner locations and unorthodox offsets around the periphery of the pool would speedily destroy any semblance of a uniform spacing pattern for the pool.

To the extent it creates a precedent, a well drilled in the location proposed by this application will destroy the spacing pattern for the pool and impede orderly development. To the extent it results in the drilling of unnecessary wells, it will cause waste. To the extent it is successful in paying for itself, it will confiscate the property of others.

For these reasons, we believe the unorthodox location requested by this application constitutes an unwarranted deviation from the spacing pattern established for the pool and should be denied.

To determine whether or not these same considerations are applicable to the application as amended, the Commission has wisely reserved judgment upon a continuance of this cause.

MR. SPURRIER: Anyone else have any statements to make?

MR. HILTZ: R. G. Hiltz, Stanolind. I would like to say that we are opposed to the five-foot location as sought in the original application. We concur in Samedan's request for continuance or reharing on the amended application.

MR. SPURRIER: Anyone else?

MR. RANDOLPH: William Randolph, Continental Oil Company. We are opposed to the unorthodox location.

MR. SPURRIER: Anyone else? The case will be continued to the regular March hearing.

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PHONES 7-9645 AND 5-9546
ALBUQUERQUE, NEW MEXICO

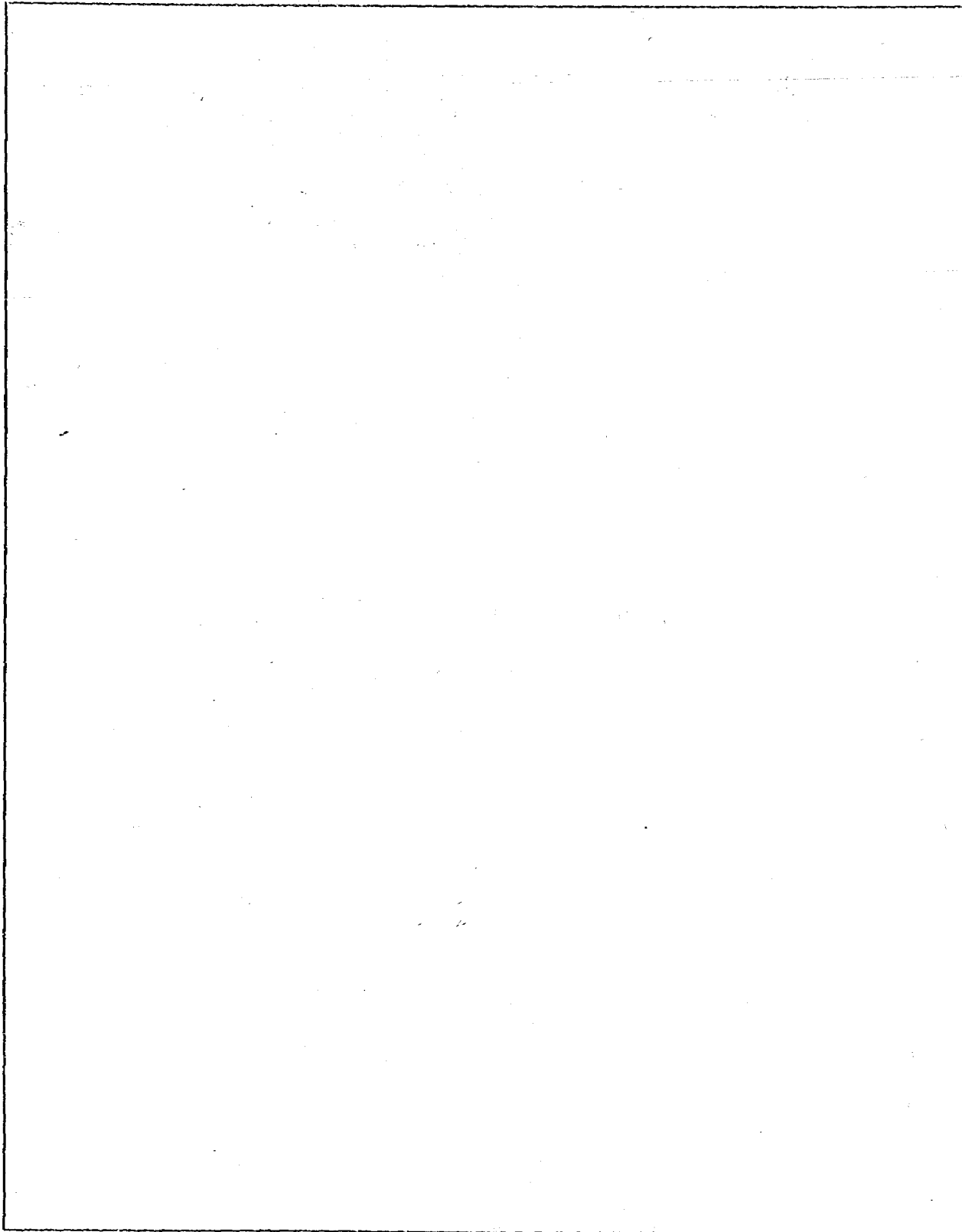
STATE OF NEW MEXICO
COUNTY OF BERNALILLO } ss.

