RECR-10
Windmill Oil

OCC Hearing
& Order

1965

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Hobbs ~~Santa Fe~~, New Mexico
April 14, 1965

REGULAR HEARING

IN THE MATTER OF:

APPLICATION OF JOSEPH O. WALTON TO REMOVE AND MARKET OIL FROM THE OGALALLA FORMATION, LEA COUNTY, NEW MEXICO

Case No. 3235

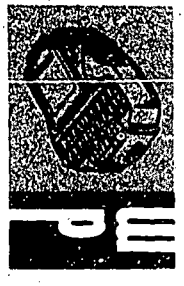
BEFORE:

GOVERNOR JACK M. CAMPBELL

SECRETARY-DIRECTOR A. L. PORTER

LAND COMMISSIONER GUYTON B. HAYS

TRANSCRIPT OF HEARING



MR. PORTER: Call Case Number 3235.

MR. DURRETT: Application of Joseph O. Walton to remove and market oil from the Ogalalla formation, Lea County, New Mexico.

MR. PORTER: I'd like to call for appearances in Case Number 3235.

MR. WALTON: Mr. Porter, my name is Joseph O. Walton. I am the applicant in this case, and I represent myself.

MR. PORTER: Are there any other appearances in Case Number 3235? ... The witness may be sworn.

* * *

J O S E P H O. W A L T O N, the witness, having been duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. WALTON: If it please the Commission, my name is Joseph C. Walton. I am an attorney, living in Lovington, New Mexico, and have lived in Lea County for approximately thirty years. I make application here this morning to salvage oil that is polluting underground water in the northwest part of the Hobbs Pool. The bound forms I have just given to each of the Commissioners, the attorney and the member of the staff are eighteen exhibits that I propose to offer, and do offer at this time. They are identified by subject and date in the index, and each of those exhibits is taken from the official files of

the Office of the Oil Conservation Commission of New Mexico. I will not go into those exhibits individually and in detail; but I now offer those exhibits in evidence, and ask this Commission to take judicial knowledge of their own records and the exhibits I have now offered.

MR. PORTER: Are there any objections to the admission of Mr. Walton's exhibits?

GOVERNOR CAMPBELL: Mr. Walton, Exhibit 18 appears to be handwritten notes of some sort. Are these from the files of the Oil Conservation Commission?

A Yes, sir.

Q In Hobbs?

A No, sir.--Yes, sir, in Hobbs.

Q Is there an indication on there by whom the notes were made?

A There are no indications, nor the date of these. The reason is that it gives a brief history of the casing procedure of the oil companies in Lea County, and also of the leak. It is offered merely for its historical value, and it was written in longhand by an unidentified employee, I assume of the Commission.

Q It appears to be made by several people. You're not offering this as any official position of the Oil Conservation Commission?

A No, sir, none of those exhibits are anything that is an official position or policy of the Commission--they are merely factual exhibits.

MR. PORTER: If there is no objection, the exhibits will be admitted into the record.

MR. WALTON: As far back as 1953 one of the major oil companies in Lea County reported to this Commission that they had uncontrolled flow of oil in a bradenhead of the well they were then producing, and they asked authority from this Commission to market at least 3,000 barrels of oil that had then been produced. Before the source of the oil was discovered I believe about 8,000 barrels of oil were marketed from that bradenhead of this oil company's well. In testing the well of this company it was determined that the source of the oil wasn't that well; and this company stated that they were notifying offsetting oil companies of their problem and for them to take appropriate action. This Commission at that time, in 1953, did take appropriate action and required tests for leaking casing and the repair of them. The next thing we know officially of the leaking conditions of wells in Lea County and the Hobbs Pool was a resolution of the City Commission of the City of Hobbs, calling upon this Commission to take affirmative action to stop contamination and take such steps as appropriate to relieve contamination that had already been

caused. This Commission took such action.

GOVERNOR CAMPBELL: When was this?

A In 1954. In 1957 a surface owner in the northwest part of th Hobbs Pool attempted to drill for water. In drilling some thirteen wells he found oil on the top of the Ogalalla formation. The Ogalalla formation is the source of all potable water of Lea County. Quite a furore was raised at that time, and the Commission called a special meeting in Hobbs for October 9, 1957. All operators were notified of this meeting, and it was attended by quite a few people, including representatives of all operators of Lea County. At that time Mr. Porter appointed a committee to study condition of the water in the northwestern part of the Hobbs Pool, and authorized or directed this committee to make reports and recommendations as to how to alleviate the contamination in the existing wells and to set up rules and regulations--suggested rules and regulations for this Commission to follow to assure no more future contamination. This committee was composed of representatives of the oil companies or operators of Lea County, the City Commission, the State Engineer, and several others; but anyhow, they made a very extensive, exhaustive study, and in September 1957 they submitted their final report.

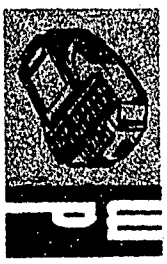
This final report found some thirteen or fourteen wells in this area we spoke about that were contaminated by

gas; some of them several miles--in other words, this wasn't confined to any particular area. They found some seven or eight wells contaminated with oil. I believe a great many people here were present at that meeting, and actually went out and saw some contamination of some of these water wells. The Commission then directed that very rigorous steps be taken to test the oil wells for leaks, and to repair them in those leaks that were found. I believe since the inception of this field, it has been found that about sixty-six wells have at one time leaked. Since 1957, as a result of the report, I believe this Commission has required that wells be tested at least four times a year, and one of those tests in the presence of a representative of the Commission. As far as I know, as far as I have been able to find out, there are now no wells leaking and there is no continuing recharge to the contamination process out in the area I propose to operate.

Among the things this committee reported was that the Ogalalla formation is the fresh water formation of Lea County. Over a period of years the water level has decreased, thereby having what they term "dry water sand" at the top of the formation. That is where the oil has accumulated that I propose to salvage. The committee also reported that over a period of years, this--which they assumed at that time the oil was confined to a relatively small area--would, as the

water table decreased, tend to spread out in various directions. In spreading out, the report states that at least twelve feet of the oil that reached a dry water sand would remain in that sand, unrecoverable, and of course we know that once water sand has been contaminated or saturated with oil, it's almost impossible to decontaminate it to the extent that, even though it refills with fresh water, that that water would be potable. Also, as the water table declines the oil will follow it down, and as it follows it down it again contaminates the fresh water strata, that is forever lost for fresh water.

They made several recommendations as to how the water could be decontaminated to make it potable, and among them was that the owner of the land should take extensive steps in his casing procedure, and that if he then encountered any gas in the water it could be cascaded over two or three times, over activated charcoal, to make it potable. It also suggested to land owners who owned the land that had oil, to accumulate the water and oil on the surface and let it out and skim it off the top. That is what I am asking to do. I am asking to comply with the recommendation of that committee, and in doing this I believe I can salvage some oil off the top of the water that will have a market value. It has been stated that if a land owner in this area drilled a well for water and encountered oil on top of that water sand, he could produce or he



could bail out that water and the oil indefinitely, without any control of this Commission or anyone else, provided he did not attempt to market the oil. In other words, he could skim the water off and make potable water, and he could burn the oil or otherwise dispose of it and destroy it, and this committee would have no control over him in trying to clear up his own water. Of course, doing that would be a waste; and this Commission is created by law to prevent waste, and I am attempting to get authority to dispose of this oil on an economical basis. These land owners wanted oil. It is not, in my opinion, any quantity of oil that accumulates; and in having any new source, the quantity of oil is limited, the amount is unknown; I don't know who could estimate how much oil is on top of this water, but in my opinion I can go in there and salvage this oil for an economical disposal of the oil itself, which would be helping the land owners and helping to decontaminate the water and prevent spread in other directions; and also, as the water table declines, to help prevent the contamination of additional strata of water-bearing sand.

About two or three months ago--about three or four months ago, a man out in this northwestern part of town attempted to drill a well for water. He encountered oil. He moved over and drilled another well and again encountered oil. In the first well, however, he attempted to case off the oil--

he went down about 110 feet and he was unable to case it off, and he was still getting contaminated water, so he moved over and tried another well and encountered the same difficulty. He then came to see me--having had actual knowledge of this contamination since 1953 and particularly in 1957, when, as an attorney, I had represented a land owner and attempted to pinpoint the responsibility of these leaks, and I filed a lawsuit to attempt to do that. The case never went to trial and was finally dismissed because of my inability to prove the source of this oil and pinpoint it to any well, any group of wells o any ownership. I am of the opinion that today you still cannot pinpoint it; you still cannot say, "This well is contaminating my water, and this company is liable for it"--I don't think that can be done.

So when this man came to see me some four months ago, and having known of this and wondered in my own mind why somebody had not attempted to salvage the oil, if it was salvageable, I decided to try it myself. So I went out to this man's land. The well was open; was in casing. I watched them bail water and oil out, and I determined that it looked sufficiently good at that time, or bad for the landowner, that I sought technical assistance from Mr. Pat Ballew of the Seminole Safety Anchor Company to help me rig up some economical way that oil could be skimmed, so we came up with this weird looking

windmill you see in my exhibit. It's on a gin pole and there's a regular windmill on top. The reason it's on a gin pole is it's anchored down by four wires and when we pull the tubing or casing we loosen up two of the guys and pull the windmill back, and we don't have to take it down to work on it. That's the reason it's not on four posts.

MR. PORTER: Is that still up, after the wind Saturday?

A Yes, sir. I've been shut down since the 24th of last month. Then after I saw the mill could work, I went to Mr. Porter in Santa Fe and told him of my problems and intention, and asked permission to continue to test this process of production or salvage. When I use the word "production," I mean "salvage." I'm not producing; I'm salvaging oil on top of the water. I'm not a producer. Mr. Porter at that time consulted with other members of the Commission and they gave me authority to test the windmill for thirty days, or until I produced 100 barrels of oil. My thirty days was up the 24th of last month, and I had at that time produced approximately 100 barrels of oil. The paper says I produced 140. That 40 barrels was produced before I went to Mr. Porter and asked his permission, and I've still got it. I've sold 100 barrels, but I've still got 40 in the tank.

Now at this time, with permission of the Commiss-

ion--it won't take but just a very few minutes--I'd like to demonstrate to you how I propose to salvage this oil. We salvage water on the downstroke rather than the upstroke, and we are actually literally skimming it off the top of the water, and with permission of the Commission I'd like to show you this little demonstration. This is the end of a three-inch casing that we insert in the bottom of the well. This one-inch pipe goes through this casing and has an opening--a one-inch opening in the bottom. The fluids come in through the sides. Now, on that one-inch pipe I have constructed a piston which is of the simplest type, and this is a cylinder that sets over the top of this piston. Of course here I have a cut-off valve that will keep the oil from going back into the well, and also keep it from going--flowing back into the well I have pumped. This also has a one-inch opening. My sucker rod is one-inch pipe. The sucker rod comes up to the top of the surface and then has a tee over to the tank where I produce the fluids. The one-inch pipe is clamped to the production rod of the windmill. Now, between the--on the downstroke we pump the fluid; on the upstroke we fill the cylinder, and every time the windmill turns over it's going to pick up whatever fluid is in there. Then if it ever becomes necessary to return any water that we might be producing, back to the water surface from your separator on the surface. The outlet to the

separator can come right down to the pipe and casing, and of course as you saw a few minutes ago, we have an outlet here that will return water to the water formation. So literally we can set that casing on top of the water and we're not even putting any influence on the water below it, because we're drawing it in from the side. If any fluid gets in that little trap in the bottom there, we're going to produce it. We're going to produce it with a windmill, and every time that windmill goes up or down you're pumping fluid if there is any there. If there is no fluid there it will do no damage for the windmill to pump dry for six months; but then when fluid does get in there we will pick it up and take it out.

The presence of the oil on top of the water is a nuisance; it's a public nuisance as well as a private nuisance to the people who have land out there. It's a continuing nuisance; it's still there; and we've known it's been there since 1953, twelve years ago. It's a creeping nuisance, in that it's creeping out further. Your committee reported that eventually it would dissipate itself into new water-bearing sands by this 12% that it will hold before it would reach a point of saturation. Now, I'm asking--how this oil will flow into that, the rate of flow I don't know. I don't know how much oil is there. During this thirty-day period I produced on the average, three barrels a day. How long that will last I

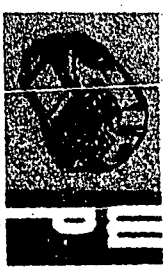
don't know, but you can see from our operation the simplicity of it--the simplicity of the windmill. I could let the windmill set out there and if I got half a barrel a day, or a quarter a day, after I have recovered my initial investment it's all gravy--I don't have any power problem; if the oil comes in I'll pull it out if the wind blows.

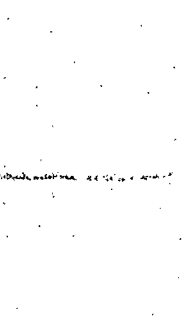
GOVERNOR CAMPBELL: You don't have any problem with the wind blowing, do you?

A No, sir; every morning I look out to see if the wind's blowing. I enjoy seeing it--I guess I'm the only person in Lea County that welcomes a sandstorm.

MR. PORTER: I don't know if this Commission has jurisdiction over "gravy."

A Of course it isn't very rich gravy, at two or three barrels a day, but I'm just telling the Commission that to take care of the saturated point of this sand, I believe we can do it. I don't believe we can do it by one well each 2½ acres; I don't believe the porosity of this field will do it. It may take four wells for a 2½-acre tract--this area was subdivided for residences in 2½-acre tracts. I feel reasonable confident that at least four wells will do it; but since I'm salvaging oil, since I'm abating a nuisance, I don't think this Commission should concern itself with how I do it. I think you ought to say, "Joe, go out there and get that oil off any way you can,





because it's a nuisance which ought to be off," and actually what this meeting should be about, Mr. Porter--there ought to be a subsidy granted to persons like me that would take it off. I think we know it was an unavoidable mistake--let's say, an unavoidable event, that this oil got onto the water sand, but it is there, that is a fact. It is a nuisance which should be removed, and what I'm asking you to do is to not grant me permission to operate as an oil operator; I operate as the New Mexico Water Company--I'm asking you to permit me to market the oil I'm able to salvage from this nuisance. I don't know how much I'm going to produce--I don't know how much I'm going to salvage. It may be that I could salvage ten barrels a day at first, and then it may drop down to nothing, so I can't say I want authority to salvage so many barrels of oil. I want authority to sell all the oil I am able to salvage, regardless of how I produce it--I mean salvage it.

Now, somebody's got to regulate it. I don't mind being regulated; I'll conform to any regulation this Commission or the State Engineer imposes, because I know when you deal with a commodity that goes into the Interstate Commerce Commission there's a possibility of hot oil operation. I know somebody's got to regulate it and I'm ready to be regulated in any reasonable way in marketing the oil.

That is my case.

CROSS-EXAMINATION

MR. PORTER: In other words, you're not seeking permission to produce, but to market?

A Right.

MR. PORTER: Does anyone have a question of Mr. Walton?

MR. IRBY: If I may, I'd like to ask clarification of one point Mr. Walton made in his statement, when he spoke of returning the water to the Ogalalla sands. I'm not sure how he's going to do this and what treatment the water will receive prior to return to the sand; and if he will, I'll appreciate his clarification of that point. I am Frank Irby, State Engineer's Office.

A Mr. Irby, any type of settling process on the surface that would settle the water out would be advisable. I have here a little sketch that shows an oil and water separator that would be adjacent to the production. Then you would take the oil from that as it settles off to go over to the storage tank. I'm not saying we're going to return the water unless with the State Engineer's approval, but if we did return it it would be bled off the separator directly into this casing and go into the same source from which we were pumping.

Q After going through the separator?

A After going through the separator.

MR. PORTER: Does that answer your question?

MR. IRBY: Yes, sir.

GOVERNOR CAMPBELL: Is that area within the defined limits of a declared water basin?

A Yes, sir. I believe I have talked to the State Engineer about it. I would appreciate it if Mr. Irby would make a statement to this Commission as to the stand of the State Engineer on my proposed operation. Mr. Irby, would you--

MR. PORTER: Are you in a position to do that at this time?

MR. IRBY: Is the Commission ready for statements in the case?

MR. PORTER: Well, we're ready for statements at any time, of course. If you want to go ahead and make your statement, it will be fine. Anyone else may--we're not going to dismiss Mr. Walton yet; if anyone wants to ask a question of him he may. I think it might be appropriate if you would make your statement at this time, if you are prepared to do so, Mr. Irby.

MR. IRBY: To be sure I won't contradict what I said before, I'll refer to my notes. Mr. Chairman, members of the Commission: It is the position of the State Engineer that it would be advisable to remove this oil from the surface of

the water in the Ogalalla sands, if it is physically feasible to do so. We realize that this is a contaminate; we would like to see it removed. We realize, of course, that the regulation of everything pertaining to oil and gas is vested in the Commission and not in the State Engineer. We do take a strong interest in the preservation of the quality of the water as well as the production of the water. This well Mr. Walton has his equipment on now is a permitted well within the Lea County underground water basin. I have studied, some time ago, the report Mr. Walton refers to, made by the committee appointed by the Commission, and I know of no subsequent reports on this subject. If there is regulation as Mr. Walton suggests, I think it should be through the Commission. The State Engineer is basically concerned with water problems, and only incidentally concerned with oil problems. The State Engineer is ready and willing to lend any assistance to the Commission or to any committee the Commission appoints to help alleviate this situation. It isn't the intention of the State Engineer to impose his thoughts or theories on the Commission.

That's all I have, sir, unless there are some questions.

GOVERNOR CAMPBELL: Mr. Irby, don't you agree, or do you agree that the situation here is obviously one of oil being present in a water reservoir, rather than a large volume

of water being present in an oil reservoir?

MR. IRBY: Yes, sir.

GOVERNOR CAMPBELL: That being the case, then jurisdiction--and I'm not arguing the point--I think would have to be a cooperative effort, but basically it is a water problem?

MR. IRBY: It's certainly a problem to the basin and to the water users, and for that reason it may be classified basically as a water problem.

GOVERNOR CAMPBELL: Does your study of the 1957 report and your knowledge of this water basin satisfy you that there is no present recharge of oil into this area?

MR. IRBY: I wasn't satisfied of it at the time the report came out, but the quarterly casing surveys confirms me that this is certainly true today.

GOVERNOR CAMPBELL: Mr. Walton, who did you get your leases from?

A I don't have leases; I have agreements with the surface owners to permit me to come in there and damage their property and erect this weird water contraption.

Q No royalty?

A I pay them--if I salvage any fluid that has a market value, I pay them a certain part of it for the privilege of being on their surface. I failed to state this, but

in my opinion this oil has been known to exist since 1953, and no person, even after this committee made its extensive report, attempted to salvage any of that oil; they have made no attempt to decontaminate the water; and the oil present on top of this water sand is unclaimed, abandoned, wild, fugitive, and it belongs to whoever captures it.

GOVERNOR CAMPBELL: Salvages it?

A Salvages it--yes, sir.

MR. PORTER: Does anyone else have a question?

MR. NUTTER: Mr. Walton, you mentioned that this a private nuisance and a public nuisance, and you also declared that it is a creeping nuisance. How has it been a creeping nuisance?

A Because of the committee's report, for one thing, that says there will be a tendency for the oil that accumulated in what they considered then a small area, to follow the water table on out, which is physically--from a physical standpoint is the natural thing for it to do. And another thing, only two weeks ago there was one man in this same area that I was talking to, that had up to this summer been able to produce fresh water from his land. About two or three weeks ago he was pumping water into his yard to irrigate it, and it developed oil. It has ruined his yard.

Q You mean it might be an increasing nuisance in

the future--the water table had been lowered, and oil suddenly became available, or--

A A creeping nuisance, both horizontally and laterally and vertically.

Q The committee in 1957--this was shortly after the casing leaks were first detected--claimed this oil may have been moving laterally at that time; but is there any evidence today that the oil is moving laterally?

A Other than this one well I spoke about, and other than the physical characteristics of oil on water sand--that as the table declines the oil is not just going to perpendicularly cut off, it's going to seek its lowest level; and to me that is a physical fact--we know it will tend to do that; if you have a foot of water sand and reduce the oil from adjacent sant it's going to creep out, and it certainly is a creeping nuisance downward.

Q As the water table would decline, the oil will follow the water table down?

A Yes, sir.

Q How would you dispose of the produced water, if you were to dispose of it, in the Ogalalla formation?

A I'm going to produce as little water as is physically possible. That that I am going to dispose of, I will settle out as I have diagrammed, and return it through three-

inch casing to the water-bearing formation.

Q The Ogalalla water--and if I'm wrong, Mr. Irby, correct me--but I think the Ogalalla water does have a certain amount of movement to it?

A According to this committee report it moves from twelve to eight inches a day, but the committee also says it will be a tendency for oil on top of the water to stabilize itself, because as the water moves, the oil is going on into a new water-bearing sand, and as it goes into the new water-bearing sand, 12% of it is going to be absorbed before the sand is saturated.

Q If the water is static, or moving at the rate of twelve inches a day, the injection of produced water back into the Ogalalla is going to make the movement more extreme?

A Such a very, very small amount that it wouldn't be noticeable. If I produce water, maybe once a day or once a week I'm going to be putting it right back into the well I took it out of, and by the time I have put the water back in, the water that is moving twelve inches a day is still in the well bore.

Q This is the point I'm trying to make. If the water is more or less static and you produce some water and oil, and re-inject the water, isn't there a possibility that it would disturb the static flow in the reservoir and cause the oil to

spread more?

A I don't believe so. I'm not going to put in more water than I have taken out.

Q But in the time you've taken this water out and that reservoir has come to a stabilized condition again, when you put the water back in, something has to move in order for that water to have a place to go, and you're going to move oil and water; and won't this cause the oil to spread?

A I believe if it did, it would be so nominal, because when you produce water or oil you have a tendency to create a cone of depression, and when you put the water back in you would fill the cone of depression you created maybe two or three days ago.

Q That cone is going to have to be filled with something?

A It would be filled with air or oil. I'm hoping it will be filled with oil, coming from the side--that would be ideal; and if I can put as many as four wells on each 2½ acres I've got a bigger area I'm draining from.

Q When you put water in, that would cause the cone of oil to be spread?

A No, sir, it's going to cause the cone to be filled back up.

Q With water?

A Yes, sir. In other words, I'm going to produce the same water two or three times, but when I produce the water I think I'm going to produce oil with it.

Q In the operation of your civic project, if this happens to be on a tract on which the surface rights belong to some resident who has a home there, and the State owns the mineral rights to the tract, do you think the State is entitled to a royalty from that oil?

A Fortunately none of this land belongs to the State. I do understand that Mr. Bolton, the attorney for the Commission of Public Lands, has stated that if any oil is produced from State land, regardless of the source, somebody is going to have to pay royalty to the State.

Q This case is advertised, "Joseph O. Walton seeks to remove and market oil from the Ogalalla formation, Lea County, New Mexico," without restriction to any particular area; and in the alternative, you seek authority to remove and market oil from three test wells in Section 30. It seems to me that the State does have land in Lea County, New Mexico.

A The State owns the southwest quarter of Section 30.

Q Are you in effect, by saying that no State land is involved, taking the alternative route on your application, because the first application--

A Yes, I see what you mean.

Q Your first application seeks authority to remove and market oil from Lea County--

A Yes.

Q --Which includes State land, Federal and and fee land.

A Yes, but I'm not going on any land without permission of the owner of the land. I wouldn't even think of going on State land without the approval of the Commission of Public Land, no more than I would think of trespassing on some surface land without permission.

Q In the event of a fee lease where the oil operator has a lease entitling that operator to oil and gas rights from the surface to the middle of the earth, are you trespassing on their lease?

A No, sir, for this reason: When they got that oil lease they got it from a mineral owner. The mineral owner owned only what was on that least at the time he executed the lease. This oil wasn't on that land; it wasn't present, in the same position it was at the time the lease was executed. The mineral owner warrants his title to the oil company, to the lessee. How can he warrant title to something that doesn't exist at the time he gives the lease? This wasn't in existence.

Q Is there any positive evidence or proof that this

oil wasn't present at the time the lease was issued?

A Yes, sir. Mr. Irby can testify to this; I can testify to it; all the land owners can testify to it. The report of this committee went on an assumption that this was a contamination that did not exist except by wells that had leaked from production of oil at ground depth. I can get you any number of ranchers and farmers and land owners that have drilled wells that were not contaminated until the oil industry came in and drilled their wells. Another thing--this oil, according to this committee report, is from the San Andres formation and not from the Ogalalla formation. I believe this Commission can take judicial notice of the law of nature that there is no oil in the Ogalalla formation. This is a contamination that has got there from other sources.

Q I think they can take judicial notice of the fact that there is oil in the Ogalalla now.

A Yes, sir; and if I get authority to do this, I'll go out right after this meeting and turn my windmill on.

Q How much of this oil can you remove actually, as a civic project, to improve the quality of the water? Can you remove 100% of the oil from the water?

A No, nobody can remove 100%. I have stated before what the committee reported, and I have to agree that there's going to be 12% that's going to hold before it gets saturated.

I have no earthly idea of the porosity; I'm not that type of geologist. I have no idea how much I can decontaminate, but if I can decontaminate ten barrels, I've done good. If I can keep at least ten barrels from spreading out--if I can put up four wells to every 2½ acres, I can decontaminate a whole lot of that saturation. You spoke of this as a civic project--you know why I'm in it.

Q I got the impression from your direct testimony that this was primarily a civic project.

A No, sir, I'm very sorry if I left that idea. I said that while I was doing it, it would be performing a civic service. That's true; I'll stick by it. I would say if we can go out there and drain every bit of oil, even that 12%, off, a land owner would be much prouder of that than my going out and skimming the decontaminate off that fresh water.

Q I still would like clarification of your application, which is for two different things--first, authority to remove and market oil from the Ogalalla without restriction concerning the method of operation or quantity of oil removed --that's the first application; and the alternative seeks authority to remove and market oil from three test wells in Section 30, without restriction concerning the method of operation or quantity of oil recovered. You stated that as far as State land was concerned you would not remove any oil from

any State lease because of your royalty; so in effect does that limit your application to fee leases or Federal leases?

A No, sir, it does not, for this reason: If I can go to the Commissioner of Public Land and tell him that the water on top of this formation is contaminated and that I can see that I can pay him a royalty, I would certainly try to get that authority from the State Land Office--yes, sir, I would try to get that authority. Whether he would grant it or not, I don't know--I've never approached him.

Q Have you discussed the matter with the United States Geological Survey, in regard to Federal leases?

A No, sir, but I would say the same thing--if they would give me such a lease and I was convinced that there was salvageable oil on top of the water formation, I would not hesitate to approach them and seek a lease.

Q Would this be a water lease or an oil lease?

A Well, I used the wrong term. I would seek an agreement with them that I could go on their land to erect such equipment as I needed--it would not be a lease. I don't think you can give a lease to salvage something that you don't own, and in my opinion this oil as it is now is not owned--it's abandoned, it's unclaimed, it's just like a deer on the range --it doesn't belong to the surface owner; it belongs to whoever kills it.

Q This almost sounds like a recapitulation of the law of capture, which was the original law of oil and gas production, which has more or less been abandoned over the last several years. In other words, this doesn't belong to anyone?

A That's right. I'm familiar with the law you spoke of, that oil wasn't owned-in-place.

Q It doesn't belong to anyone?

A Yes, sir.

GOVERNOR CAMPBELL: He's speaking of the oil involved in this application--this particular application.

MR. NUTTER: And it does belong to the man who reduces it?

A Yes, sir.

MR. NUTTER: No further questions.

REDIRECT EXAMINATION

BY MR. DURRETT:

Q I have one or two. First, I realize the case has been advertised concerning Lea County, but in fact you don't intend to operate all over Lea County?

A No, sir.

Q What areas are you speaking about?

A I'm speaking about the area I have shown in Exhibit 2. It's entirely in Section 30, Township 18 South, Range 38 East, and almost entirely within the east half of that area.

You'll notice that at the top of the map here are the areas I personally know, that have water wells contaminated with oil. Below in the southeast quarter of Section 30, I know of no test wells, but I have extended it by dotted lines, since I think it goes in that direction. The well I was operating was in Section 30--I mean in Tract 33 on Exhibit 2, and that's just across a little road from the southeast quarter of Section 30, and there's no reason to believe that if you have a contaminated oil well thirty feet away, it wouldn't be contaminated across the road.

Q But you're speaking of Section 30?

A That's right. I have limited it to those areas I know or believe are contaminated by oil on the surface.

Q I believe you stated there is a mineral lease involved that has been issued on this land?

A Yes, sir--it was fee land.

Q Who would be the lessee?

A There are two lessees. I believe the northeast quarter there is owned by Getty Oil Company and operated by Tidewater; and I believe the south lease is owned by Humble Oil. On Exhibit 1 is a map that does show ownership, and I have ringed in red not all the wells in Hobbs Pool that have leaked, but those in the immediate area.

Q Have you discussed your proposal with the lessees?

A No, sir, I have not.

Q I believe you stated on direct, and I think in answer to a question from the Governor, that you did not propose to pay royalty, as such, on your oil recovery?

A No.

Q Now, that would be true, as far as your thinking right now, if you would move over to some State acreage, is that correct?

A Yes, sir, and it would be on such terms as the Commission of Public Lands thought was advisable to the State.

Q What about taxes?

A I assume any oil that goes into commerce--that taxes will have to be paid on it just as though it was produced oil.

Q Do you propose to pay those taxes?

A Yes, sir, I certainly would.

Q One other question. Am I correct--let me rephrase that. Are you or are you not asking the Commission to determine who has a legal right to produce the oil we're talking about?

A No, sir, I am not. I don't believe this committee could determine that, because if it did, then it would have to be made a party to every lawsuit involving a dispute over royalty.

Q Then are you asking the Commission to authorize oil to be recovered if it can be legally done?

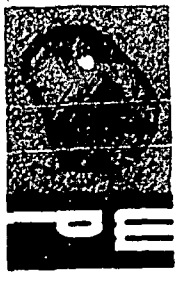
A No, sir, not exactly. I'm asking them to authorize me to recover or salvage oil. The title to it is a legal question that has never been presented. I think I'm on sound ground to say that it is abandoned and belongs to the taker, but if there is any dispute as to the title as to the oil, that would be between me and whoever claims it.

Q You don't want the Commission to determine that?

A No, sir.

Q Now, pursuing the same line of thought, am I correct in saying that you are not asking the Commission to authorize you as an individual to do this--you are asking the Commission to authorize any party who desires to skim oil off the Ogalalla formation, and market it?

A That's correct. I'm not asking for any exclusive. I don't know if the Commission has authority to grant any exclusive right for me to do what I say I want to; I'm asking them to establish that I can do it. If anybody else wants to get the same authority they can use this hearing, I assume, to base that authority on, and I assume that if this Commission gave me that authority it wouldn't necessitate another hearing --it would authorize Mr. Porter to grant authority to anybody to do what I want to do.



Q That would cover anybody that wanted to go out and do this?

A Yes, sir.

Q Am I also correct that you seek authority to be removed from all rules the Commission has, concerning the production of oil?

A Yes, sir.

MR. DURRETT: I believe that's all I have.

GOVERNOR CAMPBELL: When you get down to it, all you're asking is authority to market your product?

A That's all I'm asking, yes, sir.

MR. PORTER: I think you may have told us the depth of the well you have used as an experimental well--

A Twenty-nine feet.

Q Twenty-nine feet deep?

A Yes, sir, and it was originally drilled, I believe, to 110 feet, but my salvage operation is at twenty-nine feet.

Q I got the impression somewhere that the operation was at 48½ feet.

A I may have told you that, because when I first started out we were lowering and raising the casing, trying to find the static level of the water. When we started we may have started at 48 feet.

Q But the depth of the well is 110 feet?

A Yes, but then I put in a submergible pump to where I could pump it off quick and know where the water was. I kept raising it until I got to 29 feet.

Q How deep do you anticipate drilling additional wells?

A I wouldn't want to go more than 35 feet, because the more you disturb the water sand, the more trouble you're going to have with water, and I don't want to have any trouble with water.

GOVERNOR CAMPBELL: You want your troubles all to be oil?

A Yes, sir.

MR. PORTER: Does anyone else have any question of Mr. Walton?

MR. IRBY: On a technical point, I want to say that I don't fully agree with Mr. Walton's description of the creation and rebuilding of total compression under water table conditions; and the point I'd like to make is that, producing at the rate of a barrel or a half-barrel of water per day, which is a part of his testimony, the natural forces of the water in place are going to keep this cone refilled, if one is created. The pumping rate is so small there will not be a cone created--you've got to get into higher pumping rates to creat a cone.

GOVERNOR CAMPBELL: Are you able to draw a conclusion as an engineer as to whether, assuming the facts that Mr. Walton stated as to the rate of pumping, that would or would not interfere with the natural conditions in the Ogalalla formation so far as water is concerned?

MR. IRBY: Only to the extent that when water is drawn off from the separator and recharged through the same well from which it is produced, there would be a slight mound created, and I don't know what the size of these tanks he's talking about are, but this would control the size of the mound. But I'm assuming that these are comparatively small tanks, and the mound would naturally be small; but at lower pumping rates there would be no cone of depression created--the natural forces of the water would keep it filled.

MR. WALTON: If I recharge the well with 100 barrels of oil over a period of a week, by the same token coning would be very slight too, in that well.

GOVERNOR CAMPBELL: The mound?

MR. WALTON: --The mound would be very slight.

MR. IRBY: Yes, that's what I stated.

MR. WALTON: In other words, there would be no cone to speak of--no cone at all at that small rate of production, but say in one day's time I wanted to recharge the well with 100 barrels of water, the mound would be very slight.

MR. IRBY: Over what period of time?

A One hundred barrels--100 a week.

MR. IRBY: If it's over a week then the mound would be insignificant; nevertheless the mound would exceed any cone caused by pumping.

MR. WALTON: I stand corrected by Mr. Irby.

MR. PORTER: Mr. Irby, do you see any possible ill effects as far as fresh water is concerned, in an operation carried on such as Mr. Walton has proposed that he would carry on?

MR. IRBY: I think it would be helpful to the water problem in general to have this oil removed, but I would prefer to see it done in a somewhat different manner. I would prefer to see the oil removed at a specific well, and the water recharged to the formation after cleanup at a place outside the known contaminated area. This would have the tendency to build a mound, if one is built, around the oil contained area, which would have a tendency to push oil toward the producing well. It would work in a manner somewhat similar to peripheral flood.

MR. WALTON: I would be glad to operate under the rules of the State Engineer, but it is my idea that the water produced would be so insignificant that the mound would be insignificant. But should the case arise, I will keep the State Engineer informed; and should the case arise that he

thinks it should be recharged in an area outside the contaminated area, I would be glad to conform with any rules and regulations he sets up.

MR. PORTER: Does anyone else have a question of Mr. Walton? ... Mr. Ballew?

MR. BALLEW: I understand, Mr. Walton, you're going to take ten to twenty gallons out of one borehole per day, and going to inject back fresh water underneath where you're taking out, so I don't see that it would involve any other water, rather than the very borehole in which he's operating, because he's injecting fresh water back where he took fresh water out, so it couldn't affect any outside water.

MR. WALTON: That's right.

MR. IRBY: I have one question. I thought Mr. Walton stated this, but on remembering, I believe he didn't. What would be the oil-water ratio?

A That has varied so greatly I couldn't tell you. When I first went in there and got a static water level I was able to produce 100% oil for a very short time, and then when I put the windmill on there and it was keeping it drained down constantly, it did get to producing maybe up to 50% water, but it would be in spurts, as it would come in. I did produce sometimes 50%.

MR. IRBY: With the 100 barrels of oil, how much

water has been produced?

A I would roughly estimate that with the 140 barrels I produced, as a rough estimate I produced thirty to forty barrels of water.

Q You had no measurement on this?

A No, sir.

MR. PORTER: Does anyone else have a question? ... Mr. Walton may be excused. Does anyone else desire to present testimony in this case? Are there any statements?

MR. CHRISTY: Sim Christy, representing Humble Oil Refining. Humble, as mentioned in the testimony, is the offset operator in the southeast. Humble respectfully suggests designation as operator of the pool, and establishment of rules for orderly production of any water which may exist in the shallow pool. It is further suggested that an appropriate allowable should be established, equivalent to the applicable depth allowable for each forty-acre tract, regardless of the number of wells drilled on the forty-acre proration area.

MR. MOTTER: I am E. F. Motter, representing the Hobbs City Water Commission. We have prepared a statement we would like to read into the record.

"The Water Department of the City of Hobbs advises you that the City of Hobbs presently has water rights to 7,300

acre feet in Township 18 South, Range 38 East, for municipal purposes, and at the present time this is the only source of water supply for municipal use of the City of Hobbs.

"This statement is not to be construed as a protest or an objection to the application, but to remind the Commission of a fact of which they are aware--that the producing of a large amount of water for the recovery in ratio of a small amount of oil might well jeopardize the municipal source, and this fact should be considered in your determination of this application."

GOVERNOR CAMPBELL: Whose side are you on?

MR. PORTER: Does anyone else have a statement? Mr. Durrett, I believe you have some comments?

MR. DURRETT: I have a letter from Tidewater Oil Company which I will read into the record if the Commission so desires. First I will state that the letter is from H. E. Berg, with Tidewater. The letter reads: "Gentlemen: Mr. Joseph O. Walton, Lovington, New Mexico, has furnished this company with a copy of his letter to you of March 22, 1965, in which he requested that he be granted authority to salvage and market oil commingled with or on top of water found in the Ogalalla formation through wells situated in the northeast quarter of Section 30, Township 18 South, Range 38 East, Lea County. We understand that Mr. Walton's request has been set for hearing on April 14, 1965.

"Getty Oil Company owns the oil and gas lease covering the northeast quarter of Section 30. This lease is operated for Getty by Tidewater. Tidewater as the operator mentioned for the Getty Oil Company lease has no authority to permit a third party to abstract or remove oil from land governed by Getty, nor can Tidewater waive the rights Getty has by virtue of its lease. We do note, however, that Mr. Walton in his letter of March 22, 1965 expressed the opinion that the oil he seeks to recover is not owned by anyone, and it can be claimed by anyone. Tidewater, as operator of the oil and gas lease covering the land referred to, does not agree with this opinion."