I, ADA DEARNLEY, hereby certify that the foregoing and attached transcript of hearing in case No. 487, before the Oil Conservation Commission, Santa Fe, New Mexico on February 17, 1953, is a true and accurate record of such hearing to the best of my knowledge, skill and ability.

Dated at Albuquerque, New Mexico this 5th day of March, 1953.


REPORTER

ADA DEARNLEY & ASSOCIATES
COURT REPORTERS
ROOM 105-106, EL CORTEZ BLDG.
PHONES 7-9645 AND 5-9546
ALBUQUERQUE, NEW MEXICO



E. E. GREESON
ADA DEARNLEY
COURT REPORTERS
BOX 1308
PHONES 5-9422 AND 5-9546
ALBUQUERQUE, NEW MEXICO

C. MELVIN NEAL
W. D. GIRAND, JR.

KERMIT E. NASH
W. D. GIRAND, JR.

NEAL & GIRAND
LAWYERS
NEAL BUILDING
HOBBS, NEW MEXICO

January 28, 1953

TELEPHONES:
3-5171 3-5172
P. O. Box 1326

Oil Conservation Commission,
Santa Fe, New Mexico.

Attention: Nancy Royal

Dear Nancy:


I am here enclosing Amended Application in Cause No. 487. We have notified the companies set out in Paragraph 4 of the application, furnishing them with a copy of the application and requesting their consent to be sent direct to the Commission.

Please file this Amended Application.

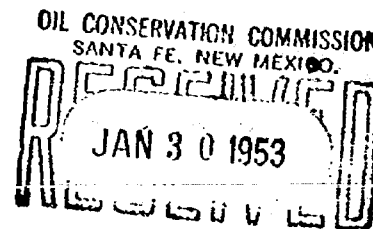
Very truly yours,

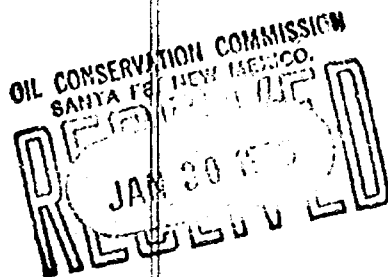
NEAL & GIRAND,

BY:



G/cl
Encls.





BEFORE THE
OIL CONSERVATION COMMISSION
OF THE
STATE OF NEW MEXICO

IN THE MATTER OF C. H. SWEET, APPLICANT
FOR AUTHORITY FOR SPECIAL PERMIT TO DRILL
AN UNORTHODOX LOCATION IN THE SE $\frac{1}{4}$ SE $\frac{1}{4}$ OF
SECTION 23, TOWNSHIP 18 SOUTH, RANGE 37
EAST, N.M.P.M., LEA COUNTY, NEW MEXICO

NO. 487

AMENDED APPLICATION

COMES NOW, C. H. Sweet and files this his amended application for a permit to drill a well in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 23, Township 18 South, Range 37 East, N.M.P.M., at a point 1,315 feet North of the South line of said section and 5 feet West of the East line of said section and for cause would show:

1. That said drilling site, to-wit: the SE $\frac{1}{4}$ SE $\frac{1}{4}$, is situated on the Southwest flank of the Hobbs Anticline and applicant proposes to drill a well to test the San Andres pay proposed to be encountered between 4,200 feet and 4,300 feet below the surface.
2. That if applicant is required to drill a normal location on said 40 acre subdivision, in all probability applicant will be unable to encounter the San Andres pay.
3. That the pattern of locating a well 1,315 feet North of the South line and 5 feet West of the East line was established by the Samedan Oil Company in its location for its No. 4 well located in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 24, Township 18 South, Range 37 East, N.M.P.M., said well being located 1,320 feet East of the proposed location of applicant as is more clearly shown by Exhibit "A" attached hereto, being a partial plat showing parts of Sections 23, 24, 25 and 26 in Township 18 South, Range 37 East, N.M.P.M.
4. That the lessees of acreage adjacent to the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 23 are as follows: Shell Oil Company to the Northwest and West, Stanolind Oil and Gas Company diagonal to the Southwest,

Skelly Oil Company to the South, Continental Oil Company diagonal to the Southeast, and Samedan Oil Company to the East and Northeast, and applicant to the North, and in this connection applicant will show that consent to the location of the proposed site has been requested of all of said companies.

WHEREFORE, applicant prays that upon hearing hereof the Honorable Commission will enter its order authorizing the drilling of a well to test the San Andres pay at a point in the $SE\frac{1}{4}$ $SE\frac{1}{4}$ of Section 23, Township 18 South, Range 37 East, N.M.P.M., 1,315 feet North of the South line of said section and 5 feet West of the East line of said section.