MR. PORTER: They didn't say what they did agree with?

MR. DURRETT: No, sir, they did not.

MR. PORTER: Do you have any other statements?

MR. DURRETT: I believe that's all, Mr. Porter.

MR. PORTER: If there are no further statements to be made in this case, the Commission will take the case under advisement.

* * *

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ELIZABETH K. HALE, Notary Public and Court Reporter, do hereby certify that the proceedings in the foregoing case were taken by me in shorthand and transcribed by me, and that the foregoing is a true and correct transcript of proceedings to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF, my hand and seal of office this 26th day of April, 1965.

Elizabeth K. Hale

My commission expires
May 30, 1968.

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. 3235
Order No. R-2902

APPLICATION OF JOSEPH O. WALTON
TO REMOVE AND MARKET OIL FROM THE
OGALALLA FORMATION, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on April 14, 1965, at Hobbs, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 4th day of May, 1965, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, 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, Joseph O. Walton, seeks authority to remove and market oil from the Ogalalla formation in Section 30, Township 18 South, Range 38 East, NMPM, Lea County, New Mexico, without restriction concerning the method of operation or quantity of oil recovered.

(3) That the applicant proposes to recover crude oil from existing water wells completed in the Ogalalla formation and water wells to be drilled and completed in the Ogalalla formation in said Section 30.

(4) That the Ogalalla formation in said area contains fresh water supplies designated by the State Engineer and that

the presence of crude oil in said formation may constitute a hazard to said water supplies.

(5) That the Commission lacks jurisdiction to determine who has the right to recover said crude oil or the title to said crude oil but should authorize the recovery and marketing of said crude oil in order to prevent waste and protect fresh water supplies designated by the State Engineer.

IT IS THEREFORE ORDERED:

(1) That crude oil may be recovered from existing water wells completed in the Ogalalla formation and water wells to be drilled and completed in the Ogalalla formation in Section 30, Township 18 South, Range 38 East, NMPM, Lea County, New Mexico.

(2) That said crude oil may be marketed provided Commission Form C-104 has been filed with the Commission's Hobbs District Office stating the name of the seller, the name of the transporter, the amount of oil to be sold, and the location of the water well from which the oil was recovered.

(3) That each person or persons recovering crude oil under the provisions of this order shall keep a daily record of the amount of oil recovered from each water well, and shall file a monthly report, in duplicate, with the Commission's Hobbs District Office stating the amount of oil recovered and the amount of oil sold from each water well during the month.

(4) That the Commission will not determine who has the right to recover said crude oil or the title to said crude oil.

(5) 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

Jack M Campbell
JACK M. CAMPBELL, Chairman

Guyton B. Hays
GUYTON B. HAYS, Member

S E A L

A. L. PORTER, Jr., Member & Secretary

esr/

GOVERNOR
JACK M. CAMPBELL
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

P. O. BOX 2088
SANTA FE

May 4, 1965

Mr. Joseph O. Walton
Attorney at Law
Lovington, New Mexico

Re: Case No. **3235**
Order No. **R-2902**
Applicant:

JOSEPH O. WALTON

Dear Sir:

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

Very truly yours,

A. L. Porter, Jr.

A. L. PORTER, Jr.
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC _____
OTHER **Mr. Frank Irby** **Mr. Pat Ballew**
Mr. Sim Christy
Mr. E. F. Motter
Mr. H. E. Berg

The El Paso Times

APR 21 1965

New Mexico Press Clipping Bureau
Albuquerque, N. M.

Windmill Produces Oil(y) Effect

Hobbs, N.M. (AP) — There's a windmill near this southeastern New Mexico town and much to everyone's looks of disbelief, it produces oil.

The windmill originally was to pump water from a 135-foot well on the W. F. Ayers farm, but oil seeped in and created a contamination problem.

Ayers' attorney, Joseph O. Walton of Levington, asked the Oil Conservation Commission for permission to test the well for 30 days or until he had 100 barrels of oil.

The test was finished March 25 and Ayers now has 149 barrels of oil stored in tanks. The oil is worth $378.

Last week, Walton asked the commission for permission to remove and market the oil and said it should be classified as "escaped, wild, fugitive, reclaimed or abandoned."

The commission took the petition under advisement.

Roswell Daily Record
ROSWELL, N. M.
AUG 21 1965
New Mexico Press Clipping Bureau
Albuquerque, N. M.

Windmill Near Hobbs Pumps Oil

22

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So Ayers' attorney, Joseph O. Walton of Lovington, asked the New Mexico Oil Conservation Commission for permission to test the well for 30 days or until he had 100 barrels of oil.

Walton and Ayers finished the wind-driven test March 25 and had 140 barrels of 29 gravity oil, worth about $378.

The rickety looking pump brings up between one-half and two barrels of oil per day, but, Walton says, production doesn't depend upon the wind.

Last week, Walton asked the New Mexico Oil Conservation Commission for permission to remove and market the oil. In his petition Walton said the oil should be classified as "escaped, wild, fugitive, unclaimed or abandoned."

The commission took it under advisement.

ARTESIA DAILY PRESS
ARTESIA, N. M.
APR 20 1965
New Mexico Press Clipping Bureau

Oil, Not Water

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CLAYTS BEACON

APR 20 1955

New Mexico Press Clipping Bureau
Albuquerque, N. M.

One-Legged Windmill In Lea Has Oil

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Alamogordo Daily News

APR 20 1965

'Wild Oil' Pumped By Windmill

HOBBS (AP) — A Lovington lawyer seeks permission to take more oil from a shallow, normally water-filled strata from which he has removed 140 barrels worth about $378, using a water windmill.

The New Mexico Oil Conservation Commission took under advisement Wednesday the request from Joseph O. Walton.

Walton told the commission "that over a period of many years certain of the oil wells in the Hobbs pool have developed casing leaks and these leaks have been so extensive that large quantities of oil are now found in what was normally water sand."

Walton had received permission to run a test on the water strata, the Ogalalla formation, which ranges in depth from 35 feet to 125 feet throughout most of Lea County. His report said he used a windmill to pump oil from 45 feet and took out the 140 barrels.

Just how much oil is in the strata has not been determined.

He wants authority to drill three more wells in the area and produce without restriction.

Walton said the oil came out of the San Andres formation but escaped from regular oil drilling rigs into the Ogalalla formation.

The lawyer termed the find as fugitive oil and said it belongs to the individual who captures it. He said removal would be a decontamination measure.

Walton said the well tested is on property northwest of Hobbs owned by W.F. Ayers. The new well would be on property owned by Robert Bensing and C.J. Sanders.

•• THE NEW MEXICAN ••
SANTA FE, N. M.

APR 15 1965

New Mexico Press Clipping Bureau
Albuquerque, N. M.

Commission Takes Unusual Request Under Advisement

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• • THE NEW MEXICAN • •
SANTA FE, N. M.
APR 20 1965
New Mexico Press Clipping Bureau
Albuquerque, N. M.

One-Legged Windmill Pumping Oil in NM

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The rickety looking pump brings up between one-half and two barrels of oil per day, but, Walton says, production doesn't depend upon the wind.

Last week, Walton asked the New Mexico Oil Conservation Commission for permission to remove and market the oil. In his petition Walton said the oil should bee classified as "escaped, wild, fugitive, unclaimed or abandoned."

The commission took it under advisement.

SILVER CITY DAILY PRESS

APR 20 1965

New Mexico Press Clipping Bureau
Albuquerque, N. M.

Windmill Pumps Oil Instead Of Water At Hobbs

HOBBS (AP)—Theres' a one-legged windmill west of this southeastern New Mexico town and, much to everyone's disbelief, it produces oil.

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The Raton Daily Range

APR 20 1965

New Mexico Press Clipping Bureau
Albuquerque, N. M.

Windmill Pumps Oil Near Hobbs

22

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The Albuquerque Tribune
APR 15 1965

Fugitive Oil Captured By Lovington Attorney

HOBBS, April 15 (AP) — A Lovington lawyer wants permission to take more oil from a shallow, normally water-filled strata from which he has removed 140 barrels worth about $378, using a windmill.

The New Mexico Oil Conservation Commission took under advisement yesterday the request from Joseph O. Walton.

"It is an established fact," Walton told the commission, "that over a period of many years certain of the oil wells in the Hobbs pool have developed casing leaks and these leaks have been so extensive that large quantities of oil are now found in what was normally water sand."

Walton had received permission to run a test on the water strata, the Ogalalla formation, which ranges from 35 feet to 125 feet throughout most of Lea County. His report said he used a windmill to pump oil from 45 feet and took out the 140 barrels.

Just how much oil is in the strata has not been determined.

He wants authority to drill three more wells in the area and produce without restriction and free of commission well location requirements.

He said the well he tested is on property northwest of Hobbs owned by W. F. Ayers about two miles west of Turner. The oil tested at 29 gravity, worth about $2.70 a barrel.

Walton said the oil came out of the San Andres formation but escaped from regular oil drilling rigs into the Ogalalla formation.

His new wells would be on property owned by Robert L. Bensing and C. J. Sanders.

The lawyer termed the find as fugitive oil and said it belongs to the individual who captures it. He said removal would be a decontamination measure and protect fresh water sources.

Independent

APR 2 1 1965

New Mexico Press Clipping Bureau
Albuquerque, N. M.

Windmill Pumps Oil Near Hobbs

HOBBS (AP)—There's a one legged windmill west of this southeastern New Mexico town and, much to everyone's disbelief, it produces oil.

The windmill, two miles from downtown Hobbs, originally was to pump water on the W.F. Ayers farm. But oil has seeped into the water-bearing Ogalalla formation, creating a contamination problem.

So Ayers' attorney, Joseph O. Walton of Lovington, asked the New Mexico Oil Conservation Commission for permission to test the well for 30 days or until he had 100 barrels of oil.

Walton and Ayers finished the wind-driven test March 25 and had 140 barrels of 29 gravity oil, worth about $378.

The rickety looking pump brings up between one-half and two barrels of oil per day, but, Walton says, production doesn't depend upon the wind.

Last week, Walton asked the New Mexico Oil Conservation Commission for permission to remove and market the oil. In his petition Walton said the oil should be classified as "escaped, wild, fugitive, unclaimed or abandoned."

The commission took it under advisement.

ARTESIA DAILY PRESS
ARTESIA, N. M.
APR 16 1965
New Mexico Press Clipping Bureau
Albuquerque, N. M.

Well Leaks Create New Crude Strata

22

HOBBS (AP) — A Lovington lawyer seeks permission to take more oil from a shallow, normally water-filled strata from which he has removed 140 barrels worth about $378, using a water windmill.

The New Mexico Oil Conservation Commission took under advisement Wednesday the request from Joseph O. Walton.

Walton told the commission "that over a period of many years certain of the oil wells in the Hobbs pool have developed casing leaks and these leaks have been so extensive that large quantities of oil are now found in what was normally water sand."

Walton had received permission to run a test on the water strata, the Ogalalla formation, which ranges in depth from 35 feet to 125 feet throughout most of Lea County. His report said he used a windmill to pump oil from 45 feet and took out the 140 barrels.

Just how much oil is in the strata has not been determined.

He wants authority to drill three more wells in the area and produce without restriction.

Walton said the oil came out of the San Andres formation but escaped from regular oil drilling rigs into the Ogalalla formation.

The lawyer termed the find as fugitive oil, and said it belongs to the individual who captures it. He said removal would be a decontamination measure.

Walton said the well tested is on property northwest of Hobbs owned by W.F. Ayers. The new well would be on property owned by Robert Bensing and C.J. Sanders.

The Albuquerque Tribune
APR 20 1965

As the Windmill Turns The Oil Gushes Forth

HOBBS, April 20 (AP) — There's a windmill west of this southeastern New Mexico town and in spite of everyone's looks of disbelief, it produces oil.

The windmill, just two miles from downtown Hobbs, originally was to pump water on the W. F. Ayers farm, but oil has seeped into the water-bearing Ogalalla formation creating a contamination problem.

So Ayers' attorney, Joseph O. Walton of Lovington, asked the New Mexico Oil Conservation Commission for permission to test the well for 30 days or until he had 100 barrels of oil.

Walton and Ayers finished the wind-driven test March 25 and had 140 barrels of 29 gravity oil stored in two old stock tanks. The oil is worth about $378.

The oil was produced from just 45 feet below the surface. The oil floats on top of the water in the well which ranges to 135 feet.

The rickety looking pump brings up between one-half and two barrels of oil per day, but, Walton says, production doesn't depend upon the wind.

The production figures vary because of the thickness of the oil on the surface of the water pool.

Last week, Walton asked the New Mexico Oil Conservation Commission for permission to remove and market the oil. In his petition Walton said the oil should be classified as "escaped, wild, fugitive, unclaimed or abandoned."

The commission, which never had run into a similar case, took it under advisement and will render a decision later.

"Exhibit 18"

HOBBS AREA & RELATED POOLS

CASING LEAKS & LEAKS REPAIRED JULY 1957

OPERATOR LEASE - DATE COMP - POOL	WELL UNIT	S-T-R	CASING PROGRAM (All fractions Dropped) Surface	Intermediate	Production	Liner Patch Liner Full String	Leak Found	String and Depth of Leak	Repaired Date	Remarks
SHELL OIL CO. (Continued)										
State F Dec 10'41 Bowers	1-A	23-18-37	8⅝" 1592/525		4½" 4099/130		3/?/57	4½" 3300/2575	6/5/57	
Langer Inv. Co. Jun 15'35 Hobbs	3-J	27-18-38	12¾" 257/155	9⅝" 1645/200	7" 4075/250		9/28/53	7" 800		
Langer Inv. Co. Feb. 1'35 Hobbs	2-K	27-18-38	12¾" 233/700	9⅝" 1548/350	7" 4060/250				6/6/57	
SKELLY OIL CO.										
Fowler Hobbs	2-F	31-18-38	12¾" 208/300	9⅝" 2796/400	7" 3964/450	5½" 4211/325	12/5/55	No Leak 7"	12/11/55	
Fowler Hobbs	1-C	31-18-38	12¾" 206/125	9⅝" 2750/400	7" 3973/450	5½" 4215	8/28/53	7" No leak	5/26/54	
SOUTHERN PET. EXPL. CO. INC.										
Morris A Mar 1'36 Hobbs	1-O	21-18-38	12¾" 252/200		7" 4066/468	5½" 0-572	4/23/57			
							7/ /57			
Morris B Nov 23 '37 Hobbs	1-P	21-18-38	10¾" 259/175		7" 4097/400	4½" 4072/400 43	7/10/56		7/20/56	
STANDARD OF TEXAS										
T/A State Sept 17'30 Bowers	2-O	29-18-38	13⅜" 242/150	9⅝" 2822/725	7" 3951/300		3/27/57		5/10/57	
SUN OIL COMPANY										
McKinley Aug 15'30 Hobbs	1-A	5-19-38	12¾" 192/190	9⅝" 2746/500	7" 3994/225	5½" 4170 NA.	3/26/54	7" ?	5/4/54	
McKinley Aug 13'30 Hobbs	2-H	5-19-38	12¾" 200 NA	9⅝" 2900 NA	7" 4000 NA	5½" 4169/50	9/28/53	7" 1226/1650	4/26/54	
McKinley Aug 19'30 Hobbs	3-B	5-19-38	12¾" 200 NA	9⅝" 2900 NA	7" 4000 NA	5½" 4175 NA	9/28/53	7" 1877/1882	4/2/54	
McKinley Oct 16'30 Hobbs	4-G	5-19-38	12¾" 2000NA	9⅝" 2900 NA	7" 4000 NA	5½" 4200/65	9/9/53	7" 77/3790	4/2/54	Bad Collars
SUNRAY MID-CONTINENT OIL CO.										
Fowler Nov 12'30 Hobbs	1-D	31-18-38	13⅜" 300	9⅝" 2750/600	7" 3950/425		9/30/53	7" 3100	10/21/53	

C-32-35

More Trouble At Joe Walton's Mill

Joe Walton's Windmill Oil Co. is having more troubles. The assistant D.A. and a Gaines County, Texas man, Joe Ballew formed Windmill Oil Co. to take oil from a water well formation in Lea County.

In his suit filed in District Court, the firm has sued Permian Corporation asking a total of $12,227.76 for oil sold to them during a three month period.

The petition stated although demand had been made for payment, none had been received.

Earlier Walton was involved in litigation by an oil firm claiming the oil he is receiving. This case is still pending in District Court.

Hobbs Flare Sept 30-65

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. 3235
Order No. R-2902

APPLICATION OF JOSEPH O. WALTON
TO REMOVE AND MARKET OIL FROM THE
OGALALLA FORMATION, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on April 14, 1965, at Hobbs, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 4th day of May, 1965, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, 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, Joseph O. Walton, seeks authority to remove and market oil from the Ogalalla formation in Section 30, Township 18 South, Range 38 East, NMPM, Lea County, New Mexico, without restriction concerning the method of operation or quantity of oil recovered.

(3) That the applicant proposes to recover crude oil from existing water wells completed in the Ogalalla formation and water wells to be drilled and completed in the Ogalalla formation in said Section 30.

(4) That the Ogalalla formation in said area contains fresh water supplies designated by the State Engineer and that

the presence of crude oil in said formation may constitute a hazard to said water supplies.

(5) That the Commission lacks jurisdiction to determine who has the right to recover said crude oil or the title to said crude oil but should authorize the recovery and marketing of said crude oil in order to prevent waste and protect fresh water supplies designated by the State Engineer.

IT IS THEREFORE ORDERED:

(1) That crude oil may be recovered from existing water wells completed in the Ogalalla formation and water wells to be drilled and completed in the Ogalalla formation in Section 30, Township 18 South, Range 38 East, NMPM, Lea County, New Mexico.

(2) That said crude oil may be marketed provided Commission Form C-104 has been filed with the Commission's Hobbs District Office stating the name of the seller, the name of the transporter, the amount of oil to be sold, and the location of the water well from which the oil was recovered.

(3) That each person or persons recovering crude oil under the provisions of this order shall keep a daily record of the amount of oil recovered from each water well, and shall file a monthly report, in duplicate, with the Commission's Hobbs District Office stating the amount of oil recovered and the amount of oil sold from each water well during the month.

(4) That the Commission will not determine who has the right to recover said crude oil or the title to said crude oil.

(5) 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

JACK M. CAMPBELL, Chairman

GUYTON B. HAYS, Member

S E A L

esr/

A. L. PORTER, Jr., Member & Secretary

File Case 3335

STATE LAND OFFICE

MEMORANDUM

May 20, 1965

FROM: WILLIAM O. JORDAN, LEGAL DEPARTMENT

TO: GUYTON B. HAYS, COMMISSIONER OF PUBLIC LANDS

SUBJECT: SW¼ Sec. 30, T18S, R38E, Lea County, New Mexico
Marathon Oil Company Lease A-3071

With regard to Mr. Walton's attached letter of May 17, it is my opinion that if there be oil upon this land in commercial quantities which is going to waste it is Marathon's right, and, in fact, duty, under its oil and gas lease to recover this oil. In this connection, if Marathon wishes, it may recover this oil on its own or farm it out to Mr. Walton. (7-11-7, NMSA, 1953 Comp.).

I would suggest that a letter be written to Marathon advising them that we have information that there is oil going to waste upon lands under their lease and make demand upon them to recover the same and pay the state its royalty. Before writing this letter, however, you may wish to have this matter investigated to determine whether the oil is in commercial quantities before making demand upon Marathon to recover same.

As I understand it, the Oil Commission has, by order, authorized the recovery of oil on the adjoining land in the manner stated by Mr. Walton. However, the Commission makes no pretense of trying to determine ownership of the oil or to make a determination as to whose right it is to recover same. (See Case No. 2735, Order No. R-2902, dated May 4, 1965).

WILLIAM O. JORDAN

cc Jim M. Durrett, Jr.
Oil Conservation Commission

JOSEPH O. WALTON
ATTORNEY AT LAW
LOVINGTON, NEW MEXICO

May 17, 1965

Guyton B. Hays
Commissioner of Public Lands
State Land Office Building
Santa Fe, New Mexico

Re: SW 1/4, Sec. 30 - T. 18 S.
R. 38 E., Lea County, New Mexico

Dear Mr. Hays:

The above state owned land is a diagonal offset to 2 water wells from which I am now salvaging oil from the water sands of the Ogalalla formation. The depth is approximately 50 feet. You are familiar with the fact that I contend that such oil is wild, abandon, unclaimed, fugitive, escaped oil.

Although I believe that these 2 water wells are on the extreme western edge of the contamination, it is possible that the contamination extends into the Southwest Quarter of this section, and if this is true, I am of the opinion that this salvage operation is economically feasible and would return considerable monies to the state.

Marathon Oil Co At the present time, the land is under an oil and gas lease to ~~Ohio Oil Company~~ and is held by production. It is also under institutional Lease GK-339 which expires in October, 1967 and is owned by the Harry G. Huston estate.

Request is hereby made that this land be reclassified for the purpose of entry on the surface to salvage this unclaimed oil and I hereby make application for the right to conduct this salvage operation on such terms and conditions as can be mutually agreed upon. I will be glad, and request that I be permitted to discuss this matter with your attorney.

Yours very truly,

Joseph O. Walton

JOSEPH O. WALTON

BBoog 9-307 Marathon Oil Co
9-309

w/pe

cc: Wm. O. Jorden
Legal Department

SANTA FE			
FILE			
U.S.G.S.			
LAND OFFICE			
TRANSPORTER	OIL		
	GAS		
OPERATOR			
PRORATION OFFICE			

REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Supersedes Old C-104 and C-110
Effective 1-1-65

I.

Operator

Address

Reason(s) for filing *(Check proper box)*

New Well ☐ Change in Transporter of:

Recompletion ☐ Oil ☐ Dry Gas ☐

Change in Ownership ☐ Casinghead Gas ☐ Condensate ☐

Other *(Please explain)*

If change of ownership give name and address of previous owner _____

II. DESCRIPTION OF WELL AND LEASE

Lease Name	Well No.	Pool Name, Including Formation	Kind of Lease State, Federal or Fee

Location

Unit Letter _____ ; _____ Feet From The _____ Line and _____ Feet From The _____ Line of Section _____, Township _____ Range _____, NMPM, _____ County

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil ☐ or Condensate ☐					Address *(Give address to which approved copy of this form is to be sent)*
Name of Authorized Transporter of Casinghead Gas ☐ or Dry Gas ☐					Address *(Give address to which approved copy of this form is to be sent)*
If well produces oil or liquids, give location of tanks.	Unit	Sec.	Twp.	Rge.	Is gas actually connected? When

If this production is commingled with that from any other lease or pool, give commingling order number: _____

IV. COMPLETION DATA

Designate Type of Completion – (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v.	Diff. Res'v.

Date Spudded	Date Compl. Ready to Prod.	Total Depth	P.B.T.D.
Pool	Name of Producing Formation	Top Oil/Gas Pay	Tubing Depth
Perforations			Depth Casing Shoe

TUBING, CASING, AND CEMENTING RECORD

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT

V. TEST DATA AND REQUEST FOR ALLOWABLE

(Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

OIL WELL

Date First New Oil Run To Tanks	Date of Test	Producing Method *(Flow, pump, gas lift, etc.)*	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil - Bbls.	Water - Bbls.	Gas - MCF

GAS WELL

Actual Prod. Test - MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Testing Method *(pitot, back pr.)*	Tubing Pressure	Casing Pressure	Choke Size

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Commission have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

_____
(Signature)

_____
(Title)

_____
(Date)

OIL CONSERVATION COMMISSION

APPROVED _____, 19 _____

BY _____

TITLE _____

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out Sections I, II, III, and VI only for changes of owner, well name or number, or transporter, or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiply completed wells.

DOCKET: REGULAR HEARING - WEDNESDAY - APRIL 14, 1965

OIL CONSERVATION COMMISSION - 9 A.M., THE INN, MOTOR HOTEL CONVENTION CENTER, 200 SOUTH LINAM, HOBBS, NEW MEXICO

ALLOWABLE (1) Consideration of the oil allowable for May, 1965;

(2) Consideration of the allowable production of gas for May, 1965, from ten prorated pools in Lea and Eddy Counties, New Mexico, also consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico, for May, 1965.

CASE 3235: Application of Joseph O. Walton to remove and market oil from the Ogalalla formation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to remove and market oil from the Ogalalla formation in Lea County, New Mexico, without restriction concerning the method of operation or quantity of oil recovered. In the alternative, applicant seeks authority to remove and market oil from three test wells to be drilled in Section 30, Township 18 South, Range 38 East, Lea County, New Mexico, without restriction concerning the method of operation or quantity of oil recovered.

CASE 3236: Application of Anadarko Production Company for force-pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Indian Basin Upper Pennsylvanian Gas Pool underlying Section 19, Township 21 South, Range 23 East, Eddy County, New Mexico.

CASE 3237: (THIS CASE WILL NOT BE HEARD BEFORE 3 P. M.)

Hearing on motion of the Oil Conservation Commission to consider instituting gas prorationing in the Indian Basin-Upper Pennsylvanian and Indian Basin-Morrow Gas Pools, Eddy County, New Mexico. The Commission, in the above-styled cause, will consider limiting gas production from the Indian Basin-Upper Pennsylvanian and Indian Basin-Morrow Gas Pools in Eddy County, New Mexico, to reasonable market demand and to the capacity of gas transportation facilities and will consider the method of allocating the allowable production among the gas wells in each pool. The Commission will also consider methods of dealing with gas wells not connected to a gas transportation facility.

CASE 3188 (DE NOVO): THIS CASE WILL BE CONTINUED TO THE MAY 19, 1965 REGULAR HEARING

Application of Maleta Y. Brimhall and Barbara Burnham for force-pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seek an order force-pooling all mineral interests in the Basin Dakota Pool underlying the W/2 of Section 7, Township 30 North, Range 11 West.

San Juan County, New Mexico. Upon application by Beta Development Company, this case will be heard de novo under the provisions of Rule 1220.

CASE 3238: Southeastern New Mexico nomenclature case calling for an order for the contraction, abolishment, and extension of certain pools in Lea, Roosevelt and Chaves Counties, New Mexico:

a) CONTRACT vertical limits of the Antelope Ridge-Morrow Pennsylvanian Gas Pool to include only the Lower Pennsylvanian formation and redesignate said pool as the Antelope Ridge-Lower Pennsylvanian Gas Pool.

b) ABOLISH the West Bluitt-San Andres Gas Pool described as:

TOWNSHIP 8 SOUTH, RANGE 37 EAST, NMPM
SECTION 8: NE/4

c) EXTEND the Bluitt-San Andres Gas Pool to include therein:

TOWNSHIP 8 SOUTH, RANGE 37 EAST, NMPM
SECTION 8: NE/4

d) EXTEND the Gladiola-Wolfcamp Pool to include therein:

TOWNSHIP 12 SOUTH, RANGE 38 EAST, NMPM
SECTION 7: SE/4

e) EXTEND the Lusk-Strawn Pool to include therein:

TOWNSHIP 19 SOUTH, RANGE 32 EAST, NMPM
SECTION 17: SW/4

f) EXTEND the Milnesand-San Andres Pool to include therein:

TOWNSHIP 8 SOUTH, RANGE 35 EAST, NMPM
SECTION 5: N/2

g) EXTEND the Tobac-Pennsylvanian Pool to include therein:

TOWNSHIP 8 SOUTH, RANGE 32 EAST, NMPM
SECTION 25: NE/4

TOWNSHIP 8 SOUTH, RANGE 33 EAST, NMPM
SECTION 16: E/2 SW/4
SECTION 30: NW/4

CASE 3239: Northwestern New Mexico nomenclature case calling for an order for the extension of certain pools in Rio Arriba, San Juan, and Sandoval Counties, New Mexico:

a) EXTEND the South Blanco-Pictured Cliffs Pool to include therein:

TOWNSHIP 23 NORTH, RANGE 2 WEST, NMPM
SECTION 16: NW/4
SECTION 17: NE/4
SECTION 23: NW/4

TOWNSHIP 23 NORTH, RANGE 3 WEST, NMPM
SECTION 13: SE/4

TOWNSHIP 25 NORTH, RANGE 3 WEST, NMPM
SECTION 7: S/2 and NE/4

b) EXTEND the Blanco-Mesaverde Pool to include therein:

TOWNSHIP 26 NORTH, RANGE 8 WEST, NMPM
SECTION 4: N/2
SECTION 5: N/2
SECTION 7: E/2

TOWNSHIP 27 NORTH, RANGE 9 WEST, NMPM
SECTION 10: S/2
SECTION 25: W/2
SECTION 26: E/2

c) EXTEND the Largo-Gallup Pool to include therein:

TOWNSHIP 26 NORTH, RANGE 7 WEST, NMPM
SECTION 5: All

d) EXTEND the Tocito Dome-Pennsylvanian "D" Oil Pool to include therein:

TOWNSHIP 26 NORTH, RANGE 18 WEST, NMPM
SECTION 7: SE/4
SECTION 27: SW/4
SECTION 28: SW/4
SECTION 34: NW/4

JOSEPH O. WALTON
ATTORNEY AT LAW
LOVINGTON, NEW MEXICO

March 22, 1965

Case 3335

New Mexico Oil Conservation Commission
State Land Office
Santa Fe, New Mexico

Re: Request for Permission to Salvage Oil

Gentlemen:

It is respectfully requested that I be granted authority to salvage and market oil that is now comingled with, or is on top of, the waters found in the Ogalalla formation. This request is in the alternative, as follows:

FIRST, that authority be granted to market oil salvaged without restrictions as to the method of operation or quantity recovered; or

SECOND, that I be given permission to continue testing operations by drilling three additional test wells, and be granted authority to market all oil salvaged, without regard to quantity.

To support this request, I submit the following:

The Ogalalla formation is the source of potable water in Lea County. It is found at a depth varying from 25 to 50 feet below the surface. Prior to the discovery of oil in Lea County, this water was uncontaminated.

Prior to 1957, many of the oil and gas wells in the northwest portion of the Hobbs Pool developed casing leaks and unknown quantities of oil escaped and is now found comingled with, or is on top of, the waters of the Ogalalla. The casings were repaired and, as far as is known, there is presently no escape of oil or gas.

In 1957, the contamination of the potable water was officially brought to the attention of the various oil companies operating in the Hobbs Pool and hearings were held for the purpose of determining the feasibility of taking some action to decontaminate these waters. A committee, composed of various representatives from the oil companies, was appointed and a report was made which, in effect, stated that there was no reasonable or practical method of decontaminating these waters, and since that date nothing has been done.

Several surface owners of the lands located in the Northwest portion of the Hobbs Pool have attempted to obtain potable water from the Ogalalla and have encountered free oil on the top thereof. The presence of this oil constitutes a public and private nuisance and is detrimental to the health, welfare and safety of the surface owners and the public generally. It affects the public in that it is spreading and might even go to the extent of contaminating the source of water now being used by the City of Hobbs.

Several of the surface owners in the above area have employed me to assist them in taking such steps as may be necessary to alleviate the situation. In doing this, it is believed possible to salvage and market some of this free oil. It is believed that such an operation would be beneficial to the surface owners and the public generally.

It is my opinion that this oil is classified as either escaped, wild, fugitive, unclaimed or abandoned. It belongs to no one in its present state and can be legally claimed by anyone reducing it to possession.

Under authority of this Commission, I have conducted a month-long test and investigation. I believe that this oil can be captured, that it can be marketed, and that it can be done economically. It has been stated that any surface owner could remove any oil from the waters without authority of this Commission, provided that no attempt is made to market the same. This, of course, would constitute waste and is contrary to the purpose of this Commission.

The location of the three requested test wells are as follows:

Location	Owner
SW 1/4 SW 1/4 SW 1/4 NE 1/4 Sec. 30, T. 18 S., R. 38 E. (This is also the location of the present test)	W. F. Ayers
SE 1/4 SW 1/4 SW 1/4 NE 1/4 Sec. 30, T. 18 S., R. 38 E.	Robert L. Bensing
NE 1/4 SW 1/4 SW 1/4 NE 1/4 Sec. 30, T. 18 S., R. 38 E.	C. J. Sanders

It is respectfully requested that this matter be put before the Commission at its hearing on April 14, 1965.

Respectfully submitted,

JOSEPH O. WALTON

W/pe

cc: Mr. James M. Durrett, Jr.
New Mexico Oil Conservation Commission
State Land Office
Santa Fe, New Mexico

Mr. Joe D. Ramey
New Mexico Oil Conservation Commission
P. O. Box 1980
Hobbs, New Mexico

CLARENCE E. HINKLE
W. E. BONDURANT, JR.
S. B. CHRISTY IV
LEWIS C. COX, JR.
PAUL [illegible]ATON, JR.
CONRAD E. COFFIELD
HAROLD L. HENSLEY, JR.
MICHAEL R. WALLER

LAW OFFICES
HINKLE, BONDURANT & CHRISTY
HINKLE BUILDING
ROSWELL, NEW MEXICO

OF COUNSEL: HIRAM M. DOW

TELEPHONE 622-6510
AREA CODE 505
POST OFFICE BOX 10

May 10, 1965

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico

Attention: Mrs. Ida Rodriquez

Re: NMOCC Case No. 3235

Gentlemen:

We enclose herewith your captioned case file, and wish to take this opportunity to thank you for the use of such file.

Respectfully,

HINKLE, BONDURANT & CHRISTY

By S. B. Christy IV

SBC:jy
Encl.

CLARENCE E. HINKLE
W. E. BONDURANT, JR.
S. B. CHRISTY IV
LEWIS C. COX, JR.
PAUL W. EATON, JR.
CONRAD E. COFFIELD
HAROLD L. HENSLEY, JR.
MICHAEL R. WALLER

LAW OFFICES
HINKLE, BONDURANT & CHRISTY
HINKLE BUILDING
ROSWELL, NEW MEXICO

OF COUNSEL: HIRAM M. DOW

TELEPHONE 622-6510
AREA CODE 505
POST OFFICE BOX 10

'65 SEP 8 AM 8 32

September 7, 1965

Miss Ida Rodriguez
Oil Conservation Commission
Santa Fe, New Mexico

Re: Application Of Joseph O. Walton
Case No. 3235

Dear Miss Rodriguez:

Thank you so very much for forwarding to me Case File No. 3235 together with a transcript of the April 14, 1965, hearing before the Commission in Hobbs, New Mexico.

Enclosed herewith please find both the case file and the transcript which we are returning pursuant to your request.

Yours very truly,

HINKLE, BONDURANT & CHRISTY

By Harold L. Hensley

HLH,Jr.:ecd
Enclosure

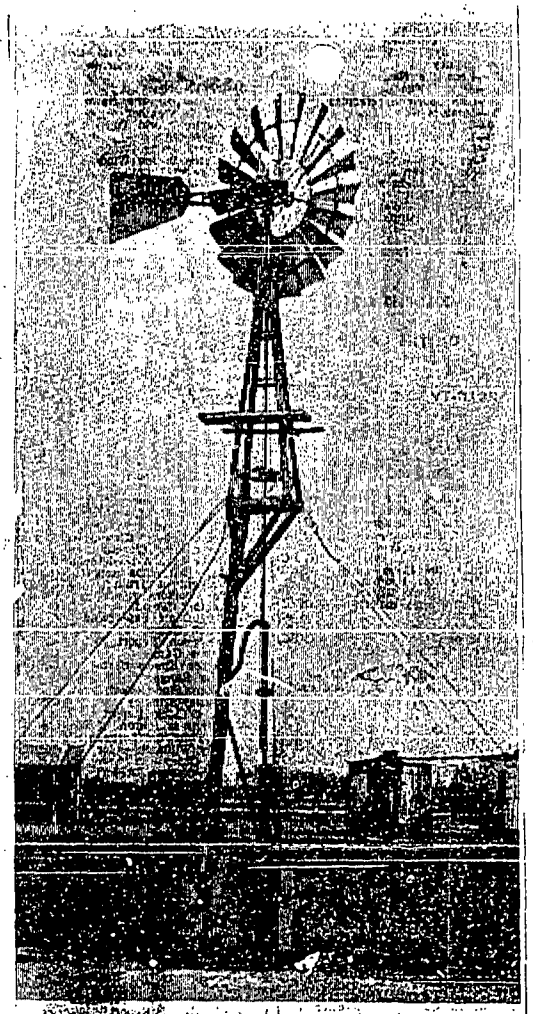
OIL CONSERVATION COMMISSION
9:00 A.M. WEDNESDAY, APRIL 14, 1965
THE INN, MOTOR HOTEL, CONVENTION CENTER
200 SOUTH LINAM, HOBBS, NEW MEXICO

CASE NO. 3235

APPLICATION OF JOSEPH O. WALTON TO REMOVE AND MARKET OIL FROM THE OGALALLA FORMATION, LEA COUNTY, NEW MEXICO

Applicant, in the above-styled cause, seeks authority to remove and market oil from the Ogalalla formation in Lea County, New Mexico, without restriction concerning the method of operation or quantity of oil recovered. In the alternative, applicant seeks authority to remove and market oil from three test wells to be drilled in Section 30, Township 18 South, Range 38 East, Lea County, New Mexico, without restriction concerning the method of operation or quantity of oil recovered.

INDEX TO EXHIBITS



WORK FOR THE WIND—This windmill atop an unusual tower is engaged in an unusual task—pumping oil from a well originally drilled to obtain water. The windmill is on property owned by W. F. Ayers, two miles west and a half mile south of the Bender Blvd. and Turner intersection. The pumping operation has been conducted by Joseph O. Walton, a Lovington attorney who told the New Mexico Oil Conservation Commission that he believes the oil should be classified "as either escaped, wild, fugitive, unclaimed or abandoned." Walton has pumped approximately 140 barrels of oil from the well and stored it in the two stock tanks seen in the right background. —Staff photo by Jim Rawls.

PROBLEM FOR OCC

Windmill Pumps Lost Crude Oil!