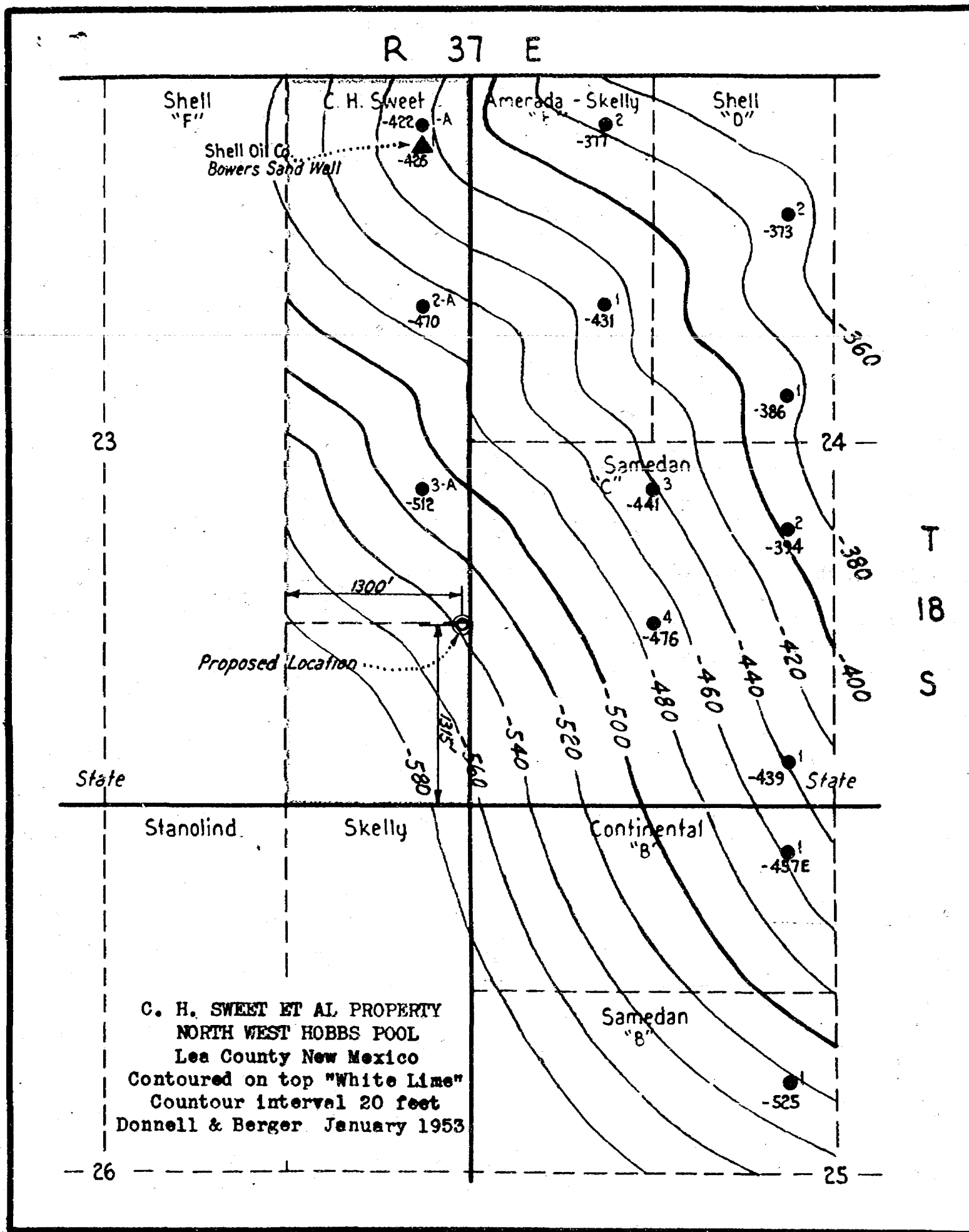
C. H. SWEET

BY


Attorney for Applicant

G/cl

EXHIBIT "A"



W. R. DONNELL

W. R. BERGER

DONNELL & BERGER
CONSULTING GEOLOGISTS
PHONE 4-8875 236 CAPITOL BLDG.
MIDLAND, TEXAS

C. H. SWEET - REQUEST FOR SPECIAL PERMIT TO DRILL

1315 feet North of the South line and 5 feet West
of the East line of Section 23, Township 18 South,
Range 37 East, Lea County, New Mexico.

Ex No 1
Case 488

W. R. DONNELL

W. R. BERGER

DONNELL & BERGER

CONSULTING GEOLOGISTS

PHONE 4-8875 236 CAPITOL BLDG.
MIDLAND, TEXAS

C. H. SWEET - REQUEST FOR SPECIAL PERMIT TO DRILL

The requested location 1315 feet North of the South line and 5 feet West of the East line of Section 23, Township 18 South, Range 37 East, Lea County, New Mexico is situated on the Southwest flank of the Northwest-Southeast trending, Hobbs Anticline. The accompanying plat is a detail contour map of the immediate area, contoured on the top of the San Andres.

A well drilled at a normal location on the 40 acre tract of the Northeast quarter of the Southeast quarter of the Southeast quarter of Section 23 would anticipate the San Andres formation at a sea level datum of -560. Since the dip of the western flank of the Hobbs structure is relatively steep a well drilled at the proposed location will encounter the San Andres at a sea level datum of approximately -535 or some 25 feet above the expected San Andres at a normal location. (See plat)

It was originally believed that the oil-water contact for the uppermost Hobbs producing zone in this area was at a sea level datum of -510. The basis for this belief was established in the Shell #1 State Sloan "E", a well drilled 990 feet North of the Sweet #1-A Shell State. The Shell #1 State Sloan "E" encountered the top of the San Andres formation at a sea level datum of -510 and after a penetration of 30 feet, the first test taken in this formation encountered water. Subsequent drilling in the area and a detailed study of the Hobbs porous zones, now show that a 30 foot penetration of the San Andres will encounter a second porous zone which is known to carry water at a sea level datum of -427 in the Sweet #1-A Shell State. The lack of water in the upper Hobbs zone at a sea level datum of -513 was established with the completion of the Sweet #3-A Shell State. This well completed at a total depth of 4191 (-513) in the upper San Andres zone, found no water in a section acidized from 4183 to 4191. It therefore can be concluded that the water found in the Shell #1 State Sloan "E" came from a lower porous zone and that the water-oil contact in the uppermost porous zone in this section of the Hobbs Pool has not been established.

The Hobbs Pool has long been known as an excellent water drive field and while present drilling has found no water in the upper zone, it is useless to ignore the fact that water can be expected in this zone by any well located structurally lower than wells now producing. Since the upper porous zone of the Hobbs field in this area has a thickness of only 8 to 12 feet, 25 feet of structural relief could easily be the difference between a commercial producing well and a dry hole.

W. R. DONNELL

W. R. BERGER

DONNELL & BERGER
CONSULTING GEOLOGISTS
PHONE 4-8875 236 CAPITOL BLDG.
MIDLAND, TEXAS

- 2 -

In view of the facts that:

(1) While no definite water has been found in the Hobbs upper porous zone in this section of the field - it is certain that since Hobbs is a prime example of a water drive field, water will be encountered in this zone at some lower point on structure.