By RAYMOND F. WATERS
Oil Editor

When the New Mexico Oil Conservation Commission meets in Hobbs Wednesday it will have one of the most unusual cases in its history dumped into its collective lap. The case involves a request by Lovington attorney Joseph O. Walton to permit the removal and marketing of oil found in a water well near Hobbs.

The water well mentioned in the request is on property owned by W. F. Ayers who lives a half-mile south of West Bender Blvd., approximately two miles west of Turner.

The Oil Conservation Commission will meet Wednesday in the Inn for its session here. Members of the commission are Gov. Jack M. Campbell, New Mexico Commissioner of Public Lands Guyton B. Hays and OCC Executive Secretary A. L. (Pete) Porter. The meeting also will be attended by more than 100 oil company representatives from all over the nation, and by staff members from the Santa Fe offices of the Oil Conservation Commission.

Walton approached commission authorities several months ago and asked permission to enter and produce oil from the well which had been drilled to water in the Ogallala formation. This strata, primary water producing source in this area, ranges in depth from 35 feet to 125 feet throughout most of the county.

The Lovington attorney received permission to test the well for 30 days, or until he had produced 100 barrels of oil. He later reported his test completed on March 25, and that he had produced approximately 140 barrels of oil.

The contents of the well were pumped to the surface by means of a windmill which raised the oil from a depth of 45 feet. The oil was stored in two stock tanks several hundred feet east of the well.

Walton now seeks authority to drill three additional wells in the immediate area and produce these without restriction, and free from commission requirements of well locations. As indicated in his request contained in a letter to the commission, Walton contends the oil he seeks to recover is lost and abandoned oil from casing leaks in the Hobbs Pool. Therefore, he maintains, it belongs to the individual who captures the oil.

Walton also said in his letter to the commission that he believes this recovery of the oil will prove a decontamination measure and will aid in preventing oil from spreading throughout the fresh water strata in this area.

Oilmen said the oil recovered by Walton was tested at 29 gravity which would make it worth approximately $2.70 a barrel. This would place value of the 140 barrels he obtained from the well at $378.

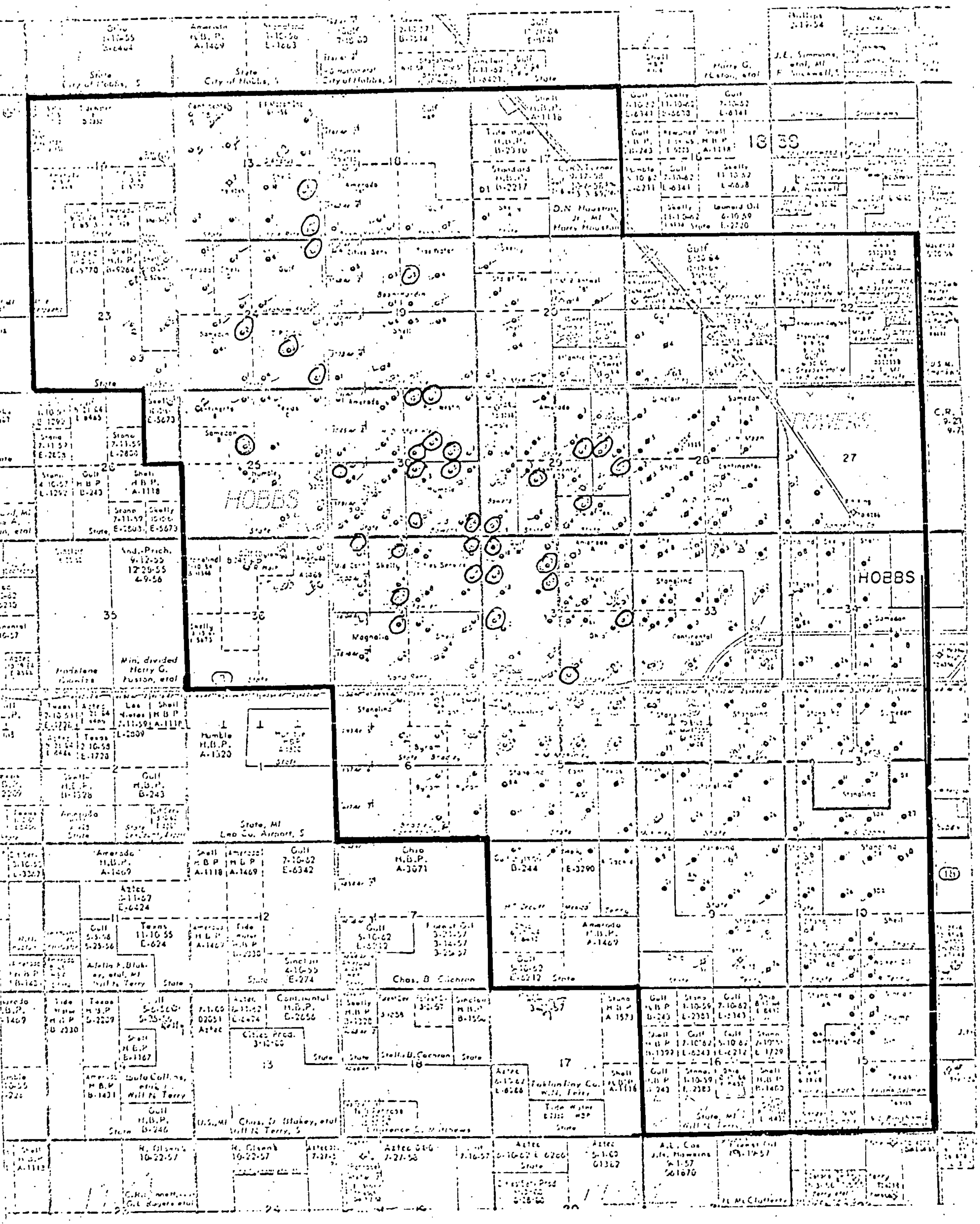
Walton's request for drilling further test wells give location of these as on property owned by Robert L. Bensing and [illegible] Sanders in the same immediate area of the Ayers well.

The Walton case is docketed as No. 3235 on the commission's agenda for the Hobbs meeting. Four other cases also are scheduled for hearing. They are:

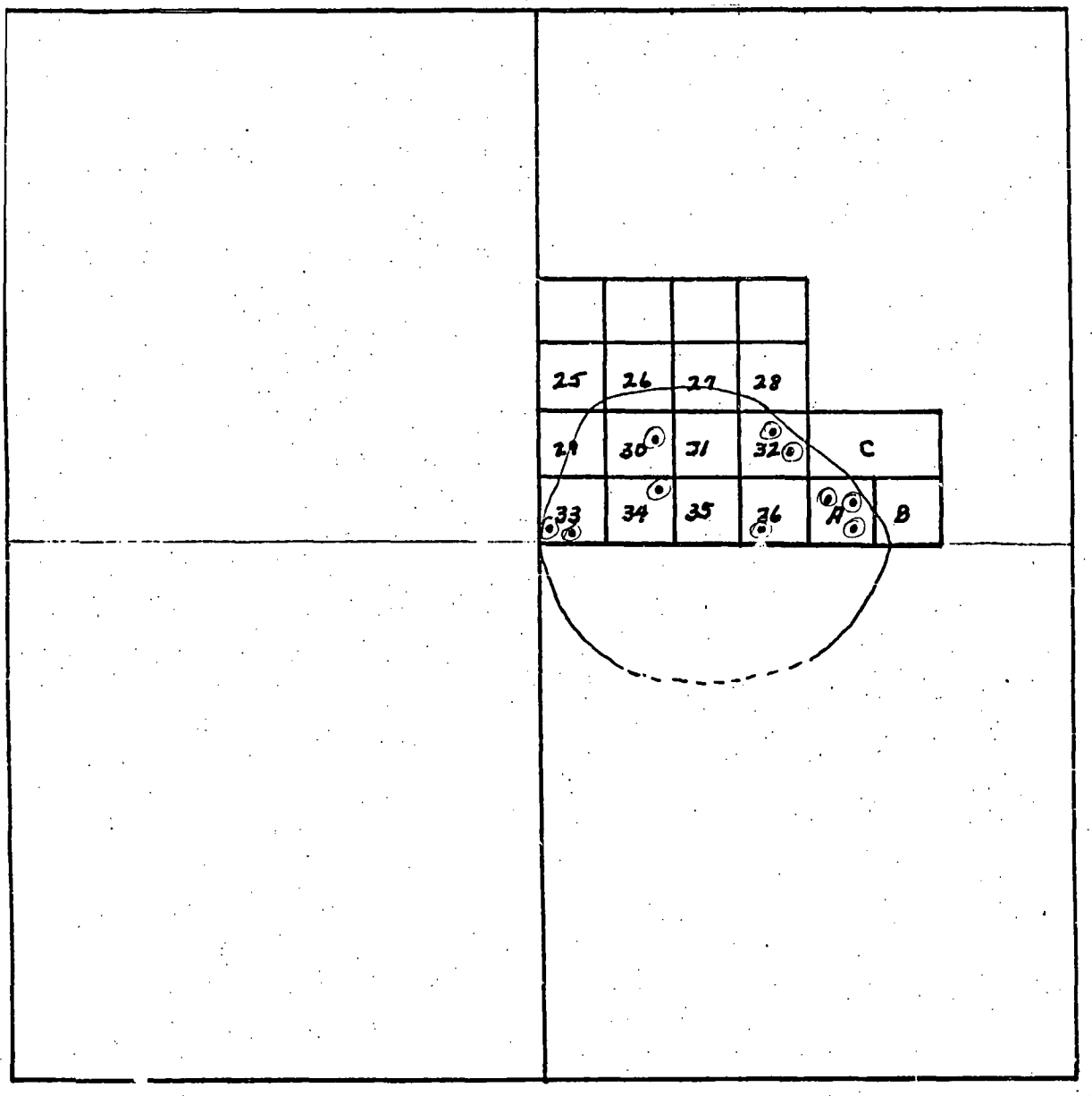
No. 3236 — Application for force pooling of all mineral interests in Sec. 19-T21S-RE23E, Eddy County. This a gas pool which is spaced on 640 acres and all owners are not interested in drilling a well. Purpose of the force pooling is to form a standard drilling and producing unit.

No. 3237—This is a followup of the meeting held in Hobbs last month in which the commission this time will have to determine if there will be sufficient drainage by one transporter before the other is connected, to cause a violation of correlative rights, and if so, what can be done to compensate for this violation.

No.'s 3238 and 3239 — These are regular nomenclature cases calling for the extension, contraction and abolishment of established pools in the various producing counties in the state.


HOBBS
HOBBS
Magnolia
Humble H.B.P. A-1320
State, MI Lea Co. Airport, S
Chas. B. Cochran

"Exhibit 1"



SECTION 30, TOWNSHIP 18 SOUTH, RANGE 38 EAST
LEA COUNTY, NEW MEXICO

"Exhibit 2"

HUMBLE OIL & REFINING COMPANY

~~HOUSTON, TEXAS~~

P. O. Box 2347
Hobbs, New Mexico
August 5, 1953

New Mexico Oil Conservation Commission
P. O. Box 2045
Hobbs, New Mexico

Gentlemen:

Authority is requested to run approximately 3000 barrels of distress oil which is now flowing, uncontrolled, from the bradenhead on our Federal Bowers "A" A/C 1 Well #2, Unit J, Section 30, T-18-S, R-38-E, Hobbs Pool. This well is flowing into a pit at an estimated rate of 18 barrels per hour.

We are now moving in a workover rig to kill the well and work same over.

Humble Pipe Line Company is transporter of oil from this lease. Oil produced in excess of current allowable for this well will be charged against the future allowable.

Yours very truly,

HUMBLE OIL & REFINING COMPANY

By R. M. Gillette
R. M. Gillette

RMG/jsp

cc: Mr. W. E. Hubbard
Mr. J. W. House

Not drilled this well

"Exhibit 5"

A-231 1060527 (8-53)

COPY

HUMBLE OIL & REFINING COMPANY

HOUSTON 1, TEXAS
P. O. Box 1600

August 12, 1953

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Attention: Mr. R. R. Spurrier
Secretary & Director

Gentlemen:

On August 2, 1953, we discovered a leak in the cellar of Federal-Bowers "A" No. 2 located on our Federal Bowers lease in the Hobbs Field, Lea County, New Mexico. Flow into the cellar was estimated at one barrel per hour. The cellar was dug out and the annulus between 12-1/2-inch and 9-5/8-inch casing was found to be flowing oil through a 1/2-inch valve on the 12-1/2-inch bradenhead. Flow was estimated at 2.5 barrels per hour.

Federal Bowers A-2 was originally completed in September, 1930, in open hole from the 7-inch casing set at 3960 feet to 4213 feet. The well was re-entered in September, 1947, and holes were located in the 7-inch oil string at 490 and 875 feet. These holes were repaired by perforating the 7-inch oil string at 1500 feet and circulating cement to the surface between the 7-inch and 9-5/8-inch casing. The hole was deepened to 4238 feet and a string of 5-1/2-inch casing was run inside the 7-inch casing set on bottom and cemented with 30 sacks. The 5-1/2-inch casing was perforated from 4010 to 4205 feet. A Baker production packer was set at 3940 feet and the well returned to production. A well completion diagram is attached.

After the cellar was cleaned out, the 5-1/2-inch oil string was tested with 1000 pounds pressure and found to hold pressure satisfactorily. A similar test was also made on the annulus between the 5-1/2-inch and 7-inch casing. This annular space was tested with 1000 pounds and was found to hold pressure satisfactorily.

"Exhibit 4"

A-238 1-50627 (3-53)

COPY

HUMBLE OIL & REFINING COMPANY

HOUSTON 1, TEXAS

On August 5, 1953, a total of 1685 barrels of water was pumped into the producing interval from 4010 to 4205 feet. Injection pressures ranged from 900 to 1600 pounds. The flow on the 1/2-inch valve on the 12-1/2-inch bradenhead had increased to 15.5 barrels of oil per hour. On August 6 after pumping an additional 455 barrels of water into the producing interval, the Baker production packer at 3940 feet was drilled out and a retainer set at 4000 feet. The 5-1/2-inch oil string was perforated at 3976 feet with four shots and a Baker P & T tool was set at 3916 feet. A total of 300 barrels of water was pumped through the perforations at 3976 feet in ten hours. The average injection pressure was 2100 pounds. A temperature survey, Delta log and potential survey were run. A bridge plug was set at 3795 feet and the 5-1/2-inch casing perforated from 3677 to 3678 feet with four shots. A total of 900 barrels of water was injected through perforations from 3677 to 3678 feet. Injection rates ranged from 16 to 60 barrels per hour and injection pressures from 2700 to 3600 pounds. As of August 8, 1953, the oil flow on the bradenhead had increased to 16.5 barrels per hour.

The results of these tests indicate that the oil flow on the 12-1/2-inch bradenhead of Humble Federal Bowers A-2 is not the direct result of a casing leak in Bowers A-2. Humble is now in the process of conducting temperature surveys in its other wells in the area in an effort to locate any possible casing leaks which might serve as a source for the oil flow noted in the bradenhead at Federal Bowers A-2. The characteristics of the oil being produced from the 12-1/2-inch bradenhead at Bowers A-2 indicate that the San Andres is the source of this oil. Humble has contacted offset operators and advised them of the situation at Bowers A-2.

We request that we be issued such tenders as are necessary, covering the oil produced from the bradenhead on this well during the period that it continues to flow; in the meanwhile, Humble will continue diligently its efforts to locate and control the source of the oil now being produced from the 12-1/2-inch bradenhead of the Federal Bowers A-2 well.

Yours very truly,

HUMBLE OIL & REFINING COMPANY

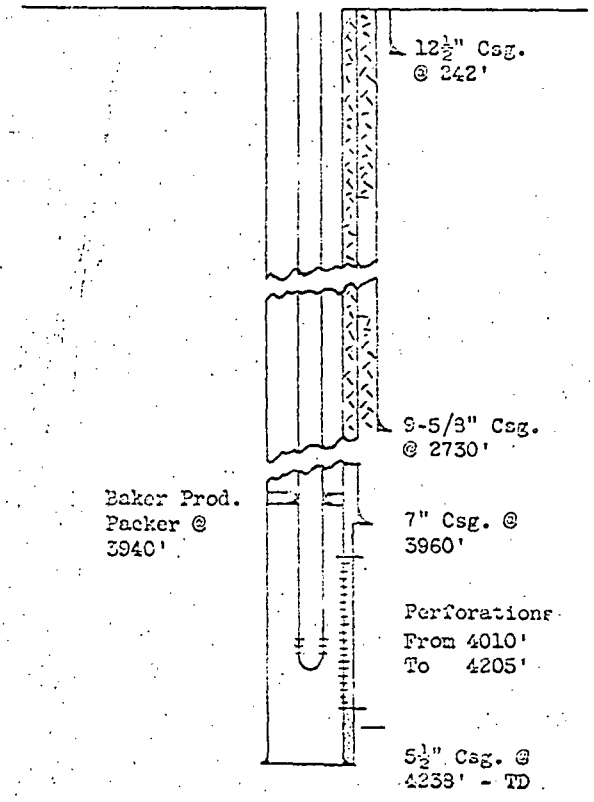
By_____
J. W. House

DBS:WDM:ls
cc: Mr. A. L. Porter ✓
P. O. Box 2045
Hobbs, New Mexico

Mr. R. S. Dewey-Bldg.
Mr. M. M. Rogers-Hobbs

"Exhibit 4"

Well Completion Diagram
Federal Bowers A-2



"Exhibit 4"

MINUTES OF THE HOBBS POOL OPERATORS COMMITTEE MEETING
AUGUST 25, 1953

The meeting was called to order by the Director who gave a resume of the reason for calling the meeting which pertained to a bradenhead leak in the Hobbs Pool. The Operator affected and offset operators reported on Bottom Hole Pressure and Temperature Surveys made in their wells. The results of which were illustrated by graphs and charts. Each Operator conducting such tests gave an outline of the work that had been done and what they proposed to do in the future.

A letter from Mr. R. R. Spurrier, Director of the New Mexico Oil Conservation Commission, addressed to all Hobbs Pool Operators was distributed. A copy of which is included herewith. Mr. W. B. Macey, Chief Engineer for the Commission, requested that the group outline a standard procedure for running this Temperature Survey. After some discussion the following procedure was adopted and recommended to the Oil Conservation Commission:

I. Well to be in a static condition - Shut-in a minimum of 24 Hours.

II. The survey instrument will be lowered at a maximum speed not to exceed fifty (50) feet per minute.

III. Reporting: Plot points every 100 feet (except where an anomaly appears in which case data shall be detailed) on 8 1/2" X 11" - 10 X 10 graph paper.

a. For the Ordinate from Zero to 4000' : 1" equal 400 Feet (Depth)

b. For the Obscissa from 65° to 100° : 1" equal 5° (Temp.)

c. On right hand side of page plot all casing strings 1" equal 400'.

d. On bottom left hand side record: Company, Lease Name, Well Number, Unit, Section, Township, Range, and Date survey was run.

Attached is a list of those attending the meeting.

Glenn Staley
Director

HOBBS POOL OPERATORS
August 25, 1953

ATTENDANCE RECORD

NAME-	COMPANY	ADDRESS
Rex C. Cabaniss	Shell Oil Company	Hobbs, New Mexico
Paul D. Sweitzer	The Texas Company	Monument, New Mexico
L. C. Hudry	Atlantic Refining Company	Denver City, Texas
J. S. Hutchins	" " "	" " "
R. M. Yarbrough	Union Oil Company of Calif.	Hobbs, New Mexico
L. B. Curtis	Continental Oil Company	" " "
Bill Kearley	Ohio Oil Company	" " "
E. Van Vranken	" " "	" " "
John A. Disch	Sinclair Oil and Gas Company	" " "
C. J. Merryman	Sun Oil Company	Odessa, Texas
D. C. Capps	Amerada Petroleum Corporation	Monument, New Mexico
W. G. Abbott	" " "	" " "
Paul S. Johnston	Texas-Pacific Coal and Oil Co.	Hobbs, New Mexico
C. C. Wilson	Continental Oil Company	" " "
R. S. Dewey	Humble Oil & Refining Company	Midland, Texas
K. C. Heald, Jr.	" " " "	Hobbs, New Mexico
M. M. Rogers	" " " "	" " "
Max E. Curry	Skelly Oil Company	" " "
Chas F. Dwyer, Jr.	Standard Oil Company of Texas	Royalty, Texas
W. B. Macey	Oil Conservation Commission	Santa Fe, New Mexico
George E. Trimble	Samedan Oil Corporation	Midland, Texas
S. J. Stanley	Oil Conservation Commission	Hobbs, New Mexico
H. A. DuPont	U. S. Geological Survey	" " "
H. E. Massey	Cities Service Oil Company	" " "
H. Lucchi	" " " "	" " "
E. E. Noble	Samedan Oil Corporation	Midland, Texas
Earl Woolwine	" " "	Hobbs, New Mexico
R. L. Hendrickson	Stanolind Oil and Gas Company	" " "

N. M. Oil and Gas Engineering Committee
Hobbs, New Mexico
8-26-53.

NEW MEXICO
OIL CONSERVATION COMMISSION

P. O. Box 871
Santa Fe, New Mexico

MEMORANDUM TO: All Hobbs Pool Operators:

SUBJECT: Casing Leaks -- Hobbs Pool.

All Hobbs Pool Operators are directed to perform the following tests on all flowing wells in the Hobbs Pool prior to October 1, 1953.

1. Take a Bottom Hole Pressure test after a minimum of 24 Hours shut-in at a datum of -400 and report the result to the Commission office at Hobbs on Form C-124-A (in triplicate).

2. Run a temperature survey to check for possible casing leaks.

3. Test all surface connections for any evidence of casing leaks.

Operators shall report the results of all tests in connection with this directive on Form C-103 and shall submit 2 copies of temperature surveys with the report.

In the event the tests show any evidence of possible casing leak operators shall take immediate steps to perform the necessary remedial work to assure this Commission that any and all oil or gas producing zones in the Hobbs area are confined to their original formation. Details of all remedial work shall be reported on Form C-103 or the appropriate USGS Form if the well is located on Federal land.

In the event any portion of the required tests outlined above have been performed since July 1, 1953 that portion of the required tests may be waived, however, operators shall be sure that appropriate Forms are on file in the Commission Office at Hobbs outlining the tests taken and the results thereof.

R. R. SPURRIER
Director

N. M. Oil and Gas Engineering Committee
Hobbs, New Mexico
8-25-53.

RESOLUTION CONCERNING THE LEAKAGE OF OIL AND GAS INTO THE LEA COUNTY WATER BASIN; RECOMMENDING REMEDIAL OPERATIONS; URGING THE OIL CONSERVATION COMMISSION TO ENACT REGULATIONS PROHIBITING SAID LEAKAGE AND EXHAUSTION OF THE NATURAL RESOURCES AND DECLARING AN EMERGENCY.

WHEREAS, it has been brought to the attention of the City Commission of the City of Hobbs that many oil and gas wells within the Hobbs Pool, by reason of defective pipe, casing leakage, and other causes, that oil and gas is now migrating from its confined horizon within the Hobbs Pool to the water and void strata directly below the very important Lea County Water Basin; and

WHEREAS, said oil and gas leakage is causing the contamination of the water which is utilized by the City of Hobbs and the greater part of Lea County and if complete contamination is effectuated, will jeopardize and destroy the future welfare and economy of the citizens of Hobbs and people of Lea County; and

WHEREAS, it has been determined that if the water strata, upon which the life and commerce of this area solely depends becomes contaminated, there is no known way to eliminate the oil and gas within the water and that the said water is forever lost for human use and consumption or for irrigation or other industrial purposes; and

WHEREAS, it has been brought to the attention of the City of Hobbs that in one particular case a leaking oil well now exists within one-half mile of the main source of the water supply of the City of Hobbs and that unless corrective measures are immediately instituted the hazard is extremely great that this oil well will contaminate the water well of the City of Hobbs and seriously impair the health and welfare of the citizens of Hobbs; and

WHEREAS, it is the belief of the City Commission of the City of Hobbs that if the Oil Conservation Commission of the State of New Mexico put into effect forthwith, proper rules, orders and regulations requiring the immediate remedial or work-over operations on all wells within the Hobbs Pool or such

"Exhibit 8"

water supply of this area and assure the continued prosperity and development of Hobbs and Lea County; and

WHEREAS, the continued leakage of said oil and gas from the confined horizon to the water or void strata is causing an unnecessary waste and loss of the natural resources of Lea County and State of New Mexico, and that as a conservative measure rules and regulations should be propounded to eliminate the waste of the natural resources of the State of New Mexico.

BE IT, THEREFORE, RESOLVED by the City Commission of the City of Hobbs that the Oil Conservation Commission of the State of New Mexico be urged to establish such rules and regulations as may be necessary to authorize and empower the Oil Conservation Commission to require such emergency action on the part of the oil operators to remedy such defective wells as may be causing contamination of the water supply and such other rules and regulations as may be necessary to prevent this continued serious contamination of the water supply of the City of Hobbs and of Lea County and to prevent the continued waste of the natural resources of Lea County and State of New Mexico.

BE IT FURTHER RESOLVED that a certified copy of this resolution be forwarded to the Honorable Edwin L. Mechem, Governor of the State of New Mexico and Chairman of the Oil Conservation Commission, and to each and every other member of the Oil Conservation Commission and that a certified copy of this resolution be forwarded to the State Engineer of the State of New Mexico.

BE IT FURTHER RESOLVED that an emergency is declared to exist requiring that this resolution take full force and effect immediately upon its passage.

INTRODUCED, PASSED AND APPROVED this 15th day of March, A.D., 1954.

ATTEST:

_____
Mayor

_____
City Clerk

June 19, 1957

Mr. A. L. Porter
State Geologist
Box 871
Santa Fe, New Mexico

Dear Mr. Porter:

The City Commission at their regular meeting on June 17, 1957, was advised that leakage from oil and gas wells in the Hobbs area was contaminating the water supply of the City of Hobbs, due either to leakage from the producing wells or from prior contamination.

You will recall that in 1954 the City of Hobbs by Resolution Number 686, requested the Oil Conservation Commission to effectuate orders requiring the cessation of oil and gas leakage. Such action was taken by the Oil Conservation Commission and after diligent efforts on the part of the Commission and the oil operators, all wells were tested and repaired.

By reason of this, it is uncertain whether the present contamination is the result of prior leakage, which now remains in the water bearing strata.

The contamination, unless corrected by migration, will ultimately pollute and destroy the water resources of the City of Hobbs and surrounding area.

The City at this time does not have a scientifically correct answer or solution to the problem, and therefore, requests

"Exhibit 9"

that the Oil Conservation Commission call a meeting to include the Commission, State Engineer, the oil operators of the Hobbs Pool and all other interested parties for the purpose of determining the most feasible method of eliminating this contamination, to be held at the Oil Conservation Commission Office in the City of Hobbs at your earliest convenience.

The City of Hobbs sincerely appreciates your present interest, and your efforts in the past.

Very truly yours,

Donald D. Mallam
City Attorney

DDM/gg
cc: Mr. Neal Marr
City Manager

NEW MEXICO
OIL CONSERVATION COMMISSION
P. O. BOX 871
Santa Fe, New Mexico

MEMORANDUM:

TO: All Operators in the Hobbs, Bowers, and Byers-Queen Pools.

FROM: A. L. Porter, Jr., Secretary-Director

SUBJECT: Protection of Fresh Water Resources.

The Oil Conservation Commission has received a letter from the City Commission of Hobbs, New Mexico, expressing concern over the danger of contamination of the Hobbs municipal water supply as a result of leakage from oil and gas wells in the area.

The City Commission requested this office to call a meeting of all operators in the Hobbs, Bowers, and Byers-Queen Pools for the purpose of determining the most feasible method of protecting the fresh water from contamination.

All operators in the above-named pools are therefore directed to appear at the Office of the Oil Conservation Commission in Hobbs, New Mexico at 10:00 o'clock a.m. on July 9, 1957. Each operator should have at least one representative present who is authorized to speak the policy of his company. Members of the field offices who are familiar with the problem should also be present.

A representative of the State Engineer's Office as well as the members of the Oil Conservation Commission expect to attend the meeting.

All inquiries concerning the meeting should be directed to the Oil Conservation Commission Office in Santa Fe, New Mexico.

June 21, 1957
ir/

NAME	COMPANY OR AGENCY	ADDRESS
Warren N. Franklin	N M O C C	Santa Fe, N.M.
H.F. Montgomery	N M O C C	Box 2045 - Hobbs, N.M.
J.K. Runyan	N M O C C	Box 2045 - Hobbs, N.M.
Dan Nutter	N M O C C	Santa Fe, N.M.
W.J. Cooley	N M O C C	Santa Fe, N.M.
C.M. Rhodes	Self	Hobbs, N.M.
F.[illegible] Englehu	Self	Albuquerque, N.M.
Eric Engbrecht	N M O C C	Box 2045 - Hobbs, N.M.
W.L. Brothers	Humble	Box 1600 - Midland, Texas
Kenny E. Meadows	Humble	Box 1600 - Midland, Texas
H. McCarty	Humble	Box 2347 - Hobbs, N.M.
D.K. Bevill	Humble	Box 2347 - Hobbs, N.M.
R.C. Tomkin	Humble	Box 2347 - Hobbs, N.M.
Jene Spiegel	State Engineer's Office	Santa Fe, N.M.
W.P. Yost	The Texas Co.	Hobbs, N.M.
R.M. Wade	The Texas Co.	Box 1720 - Ft. Worth, Texas
C.F. Taylor	Gulf Oil Corp.	Box 2167 - Hobbs, N.M.
R.V. Knutlor	Gulf Oil Corp.	Box 669 - Roswell, N.M.
C.K. Colbreth, Jr.	Gulf Oil Corp.	Box 962 - Roswell, N.M.
R.F. Eddington	Gulf Oil Corp.	Hobbs, N.M.
C.M. Hampton	Gulf Oil Corp.	Hobbs, N.M.
Elvis Utz	N M O C C	Santa Fe, N.M.
J.A. Moore	Continental Oil Co.	Roswell, N.M.
J.V. Clyston	Continental Oil Co.	Box 427 - Hobbs, N.M.
P.T. Elliott	Continental Oil Co.	Box 427 - Hobbs, N.M.
R.L. Adams	Continental Oil Co.	Roswell, N.M.

A.R. Mallou	Sun Oil Co.	Box 2880 - Dallas, Texas
Joseph C. Walton	Self	Hobbs, N.M.
Mrs. A.A. Kennita	City Commission	Hobbs, N.M.
Hugh Frith	Phillips Petroleum Co.	Box 758 - Hobbs, N.M.
J.D. Hamilton	Standard Oil Co. of Texas	Box 397 - Hobbs, N.M.
Richard Lee Doak	Standard of Texas	Bin B - Royalty, Texas
C.L. Staley	N.M. Oil & Gas Eng.	Hobbs, N.M.
D.C. Capps	Amerada Pet. Corp.	Drawer D - Monument, N.M.
J.E. Hooton	T. P. Coal & Oil Co.	Box 2037 - Midland, Texas
J.M. Brown	Pan American Petroleum Corp.	Box 899 - Roswell, N.M.
H.C. McPhail	Pan American Petroleum Corp.	Hobbs, N.M.
Ralph L. Hendrickson	Pan American Petroleum Corp.	Hobbs, N.M.
R.L. Elkins	Shell Oil Co.	Box 1957 - Hobbs, N.M.
J.W. Montgomery	Shell Oil Co.	Box 1957 - Hobbs, N.M.
Fred C. Baker	City of Hobbs Engr.	City Hall - Hobbs, N.M.
Kent N. Foxey	N.M. Oil & Gas Assn.	Box 1291 - Roswell, N.M.
A.E. Layne	Samedan Oil Corp.	Box 2137 - Hobbs, N.M.
C.W. Putnam	Samedan Oil Corp.	Box 2137 - Hobbs, N.M.
R.E. Powers	Sinclair Oil & Gas Co.	Box 1470 - Midland, Texas
C.C. Selter	Sinclair Oil & Gas Co.	520 E. Broadway - Hobbs, N.M.
R.J. Bernard	Sinclair Oil & Gas Co.	520 E. Broadway - Hobbs, N.M.
W.P. Shackelford	Tidewater Oil Co.	Box 547 - Hobbs, N.M.
D.E. Cavanaugh	Tidewater Oil Co.	Los Angeles, Calif.
Jack D. Jones	Tidewater Oil Co.	Box 751 - Tulsa, Okla
Robert H. Miller	Tidewater Oil Co.	Box 547 - Hobbs, N.M.
H.G. Moberry	Tidewater Oil Co.	Box 1231 - Midland, Texas
C.M. Neal	Tidewater & Cotty Oil	Hobbs, N.M.

Tom W. Neal	Citizen	Hobbs, N.M.
D.M. Trahan	Shell Oil Co.	Hobbs, N.M.
Fox C. Cabaniss	Shell Oil Co.	Hobbs, N.M.
W.E. Owen	Shell Oil Co.	Hobbs, N.M.
J.A. Lore	Shell Oil Co.	Midland, Texas
T.C. Webb	Ohio Oil Co.	Hobbs, N.M.
C.E. Steward	Ohio Oil Co.	Midland, Texas
D.M. Kitley	Ohio Oil Co.	Midland, Texas
D.L. Province	Ohio Oil Co.	Hobbs, N.M.
Lloyd A. Calhoun	Board of Water Comm.	City Hall - Hobbs, N.M.
Paul B. Johnston	Cackle Oil Co.	Hobbs, N.M.
Randall L. Thompson	Hobbs Water Board	Hobbs, N.M.
C.W. Jobe	Hobbs Water Board	Hobbs, N.M.
M.M. Alexander	Water Dept.	Hobbs, N.M.
Frank E. Irby.	State Engineer's Office	Santa Fe, N.M.
Fred H. Kennighausen	State Engineer's Office	Roswell, N.M.
James Wright	State Engineer's Office	Roswell, N.M.
Reed W. Mower	U.S.G.S. - Ground Water Board	Roswell, N.M.
J.D. Ramey	Skelly Oil Co.	Hobbs, N.M.
J.N. Dunlavey	Skelly Oil Co.	Hobbs, N.M.
R.J. Christensen	Magnolia Petroleum Co.	Hobbs, N.M.
Burtow Vetato	Morris R. Antweil	Hobbs, N.M.
W.G. Abbott	Hobbs Water Board	Hobbs, N.M.
E.F. Potter	Cities Service Oil Co.	Hobbs, N.M.
D.J. Van Orden	Sunray Mid-Continent Oil Co.	Midland, Texas
C.T. McClanahan	Sunray Mid-Continent Oil Co.	Hobbs, N.M.
D.E. Hull	Sunray Mid-Continent Oil Co.	Midland, Texas

Roy T. Rains	Halliburton	Hobbs, N.M.
Allen D. Jarred	Halliburton	Lubbock, Texas
Vic Jameson	Hobbs Daily News-Sun	Hobbs, N.M.
W.H. Vaughan	Walker Oil Corp.	Hobbs, N.M.
R.J. Fischer	N M O C C	Hobbs, N.M.
W.E. Smith	N M O C C	Hobbs, N.M.
Mr. & Mrs. W.H. Ellison	Citizen	Hobbs, N.M.
W.D. Arrend	Attorney	Hobbs, N.M.

VIII. The Possibility of, and Methods for, Obtaining Potable Water From the Areas of Apparent Contamination.

The Committee finds:

(1) It should be possible to obtain potable water at almost any location in the Hobbs Pool area provided that proper depth is penetrated, proper methods used to complete the water well, and reasonable caution is used in locating the well with respect to nearby possible sources of contamination.

(2) Since most contamination by oil and gas is evidenced in shallow wells, and since oil and gas will tend to migrate upward toward the water table, it would be advisable to complete water wells as deep as possible in the Ogallala, cement casing to the completion depth, seal around the top of the casing at the surface, and have the casing extend above the natural ground level.

(3) Since some evidence indicates that various depths may be contaminated, casing should be cemented so that shallower intervals can be tested if contamination is found in deeper intervals.

(4) If a water well in the Hobbs Pool area evidences contamination by oil and/or gas, this water can be made potable by removing the oil at the surface by a simple skimming or settling process. Gas can be removed by aeration. If gas contamination is severe, it might be necessary to flow the water over several cascade type trays with a layer of activated charcoal in the bottom of each. This charcoal should not require frequent replacement. If a disagreeable odor or taste of hydrogen sulfide remains a few PPM of chlorine added to the water should remove the odor and taste. Water from gas contaminated wells produced directly into and held in pressure tanks will retain gas in solution to be released when water is withdrawn.

IX. Causes of Oil and Gas Well Casing Deterioration.

The Committee finds:

Oil Conservation Commission records indicate that to this date defective casing has been repaired at 63 Hobbs Pool wells. There are numerous causes of this deterioration of casing in oil and gas wells. Some of these causes are listed as follows:

(1) Corrosive conditions are known to exist in the Hobbs Pool which can cause leaks in any casing string subjected to these conditions.

(2) Severe internal casing corrosion can result from the presence of hydrogen sulfide contained in gas produced with the Hobbs crude oil.

(3) External or internal casing corrosion can result from electrolytic action, action of sulfate reducing bacteria, or galvanic action.

(4) Stress concentrations resulting from even mild corrosion can cause failures of the well casing.

(5) Wear between the tubing and casing in pumping wells as is caused by the movement of tubing during the pumping cycle can cause casing leaks.

(6) Pressure in formations behind the casing can cause collapse of the casing.

"Exhibit 16"

OIL CONSERVATION COMMISSION

HOBBS, NEW MEXICO

THE OIL CONSERVATION COMMISSION MEETING OF JULY 9, 1957

Notice of the meeting was given by MEMORANDUM 20-57 from Mr. A. L. Porter, Jr., Secretary-Director, dated June 21, 1957. The subject of the Memorandum was "Protection of Fresh Water Resources" and directed to all operators in the Hobbs Pool Area. The meeting was called for 10:00 O'Clock A. M. On July 9, 1957 at the Hobbs Office of the OCC. The Memorandum pointed out that the meeting was called at the request of the Hobbs City Commission.