(2) Due to the steep dip of the western flank of the Hobbs structure a well drilled at the proposed location will be some 25 feet higher and much less likely to encounter water in the upper zone than a well drilled at a normal location on the 40 acre subdivision in question. (See Plat)

(3) Requests for similar locations have been granted in the past. (See Samedan #4-C on plat)

It is urgently requested that a special permit be granted to drill a well to test the upper San Andres porous zone on the 40 acres comprising the NE/4 of the SE/4 of the SE/4 Section 23, Township 18 South, Range 37 East at a location of 1315 feet from the south line and 5 feet west of the east line of said Section 23.

DONNELL & BERGER

By: *W. R. Donnell*
W. R. Donnell

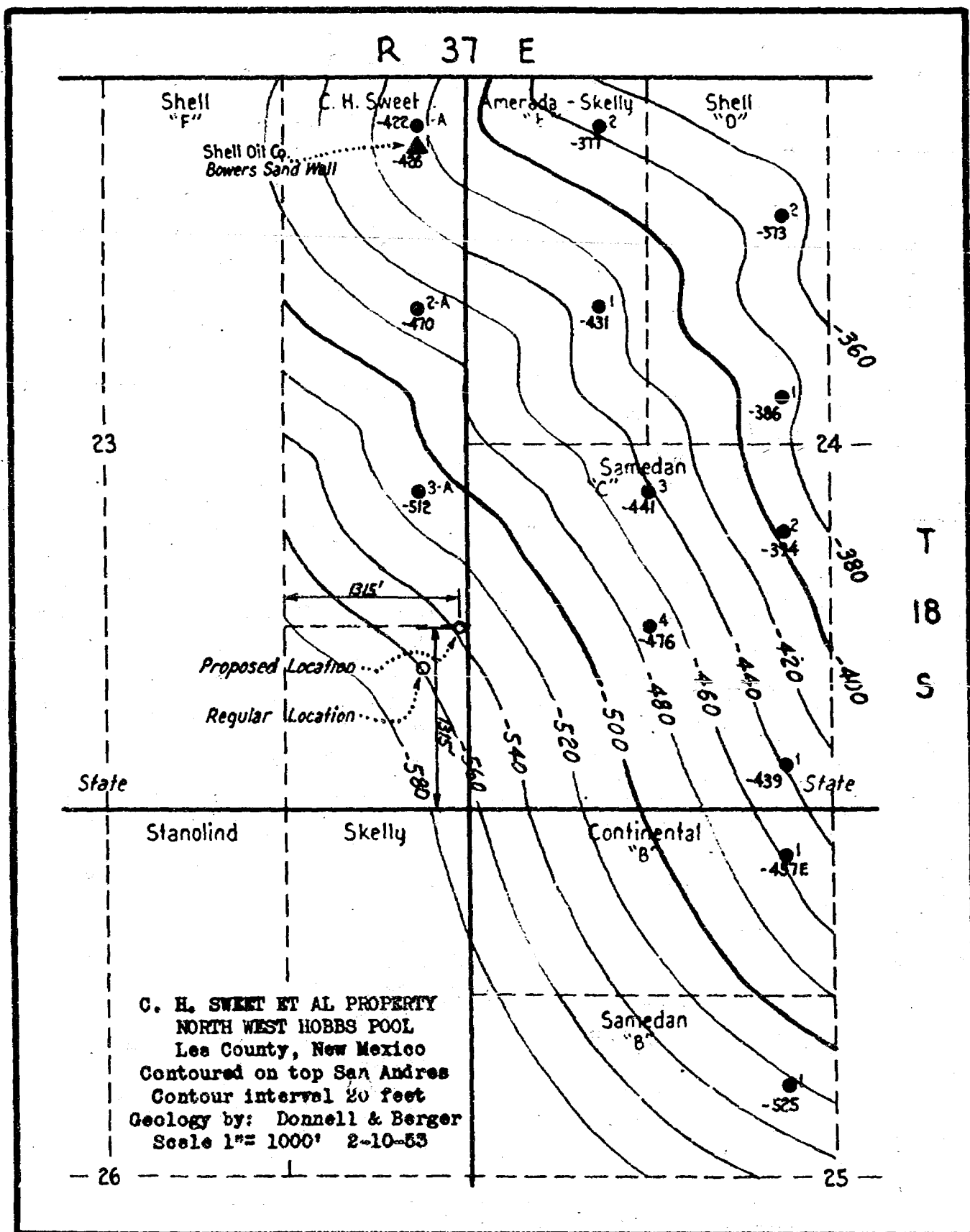
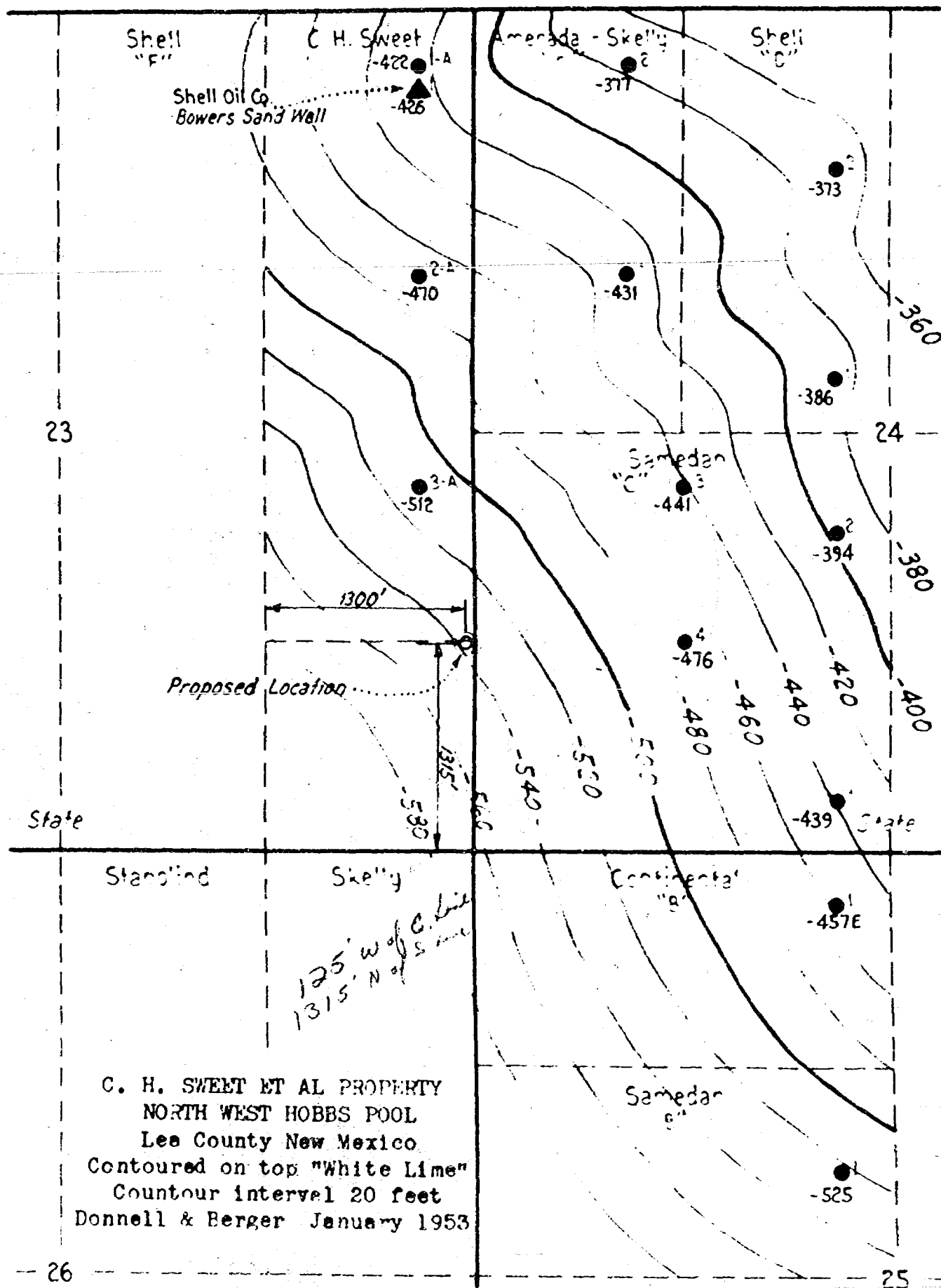


EXHIBIT "A"

R 37 E

Case 487



C. H. SWEET ET AL PROPERTY
NORTH WEST HOBBS POOL
Lee County New Mexico
Contoured on top "White Lime"
Countour interval 20 feet
Donnell & Berger January 1953

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

March 3, 1953

Mr. John A. Woodward
Amerada Petroleum Corporation
Beacon Building
Box 2040
Tulsa, Oklahoma

Re: Testimony in Case No. 487
(C. H. Sweet's application
to drill an unorthodox
location).