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The meeting was called to order by the Director who gave a resume' of the reason for calling the meeting which pertained to the fresh water contamination northwest of the Hobbs City limits. Shortly after opening the meeting a field trip to inspect the contaminated areas was conducted by Mr. E. J. Fischer, OCC District Engineer. The first stop was at the Dowell plant north of the city. A lighted match was held over a water hose, and when the valve was opened small spurts of gas would burn intermittently. The second stop was made on the Ellison property. A demonstration was made by Mr. Eric Engbrecht, OCC Oil & Gas Inspector, which indicated that the water well had 19.1 feet of fluid including 6.3 feet of 34 gravity oil. This water well is located 1250 feet from the east line and 2380 feet from the north line of Section 30, T-18-S, R-38-E. Stop No. 3 was a disposal pit of Humble Oil and Refining Co. and Stop No. 4 was the Phillips Lake where gas bubbles appeared sporadically on the surface of the water. When the bubble burst a rainbow of oil was observed. This was the last stop of the field trip and the meeting was adjourned until 1:15 P. M.

At 1:15 P. M. the meeting was called to order by Mr. Porter in the Little Theatre of the Hobbs High School, at which time Mr. Porter called on the writer to briefly outline the pollution problem for the benefit of those who were not present at the morning session. This was done. Also it was pointed out that the Commission had been aware of the problem for several years, and that it had diligently discharged its duty to see that all necessary repairs were made by the operators.

The fact that casing leaks did exist was first brought to the attention of the Oil Commission by letter from the Humble Oil and Refining Co. on August 12, 1953. The Director of the OCC called a meeting of Hobbs Pool operators on August 25, 1953, and issued a directive that tests for casing leaks be performed before October 1, 1953. To insure that the operators had found all leaks a second directive was written on March 12, 1954. This directive called for a Commission representative to witness tests on Hobbs Pool area wells.

On March 15, 1954 at a special meeting of the City Council Resolution No. 686 was adopted; this resolution declared that an emergency existed due to casing leaks in wells and requested the Oil Commission to take appropriate action to rectify this condition. As indicated above the Commission had already taken action to rectify this condition.

In August of 1956 a meeting was held by the OCC, at which meeting it was brought to the attention of operators that water contamination existed in Section 30 of T-18-S, R-38-E. Mr. Porter, Director, and Mr. Walker, Commission member, informed the operators that check for casing leaks must continue and that leaking casing would not be tolerated. Mr. Porter directed that a four section block surrounding the contaminated area be rechecked immediately and that a recheck of all

"Exhibit 12"

OIL CONSERVATION COMMISSION

HOBBS, NEW MEXICO

Hobbs area wells be made in the near future. Both orders have been complied with.

During the testing of the Hobbs Pool area from August 1953 to 1957 a total of 52 wells were found to have had leaks. These leaks have been repaired at a known cost of some 400,000 dollars.

After the above summary by this writer Mr. Porter called on the operators for an expression of their views on the matter.

Mr. A. R. Ballou representing the Gun Oil Company suggested that the problem be studied to determine the feasibility of pumping the offending oil from the fresh water aquifer, and pledged this company's cooperation toward solving the problem.

Lloyd A. Calhoun, member of the Hobbs City Water Board, addressed the chair to make a statement. He stated that the Hobbs Water Board had been keenly aware of the possibilities of contamination of the city aquifer for over 3 years, and had taken steps to provide an adequate and contamination-free water supply for at least the next 20 years. At the Water Board meeting of May 10, 1954 the subject of oil and gas infiltration into the water system was discussed. He further mentioned that a member of the OCC staff had met with the Water Board and City Commission and described the program being then carried out by the OCC.

About the middle of 1954 a majority of the Hobbs Water Board members went to Santa Fe and conferred with Mr. Bliss, State Engineer, and Mr. Irby, Assistant. Both officials were informed of the contamination. These officials were very positive in their assurances that the City wells were not in any immediate danger of contamination. They pointed out that on the basis of exhaustive engineering studies it had been determined that the lateral movement of the water in the Ogallala reservoir was about 2½ feet per year. At this time the Water Board made application and received water rights north of the Hobbs Oil Pool for an amount sufficient to support a population of 80,000 within 20 years.

Calhoun stressed his abhorrence to the type of scare headline publicity which had been given by the local newspaper and the wire services. He emphatically assured all of the Oil Company representatives and the OCC that the Hobbs City water system was not in jeopardy, and made a motion that the Hobbs City Council withdraw from the matter.

At this point Mr. Porter called on the City Council for a statement. There were no statements heard from this body.

Mr. Irby of the State Engineer's office stated that he disliked the publicity given, and had no solution for the problem and felt that the OCC and operators were capable of handling the situation.

Mr. C. F. Taylor representing Gulf Oil Corp. read a prepared statement that pledged their fullest cooperation and would take every reasonable precaution to prevent leaks.

Mr. H. E. Meadows speaking for Humble Oil and Refining Co. stated that their wells were not contaminating the fresh water aquifer, also that they would continue to observe their wells for leaks and cooperate.

COPY

"Exhibit 12"

OIL CONSERVATION COMMISSION

HOBBS, NEW MEXICO

Mr. J. W. Brown spoke for Pan American Petroleum Corp. and gave a brief summary of the manner in which they were combating corrosion and pledged to continue their observations for leaks.

Mr. Glenn Staley, New Mexico Oil and Gas Engineering Committee, stated that the first casing leaks came to their attention in 1934. The wells in the area were immediately repaired. He further said that the casing would continue to be corroded but that the operators have always been cooperative in repairing leaks.

Sinclair Oil and Gas Company stated that they recognized the problem and would continue their cooperation.

Ohio Oil Co. stated that all of their leaks had been repaired and would continue to cooperate. Shell Oil Co., Continental Oil Co., Gackle Drlg. Co., Skelly Oil Co. and Amorada Pet. Corp. all made similar statements.

Mr. Porter called on Mr. Don Hallam, Hobbs City Attorney, for a statement since Mr. Calhoun had put his request that the City withdraw in the form of a motion. Mr. Hallam said that the City's position was still as that stated in his letter to Mr. Porter of June 19, 1957 and the City would not withdraw.

At this point Mr. Porter appointed the following Committee to make a study of fresh water contamination in the Hobbs area and make recommendations as to:

(1) Any action that may be taken by the Commission in addition to what is presently being done to prevent further contamination

(2) Any corrective measures that may be employed to prevent further spread of present contamination.

Pan American Pet. Corp., Chairman
Samedan Oil Corp.
Shell Oil Co.
Tidewater Oil Co.
Continental Oil Co.
City Water Board
State Engineer
Hobbs OCC Office

A progress report was requested within 30 days.

The meeting was adjourned.

RFM/mc

"Exhibit 12"

July 26, 1957

COPY

Mr. A. L. Porter, Jr., Director
Oil Conservation Commission
Box: 871
Santa Fe, New Mexico

Dear Mr. Porter:

The first meeting of the committee that you appointed to study the fresh water pollution problem in the Hobbs area was held on July 19, 1957. A list of the committee members is enclosed for your information.

At this meeting Mr. E. G. Minton, Lea County Hydrologist, gave a brief talk on the general geology and hydrology of the area. Mr. Minton stated that from past studies the water moves at about 7 to 9 inches a day, however due to the Cone of Depression (covering about the area of the City Limits of Hobbs) it probably was moving at two to three times this rate. This Cone of Depression is some 25 feet deep and 5 to 6 miles in diameter causing the water to flow towards the center of Hobbs. When asked for suggestions from committee members he put forth the idea of dewatering the contaminated area and reinjecting the treated water. The difficulty of this type of project would be that water wells in the area would go dry. He made an estimate that if the entire saturated section was opened one well could probably produce 800 to 1,000 gals/min. Mr. Minton also stated that water wells had no casing or plug and abandonment requirements.

After Mr. Minton's talk, Mr. Jack Brown, Chairman, proposed methods of conducting the meetings and the following items were decided upon:

1. Conduct informally
2. Members notify alternates
3. Minimum of minutes
4. Quorum to be 5 members
5. Rule of majority
6. No action of member binding on his organization
7. No charges to committee
8. Only members and alternates attend meetings unless others invited

Mr. Zeno Spiegel gave a long talk on the general hydrology of the Hobbs area. Mr. Jack Brown stated that subcommittees would be formed to study specific phases of the problem and the next meeting was called for 9:00 A.M. July 25th at the Hobbs OCC Office.

"Exhibit 14"

At the second meeting of this committee, July 25th, numerous items were discussed which took most of the day.

It was the consensus of the members that the area of contamination was small in extent, possibly 2 to 5 acres, and that if as much as 300,000 barrels had entered the fresh water aquifer that due to the fact that the oil would ride on top of the water it would be filtered out within one mile. This is not a final answer but to determine in some manner what we were looking at, 300,000 barrels was assumed to be in the aquifer. Due to the dry water sands in the upper portions of the aquifer within one mile distance it would filter out if it was riding on top of the water.

However the committee is going ahead with its studies. The OCC Hobbs Office has been requested to furnish the committee with information on all remedial work completed and other pertinent information.

A subcommittee was formed, Tidewater Chairman, to investigate the feasibility of the committee recommending the manner in which future water wells should be completed. The following organizations were appointed to this subcommittee:

City Water Board
Samedan Oil Co.
State Engineer

A second subcommittee was formed, Hobbs OCC Chairman, to determine the location of all water wells in the Hobbs Pool area, and determine all physical characteristics of such wells as to pipe, depth and purity of water. The following organizations were appointed to the subcommittee:

Shell Oil Co.
Continental Oil Co.
State Engineer

A third subcommittee was appointed, Samedan Chairman, to investigate contamination of the fresh water aquifer from causes other than oil wells. The following organizations were appointed to this subcommittee:

Pan American Pet. Corp.
City Water Board

The afternoon session was largely taken up by discussing methods of preventing future contamination.

Casing programs and methods the OCC used in checking for leaks was discussed.

Following considerable discussion of preventing future contamination, the committee may recommend the following:

1. That surface pipe set on clamps should be corrected, and that a small diameter pipe be used to vent all surface bradenheads to the atmosphere at all times or install a sensitive gauge.

"Exhibit 14"

2. That quarterly tests by operators be submitted to the OCC with the certification that no leaks were found or if leaks were found a program for correction. One such test each year to be witnessed by the OCC.

3. That packers be installed on all flowing wells and the annular space be filled with sweet oil.

The committee meeting was adjourned until 9:00 A.M. August 1, 1957.

Yours very truly,

OIL CONSERVATION COMMISSION

R. F. Montgomery
Proration Manager

RFM/mc
cc-E. J. Fischer, Engineer
OCC, Hobbs
encl.

COPY

"Exhibit 14"

Roswell, New Mexico
September 24, 1957

MEMORANDUM

TO: New Mexico Oil Conservation Commission
Attention: Mr. A. L. Porter, Jr., Secretary-Director

FROM: Committee Studying Protection of
Hobbs Fresh Water Sands

SUBJECT: Final Report of the Committee

Transmitted herewith is the completed final report of the Committee. This report contains no direct recommendations since it is the consensus of the Committee that the need for any corrective action is adequately shown in the Committee findings. In some instances this corrective action is outside of the jurisdiction of the Oil Conservation Commission. We trust that you will arrange to have these matters brought to the attention of the appropriate persons or agencies.

It was the decision of the Committee that attendance at its meetings should be restricted to representatives of the agencies and companies appointed to the Committee, and to guest speakers specifically invited to a particular meeting. Mr. E. G. Minton, Lea County Hydrologist, was the only such speaker. The need for closed meetings was indicated by the somewhat negative results observed at the general meeting held in Hobbs on July 9, 1957.

The official representatives designated by each of the agencies and companies appointed to the Committee are listed as follows:

Pan American Petroleum Corporation
C. L. Kelley, Chairman, Roswell, New Mexico
J. W. Brown, Alternate, Roswell, New Mexico

Continental Oil Company
R. L. Adams, Member, Roswell, New Mexico
F. T. Elliot, Alternate, Hobbs, New Mexico

Hobbs City Water Board
L. A. Calhoun, Member, Hobbs, New Mexico
W. G. Abbot, Alternate, Hobbs, New Mexico

New Mexico Oil Conservation Commission
R. F. Montgomery, Member, Hobbs, New Mexico
E. J. Fischer, Alternate, Hobbs, New Mexico

Samedan Oil Corporation
C. W. Putman, Member, Hobbs, New Mexico
C. E. Leyhe, Alternate, Hobbs, New Mexico

"Exhibit 15"

Shell Oil Company
W. E. Owen, Member, Hobbs, New Mexico
R. C. Cabaniss, Alternate, Hobbs, New Mexico

State Engineer's Office
Zane Spiegel, Member, Santa Fe, New Mexico
R. L. Borton, Alternate, Roswell, New Mexico

Tidewater Oil Company
H. P. Shackelford, Member, Hobbs, New Mexico
R. N. Miller, Alternate, Hobbs, New Mexico

Other representatives of the agencies and companies appointed to the Committee attended meetings as second alternates, served as members of subcommittees, or otherwise assisted in the work of the Committee.

R. C. Lannen	Continental Oil Company
E. V. Boynton	Continental Oil Company
R. J. Francis	Continental Oil Company
Joe Anderson	Continental Oil Company
Eric Engbrecht	New Mexico Oil Conservation Commission
J. W. Runyan	New Mexico Oil Conservation Commission
J. W. Montgomery	Shell Oil Company
J. W. Meek	Pan American Petroleum Corporation

All of the Committee meetings were held in the Oil Conservation Commission Conference Room in Hobbs, New Mexico. The first meeting was held on July 19, 1957; subsequent all day meetings were held on July 25, August 1, August 8, August 15, August 22, and September 5. In addition to meetings of the Committee as a whole, three subcommittees held numerous meetings to complete their work assignments.

All of the agencies and companies appointed to the Committee had representatives present at each of the Committee meetings, with the exception of one meeting when one organization was unable to have a representative present.

By Committee decision the initial distribution of this final report is being restricted. In addition to the copies furnished to the Oil Conservation Commission, each designated member and alternate is to receive one copy. All have agreed to hold their copies confidential pending your decision as to the proper disposition of the report.

J. W. Brown
Acting Chairmen

"Exhibit 15"

FINAL REPORT OF COMMITTEE
STUDYING PROTECTION OF HOBBS
FRESH WATER SANDS
SEPTEMBER 24, 1957

At the request of the City Commission of Hobbs, New Mexico, the New Mexico Oil Conservation Commission called a meeting of all operators in the Hobbs, Bowers, and Byers-Queen Pools on July 9, 1957, in Hobbs.

During that meeting and subsequently by Mr. A. L. Porter, Jr.'s letter dated July 10, 1957, a Committee was appointed to make a study of fresh water contamination in the Hobbs Pool area and make recommendations to the New Mexico Oil Conservation Commission, as to:

1. Any action that may be taken by the Commission in addition to what is presently being done to prevent further contamination;

2. Any corrective measures that may be employed to prevent further spread of present contamination.

The Committee consisted of representatives from the following companies and agencies:

Pan American Petroleum Corporation - Chairman
Samedan Oil Corporation
Shell Oil Company
Tidewater Oil Company
Continental Oil Company
Hobbs City Water Board
State Engineer's Office
Hobbs Commission Staff

After collecting additional information regarding water wells and contamination of water wells in the Hobbs Pool area, after giving consideration to existing information and all reports of fresh water contamination, and after obtaining advice and assistance from recognized authorities on ground water and from research organizations and from texts and reports on geology and petroleum engineering, the Committee concluded its study by making numerous findings with respect to the overall problem of fresh water contamination in the Hobbs Pool area.

I. The Physical Characteristics of the Ogallala Formation and the Movement of Water Through This Aquifer.

The Committee finds:

(1) The entire Hobbs Pool area is directly underlain by the Ogallala formation of Tertiary age.

(2) The Ogallala formation, in the Hobbs Pool area, is an effective fresh-water aquifer with a thickness of 175'-200' of which approximately 100'-150' is saturated with water.

(3) The regional dip of the Ogallala formation is approximately 15-20' per mile in a southeasterly direction.

(4) The Ogallala formation consists largely of fine-grained sand in varying stages of cementation and consolidation. The material of the upper 5-40' is often firmly cemented by calcium carbonate to form hard dense caliche which commonly underlies the land surface in the area. The basal portion of the Ogallala is often composed of coarse sand and gravel. Thin discontinuous clay lenses are often found interbedded within the sand of the Ogallala formation. The Ogallala is underlain by Red Beds.

"Exhibit 16"

(5) Clay lenses and thin zones of very fine sand which are relatively well-cemented occur within the Ogallala formation. These are not continuous or of great lateral extent. The Ogallala ground-water reservoir, therefore, is unconfined and acts as a unit.

(6) Water levels in the Hobbs Pool area have declined as much as 12' since 1940 due to large withdrawals and regional drought.

(7) Water level measurements made during August, 1957, show that water levels in the Hobbs Pool area stand at from 18-55' below the land surface. In many instances this level is below the base of the caliche.

(8) The pore space in the sand of the Ogallala formation above the water table would normally contain pellicular water and air.

(9) There would be some water saturation in the sand of the Ogallala formation above the water table due to capillary forces, depending upon the physical characteristics of the sand and the thickness of sand above the water table.

(10) Pressure in the sand of the Ogallala formation above the water table would be atmospheric unless affected by outside forces.

(11) The water table in the Ogallala formation has a gradient of 15' per mile in a southeasterly direction. The water is moving at 9 to 12' per day in that direction.

(12) A negative area of influence, called a cone of depression, is developed by wells pumping water from the Ogallala formation.

(13) The vertical and lateral extent of a cone of depression is dependent upon the rate of withdrawal, duration of pumping, and the lithologic characteristics of the aquifer within the cone of depression.

(14) Ground-water mounds, or positive areas of influence, can be created by injecting water into the Ogallala formation by recharge wells.

(15) The positive areas of influence around recharge wells probably would not be large and would exist only in the area of the recharge well.

(16) The introduction of a second or third phase, oil or gas, below the water table in the Ogallala formation would cause a reduction in the relative permeability in that portion of the Ogallala sand occupied by the oil-water-gas mixture.

(17) Where both oil and gas are present below the water table, relative permeability of the sand to oil and gas would be zero if the water saturation varied from about 88% to 100%. The relative permeability of the sand to oil and gas increases as water saturation decreases below about 88%. Therefore, oil and gas in the Ogallala formation would not move until water saturation is decreased to less than about 88% of the total pore space occupied by a mixture of water-oil-gas.

(18) Oil or gas introduced into the Ogallala formation would be free to move provided only that sufficient saturation by oil or gas occurred.

(19) Once a portion of the Ogallala sand is saturated by oil or gas, it would not be possible to reduce this oil or gas saturation below about 10-12% saturation by the reduction of pressure or by moving water through the sand.

"Exhibit 16"

(20) Any movement of oil or gas in the Ogallala formation below the water table would result in a minimum of about 12% of the oil or gas remaining trapped in the sand through which the oil or gas moved.