Dear Mr. Woodward:

During the regularly scheduled hearing of the Oil Conservation Commission on February 17, 1953, you were called to testify in the above captioned case.

It was our understanding that you would mail a copy of your testimony to the Court Reporter, Miss Ada Dearnley, Box 1302, Albuquerque, New Mexico, and in order to expedite the filing of the transcripts in this case your cooperation will be appreciated.

Very truly yours,

W. B. Macey
Chief Engineer

lh
cc: Miss Ada Dearnley

C
O
P
Y

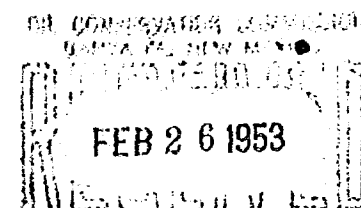
C. MELVIN NEAL
W. D. GIRAND, JR.

KERMIT E. NASH
W. D. GIRAND, JR.

NEAL & GIRAND
LAWYERS
NEAL BUILDING
HOBBS, NEW MEXICO

February 23, 1953

TELEPHONES:
3-5171 3-5172
P. O. Box 1326



Oil Conservation Commission,
Santa Fe, New Mexico.

Attention: Mr. R. R. Spurrier

Gentlemen:

Confirming my phone conversation of this date, please consider this letter our request for an indefinite continuance of Case No. 487, being the application of C. H. Sweet for permission to drill an unorthodox well in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 23, Township 18 South, Range 37 East, N.M.P.M., Lea County, New Mexico.

We are waiting on further performance of another well in the area before determining whether we wish to continue to prosecute this application as amended at the hearing.

Very truly yours,

NEAL & GIRAND,

BY: 

G/cl

cc: Mr. C. H. Sweet, Hobbs, New Mexico
cc: Mr. W. D. Donnell, 236 Capitol Bldg., Midland, Texas.
cc: Samedan Oil Company, Hobbs, New Mexico.
cc: Continental Oil Company, Hobbs, New Mexico.
cc: Skelly Oil Company, Hobbs, New Mexico.
cc: Stanolind Oil & Gas Company, Hobbs, New Mexico.
cc: Shell Oil Company, Hobbs, New Mexico.
cc: Amerada Petroleum Corporation, Hobbs, New Mexico.

C. MELVIN NEAL
W. D. GIRAND, JR.

KERMIT E. NASH
W. D. GIRAND, SR.

NEAL & GIRAND
LAWYERS
NEAL BUILDING
HOBBS, NEW MEXICO

January 22, 1953

TELEPHONES:
3-5171 3-5172
P. O. BOX 1326

Oil Conservation Commission,
Mabry Hall,
Santa Fe, New Mexico.

Attention: Nancy Royal

Dear Nancy:

I am enclosing herewith application of C. H. Sweet for authority to establish an unorthodox location as I discussed with you and Mr. Graham yesterday.

This application was given Case No. 487 in the preliminary notices you were preparing.

As soon as my engineering data is received, I propose to file an amended application.

Thanking you for your consideration and favors in this matter, I am

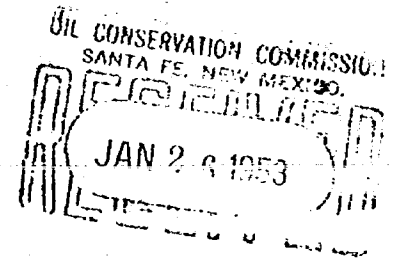
Very truly yours,

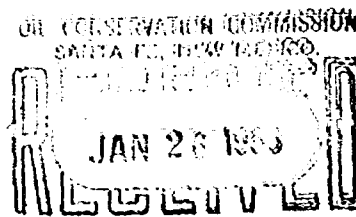
NEAL & GIRAND,

BY:



G/cl
Encls.





BEFORE THE
OIL CONSERVATION COMMISSION
OF THE
STATE OF NEW MEXICO

Case 487

IN THE MATTER OF C. H. SWEET, APPLICANT)
FOR AUTHORITY FOR SPECIAL PERMIT TO DRILL)
AN UNORTHODOX LOCATION IN THE SE $\frac{1}{4}$ SE $\frac{1}{4}$ OF)
SECTION 23, TOWNSHIP 18 SOUTH, RANGE 37)
EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.)

A P P L I C A T I O N


COMES NOW, C. H. Sweet and files this his application for a permit to drill a well in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 23, Township 18 South, Range 37 East, N.M.P.M., at a point 1,315 feet North of the South line of said section and 5 feet West of the East line of said section and for cause would show:

1. That said drilling site, to-wit: the SE $\frac{1}{4}$ SE $\frac{1}{4}$, is situated on the Southwest flank of the Hobbs Anticline and applicant proposes to drill a well to test the San Andres pay proposed to be encountered between 4,200 feet and 4,300 feet below the surface.
2. That if applicant is required to drill a normal location on said 40 acre subdivision, in all probability applicant will be unable to encounter the San Andres pay.
3. That the nearest well to the proposed location of the well herein applied for is the No. 4 well of the Samedan Oil Company, located in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 24, Township 18 South, Range 37 East, N.M.P.M., which well is 1,320 feet East of the proposed location.
4. That the Stanolind Oil and Gas Company, the Tide Water Associated Oil Company, Continental Oil Company, the Samedan Oil Company, Shell Oil Company and the applicant own all of the surrounding oil and gas leases offsetting the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 23, Township 18 South, Range 37 East, N.M.P.M.

WHEREFORE, applicant prays that upon hearing hereof the Honorable Commission will enter its order authorizing the

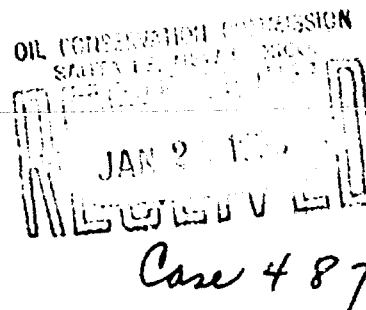
drilling of a well to test the San Andres pay at a point in
the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 23, Township 18 South, Range 37 East,
N.M.P.M., 1,315 feet North of the South line and 5 feet West
of the East line of said section.

C. H. SWEET,

BY 
Attorney for Applicant

G/cl

BEFORE THE
OIL CONSERVATION COMMISSION
OF THE
STATE OF NEW MEXICO



IN THE MATTER OF C. H. SWEET, APPLICANT
FOR AUTHORITY FOR SPECIAL PERMIT TO DRILL }
AN UNORTHODOX LOCATION IN THE SE $\frac{1}{4}$ SE $\frac{1}{4}$ OF }
SECTION 23, TOWNSHIP 18 SOUTH, RANGE 37 }
EAST, N.M.P.M., LEA COUNTY, NEW MEXICO. }

A P P L I C A T I O N

COMES NOW, C. H. Sweet and files this his application
for a permit to drill a well in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 23,
Township 18 South, Range 37 East, N.M.P.M., at a point 1,315 feet
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1. That said drilling site, to-wit: the SE $\frac{1}{4}$ SE $\frac{1}{4}$, is
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applicant proposes to drill a well to test the San Andres pay
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2. That if applicant is required to drill a normal
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3. That the nearest well to the proposed location of
the well herein applied for is the No. 4 well of the Samedan
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South, Range 37 East, N.M.P.M., which well is 1,320 feet East
of the proposed location.
4. That the Stanolind Oil and Gas Company, the Tide Water
Associated Oil Company, Continental Oil Company, the Samedan Oil
Company, Shell Oil Company and the applicant own all of the
surrounding oil and gas leases offsetting the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section
23, Township 18 South, Range 37 East, N.M.P.M.

WHEREFORE, applicant prays that upon hearing hereof
the Honorable Commission will enter its order authorizing the

drilling of a well to test the San Andres pay at a point in
the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 23, Township 18 South, Range 37 East,
N.M.P.M., 1,315 feet North of the South line and 5 feet West
of the East line of said section.

C. H. SWEET,

BY *W. H. Sweet*
Attorney for Applicant

G/cl