(21) Oil introduced into the Ogallala formation above the water table could result in the sand tending to become oil-wet thereby resulting in residual oil saturation much higher than if introduced below the water table.

(22) Gas produced with oil is soluble to some extent in the water of the Ogallala formation, depending upon the amount of gas in contact with the water and the pressure at the point of contact.

(23) Gas dissolved in the Ogallala water would have no effect upon the movement of the water unless free gas began breaking out of the water below the water table. In such a case a reduction in the relative permeability of the sand to water would result.

(24) Dissolved gas would move with the water in a southeasterly direction at a rate of approximately 9 to 12" per day.

(25) Gravitational forces would tend to move oil or free gas in the Ogallala formation upward toward the water table.

(26) A comparison of the water wells contaminated with oil and their relationship to the structure of the base of the caliche shows that these wells are located in the structural highs while water wells contaminated with gas are located both in structural highs and lows. Refer to Exhibit No. 1 which is a map of the Hobbs Pool area contoured on the base of the caliche.

(27) The structure of the base of the caliche could possibly effect the movement of oil and gas toward structural highs. Refer to Exhibit No. 1.

II. Apparent Contaminated Conditions Which Exist in the Ogallala Formation in the Hobbs Pool Area.

The Committee finds:

(1) A total of 378 water wells were located in the area. This includes temporarily abandoned and producing wells. It is believed that this represents about 80% of the total number of water wells in the Hobbs Pool area. The majority of these wells are plotted on Exhibit No. 1.

(2) Based on tests made by Committee members, 17 water wells are suspected to be contaminated by gas. This contamination is in varying degrees, from gas contamination sufficient enough to burn with a small intermittent flame, to a slight taste. The wells are as follows:

Name	Location	Degree of Contamination
Gibbins	SW SE NE 4-19-38	Slight Taste Gas
Easton	SW SE NE 4-19-38	Slight Taste Gas
Geckle	SE SE NE 4-19-38	Strong Taste Gas
Security Supply	NW NE NE 5-19-38	Slight Taste Gas
Ohio Oil	SE SE SE 32-18-38	Strong Taste Gas
Baker Tool	SW SE SW 32-18-38	Slight Taste Gas
Harwell	NW NE NE 28-18-38	Strong Taste Gas
Dowell	NE NE NE 28-18-38	Will Burn
Humble Oil	SW NE SW 30-18-38	Moderate Taste Gas
Bensing	NE NW NE 30-18-38	Very Slight Taste Gas

"Exhibit 16"

Name	Location	Degree of Contamination
Green	NE NE NE 30-18-36	Very Strong Taste Gas
Mertaugh	NW NE NE 30-18-38	Old Well Would Burn
Moon	NW NE NE 30-18-38	Moderate Taste Gas
Moon	SW NE NE 30-18-38	Moderate Taste Gas
Goins	NE SE NE 30-18-38	Strong Taste Gas
Ellison L-2230	SW SE NE 30-18-38	Moderate Taste Gas
Pacific Pump	NW NE NE 5-19-38	Slight Taste Gas

One of the above water wells (Ohio) is reported to have been contaminated with gas since 1930 when the nearest oil wells were more than a mile away.

The greatest degree of gas contamination was found in the Dowell (NE NE NE 28-18-38) water well. This well proved to be contaminated to such an extent that small sporadic flames of gas were observed when a lighted match was held over an opened water faucet.

(3) Of the 370 known water wells, 9 are known to have oil standing in the well bore and 3 are reported to be oil contaminated. The wells known to have oil in the well bore are as follows:

Name	Location	Degree of Contamination
Amerada Pet.	C N/2 29-18-38	19.4 feet
Ellison L-2230 # 1	SW NE NE 30-18-38	6.3 feet
" # 2	SE NW NE 30-18-38	0.5 feet
" # 3	SE SW NE 30-18-38	0.5 feet
" # 4	SE SW NE 30-18-38	0.8 feet
" # 5	NE SW NE 30-18-38	0.6 feet
" #11	SE NW NE 30-18-38	Trace Oil
" #12	SE SW NE 30-18-38	2.4 feet
" #13	SE SW NE 30-18-38	3.8 feet

In the case of the Ellison wells, the owner reported the presence of oil to the New Mexico Oil Conservation Commission and subsequently Commission personnel confirmed the presence of oil in the degree indicated above.

The Amerada well in which 19.4 feet of oil was found was not being produced when first inspected by Committee members. Subsequently, pumping equipment was installed and the 19.4 feet of oil was recovered. As of this date the well is pumping water and no new oil has entered the well bore. Information reported to the Committee indicates the possibility that the oil entered the well bore from the surface and not from the fresh water aquifer.

The wells reported to be contaminated by oil are located as follows:

Name	Location	Degree of Contamination
Jackson	NE NW NW 20-18-38	Unknown
Phillips	NE NW NW 4-19-38	Unknown
Pacific Pump	NW NE NE 5-19-38	Trace

The Jackson well is reported to have oil in the well bore; however, it is the opinion of this Committee that it probably is lubricating oil from the water well pump.

(4) One well is reported to be contaminated by sewage. It is located as follows:

Name	Location	Degree of Contamination
Phillips #6	SE NE NW 4-19-38	Unknown

(5) Forty-two wells were sampled. These samples were analyzed for chloride and sulfide content. Among these 42 water wells

"Exhibit 16"

are all wells that were suspected to be contaminated, the remainder being water wells near these wells. The sulfide determination did not indicate any contamination although some of the wells are known to be gas contaminated. With samples collected and analyzed by different methods, the presence of gas contamination might have been detected. A list of the wells and the results of the analysis are shown on Exhibit No. 2. Exhibit No. 3 shows the analysis of a sample collected from one of the Ellison wells during 1956 by Mr. Charles Reider, then a member of the Commission Staff.

(6) In response to the Committee's request, water analyses on 9 water wells were received from oil operators that operate water wells in the Hobbs Pool area. These analyses are included as Exhibit No. 4.

III. Feasibility of Eliminating or Removing The Apparent Contamination.

The Committee finds that there are no practical nor feasible means, now known, by which the apparent oil and gas contamination can be completely removed from the Ogallala formation for the following reasons:

(1) Evidence available gives no clear indication of the exact extent of the apparent contamination.

(2) Oil and gas contamination can exist at various depths with the same or other depths in the same area showing little or no contamination.

(3) More shallow wells evidence oil or gas contamination than deeper wells, thereby tending to confirm that oil or gas entering the Ogallala will migrate upward toward the water table.

(4) To remove oil or gas from the Ogallala, it would be necessary to flush the contaminated portion of the sand with water, draw the oil or gas into a producing water well, permit the contamination to gradually migrate or disperse, or use a combination of these methods.

(5) The combination of high withdrawal rate water wells in an area of apparent contamination encircled by recharge wells would tend to create an extended area of influence. However, the expected results in moving or flushing oil or gas would not justify the large volume of water necessary to be handled to create such an extended area of positive and negative influence.

(6) In order to decontaminate an area of oil contamination, it would be necessary to essentially remove all of the oil to prevent any further show of contamination. While it is theoretically possible to flush out the oil down to an immobile residual saturation, in practice this would be impossible.

(7) An area of gas contamination could probably be decontaminated by the use of combined high rate withdrawal and recharge wells. Even so, it would be necessary to remove gas produced with water before injecting the water in the recharge wells. Under these conditions it would be more practical to simply remove the gas from water produced for domestic purposes without a recharge program.

(8) The general and areal movement of water in the Ogallala formation in a southeasterly direction will tend to migrate or disperse the dissolved gas away from an area of apparent contamination.

"Exhibit 16"

IV. The Possibility of Contamination of The Hobbs City Water Supply By Migration from the Area of Apparent Contamination.

The Committee finds:

(1) Certain of the City of Hobbs water wells are located in the path of ground-water movement from the contaminated area in NE/4 30-18-38.

(2) Existing oil contamination is expected to be immobilized within the aquifer, especially in the relatively "dry" zone at the top of the aquifer, before it reaches the city wells. Further, as the city wells are completed at or near the base of the aquifer, the possibility of oil contamination has been greatly reduced.

(3) Since gas in solution may travel a great distance, certain city wells may be subject to some gas contamination in the future.

(4) Observation wells should be established and maintained between the contaminated area and the city wells.

The Hobbs City Water Board advised that the City had purchased 6 sections of water rights located 3 or 4 miles to the north and northwest of the Hobbs Pool area. These water rights are considered to be outside of any possible contamination from the Hobbs Pool area.

V. Possible Contamination of the Fresh Water in the Ogallala Formation by Sources Other Than Oil or Gas Wells Such as Sewage, Waste Oil and Acid, Open Storm Sewer Ditches, Gas Plant Waste Water, Refuse, and Oil and Oilfield Brines Held in Earthen Pits.

The Committee finds:

(1) One water well was reported to be contaminated by sewage.

(2) It was found that many service companies operating in the Hobbs Pool area are dumping waste material in earthen pits at random, thus creating a source of possible contamination. The City of Hobbs maintains a supervised pit east of the city wherein such waste can be disposed, for a nominal fee, thus eliminating this source of possible contamination to the Hobbs fresh water supply.

(3) One large storm sewer ditch exists in the southern part of the Hobbs Pool area. The depth of this ditch is such that if it does not actually penetrate the aquifer it is very close to doing so, and is considered a hazard to the underlying fresh water. Although samples of water collected from the ditch by Committee members during August, 1957, did not indicate severe contamination, the open ditch is subject to accidental severe contamination from a number of sources at any time. The analyses of two samples of water collected from the ditch are shown in Exhibit No. 5.

(4) Analyses indicate that water coming directly from the Phillips Gasoline Plant is not a potential source of contamination (196 PPM CL) but that the lake in which it accumulates is high in chlorides (3450 PPM CL). It is possible that oilfield brines are also introduced into this lake. Disposal of such brines by other means may cause the lake to become gradually lower in chlorides. See Exhibit No. 6 for more complete analyses of plant waste water.

(5) No accumulation of refuse was found that could be considered as a source of permanent contamination to the fresh water sands.

"Exhibit 16"

(6) It was found that numerous sources of possible contamination exist in the form of pipeline drips, tank battery burn pits, and salt water disposal pits. The latter source is expected to be eliminated in the near future after installation of proposed salt water disposal systems. Holding or disposing of oil in earthen pits is considered a possible source of contamination to the fresh water sands. This possible source of contamination can be controlled by NMOCC under existing rules and regulations.

VI. Possible Need For Rules and Regulations Governing the Drilling, Completion, and Abandonment of Water Wells in the Hobbs Pool Area.

The Committee finds:

(1) There are no rules nor regulations governing the drilling, completion, and abandonment of water wells in the Hobbs Pool area.

(2) There is a definite need for rules and regulations governing water wells to prevent further contamination of water in the Ogallala formation and to minimize the risks of producing contaminants that are now in the aquifer.

(3) Rules and regulations should, in part, govern the location, depth, casing and cementing programs, surface and subsurface completion procedure, inspection, and abandonment of water wells.

(4) There is also a need for rules and regulations governing the drilling and abandonment of any boring or excavation that penetrates the fresh water sands.

VII. Establishment of a Water Well Observation Program To Detect Any New Contamination and to Observe the Movement, if any, of Contamination from the Area Northwest of Hobbs.

The Committee finds:

(1) At least 42 water wells, and probably more, are available for observation purposes in the Hobbs Pool area. Exhibit No. 7 is a tabulation listing these wells according to their location and accessibility to water level measurements and to water sample collection.

(2) As much information as possible should be collected regarding the potential observation wells. Such information should ideally include the driller's log, date drilled, depth, casing program, location of any perforations, and an accurate description of the well location.

(3) An effective network of observation wells can be established by evaluating the potential observation wells with regard to their location within the Hobbs Pool area and to information available regarding their completion.

"Exhibit 16"

(7) Casing will be subjected to continued high pressure from the producing formation throughout the foreseeable future. Hobbs Pool bottom hole pressures averaged 956 psig in 1954 and 941 psig in 1956, indicating very gradual decline. With continued high pressure on the casing and considering the age of the remaining Hobbs Pool wells where casing has not been repaired, the instance of casing leaks may be expected to increase during the 20-30 years remaining life of the pool.

X. Methods of Preventing or Minimizing Oil and Gas Well Casing Deterioration.

The Committee finds that there are numerous means and materials available to the oil industry by which oil and gas well casing deterioration can be minimized or eliminated. Some of these means and materials are listed as follows:

(1) Coatings applied to the interior and/or exterior of casing.

(2) Numerous and various chemicals injected into oil and gas wells to minimize corrosive attack.

(3) Induced electrical current or elimination of electrical current to minimize electrolytic corrosive attack.

(4) Spotting chemically treated mud outside of casing or circulating cement outside of casing to prevent corrosive attack by sulfate reducing bacteria.

(5) Setting packers in the casing in or above the producing formation and filling the annular space above the packer with non-corrosive liquid.

(6) Circulating cement between strings of casing.

(7) Using anchors or guides to prevent tubing-on-casing wear.

XI. Methods of Determining the Existence of Defective Casing.

The Committee finds that there are numerous methods available by which defective casing can be detected. Some are listed as follows:

(1) Internal caliper surveys to gauge the extent, depth and location of corrosive attack on the internal string of casing.

(2) Temperature surveys to locate temperature anomalies which are possible indications of casing leaks.

(3) Hydraulic pressure tests using packers to determine if a leak exists and to locate the leak.

(4) Potential profile surveys to determine the probability of external casing corrosion and thereby the likelihood of casing leaks.

(5) Bradenhead pressure surveys to determine by pressure observations on the several casing strings the possible existence of casing leaks.

(6) Chemical analysis of produced water as an indication of a casing leak through the presence of foreign water.

"Exhibit 16"

(7) Lack of normal clearance between tubing and casing as an indication of possible casing collapse or of parted casing.

(8) Any observed abnormal performance of the well with respect to bottom hole pressure, gas-oil ratio, water production, or oil production.

(9) Unusual performance or presence of foreign liquid or gas in shallower oil, gas, or water wells in the vicinity.

(10) Electical logs, permeability surveys, and radioactive tracer surveys to locate leaks or parted casing.

The method or combination of methods best adapted for any particular well will depend upon the conditions which exist at each individual well. The bradenhead pressure survey is least expensive, quicker, and very effective under proper conditions.

XII. Methods of Repairing Oil and Gas Well Casing Found to be Defective.

The Committee finds that there are numerous means by which casing can be effectively repaired. The method to be used will depend upon the conditions which exist at the individual well. Some of these methods are as follows:

(1) Recover the entire casing string found to be defective and run and cement an entirely new casing string.

(2) Run and cement a full string of smaller casing inside the defective casing.

(3) Recover that portion of the casing string found to be defective, replace casing, and re-run casing string using casing bowl overshot or other method to tie back on to and seal with casing left in the hole.

(4) Run and cement a liner covering that portion of the casing found to be defective.

(5) Circulate cement to the surface between casing strings during completion or repair operations.

(6) Squeeze cement through casing leaks and obtain a solid final build up squeeze pressure.

XIII. Programming of Bradenhead Pressure Tests on Oil and Gas Wells In the Hobbs Pool Area.

The Committee finds:

(1) Bradenhead pressure surveys, where the several casing strings are open for pressure measurement, should indicate whether or not a casing leak exists and therefore the possibility of fresh water sand contamination at the well being tested.

(2) Bradenhead pressure surveys conducted annually are too infrequent to provide adequate warning of possible contamination of the fresh water sand.

(3) Bradenhead pressure surveys conducted quarterly should provide more adequate warning of possible contamination of the fresh water sand.

(4) It should be necessary for the NMOCC to witness only one of the quarterly bradenhead pressure surveys each year.

"Exhibit 16"

(5) The operators of the individual wells should conduct the other three surveys, recording and saving the test results, and filing a certification with NMOCC that all wells operated by that operator have been tested and whether or not leaks were found.

(6) All producing oil and gas wells, abandoned wells, temporarily abandoned wells, and salt water disposal wells, should be scheduled for the quarterly bradenhead surveys.

(7) There are a number of old oil wells in the Hobbs Pool area with the intermediate casing set on open surface casing with clamps, thereby preventing pressure observation. Such open surface casing is a possible source of fresh water sand contamination since the top of the surface casing is in the bottom of cellars. In order to obtain valuable information during bradenhead pressure surveys and to eliminate one possible source of contamination, the top of the annular space between the clamped intermediate casing and the surface casing should be sealed and vented to the surface.

"Exhibit 16"

EXHIBIT NO. 2

ANALYSIS OF 42 SELECTED WATER WELLS IN HOBBS POOL AREA

Analysis was to include only sulfide and chloride content. However no sulfides were identified.

Name and Source	Location	Date Obtained	Chloride mg/l
BLACKBURN, Tap at well	SW SE SW 32-18-38	8-14-57	56
CONTINENTAL, Abd. Hole	NE SW 13-18-37	8-14-57	72
HOBBS ICE CO.	NW SE SW 34-18-38	8-15-57	112
SUN OIL CO., Tap at Kuth's	SW NE NE 5-19-38	8-14-57	96
OHIO OIL CO. NO. 2, Tap by Storage Tank	NW SE SE 32-18-38	8-14-57	48
YATES SHELL STATE, Abd. Well	NW SE SE 23-18-37	8-14-57	80
HOBBS IRON & METAL, Tap	NW SE NW 3-19-38	8-14-57	80
ROBERT OWINGS, Tap	NW NE NE 31-18-38	8-13-57	80
BRIANT, From well	NE SW NE 30-18-38	8-13-57	56
R. D. MOOR, Well	NE NE 30-18-38	8-13-57	72
RYBANT, Tap	NE NE NE 30-18-38	8-13-57	48
HOBBS GAS CO., Tap	NW NE NE 28-18-38	8-13-57	112
C. MYERS, Tap	SE SE NE 4-19-38	8-14-57	48
SIMON, Tap	SE SE SE 32-19-38	8-14-57	64
PHILLIPS NO. 3, Well Tap	NW NE NW 4-19-38	8-14-57	104
PHILLIPS NO. 2, Pump Tap	NW NE NW 4-19-38	8-14-57	88
BROWN WELL SERVICE, Tap	NE NW NE 5-19-18	8-14-57	112
Water from Phillips Gasoline Plant from ditch to W-most pond	NW SE NW 4-19-38	8-12-57	749
PHILLIPS NO. 6, Tap at Well	NW NE NW 4-19-38	8-13-57	327
HUMBLE OIL, Tap at Well	SW NE SE 30-18-38	8-13-57	72
JACKSON, Sample from earth ditch 10 yds. S. of pump	NE NW NW 20-19-38	8-13-57	494
STEELE, Tap sample	SE NE SW 4-19-38	8-12-57	96
CAZEE, Tap	SW NE NE 30-18-38	8-13-57	64
PACIFIC PUMPS, Tap Sample	NW NE NE 5-19-38	8-12-57	64
SECURITY, Tap Sample	NE NW NE 5-19-38	8-12-57	80
H. EASTON, Tap Sample (S.House)	SW SE NE 4-19-38	8-14-57	64
GIBBONS, Tap Sample (N.House)	SW SE NE 4-19-38	8-12-57	40
BAKER TOOL, Tap Sample	SE SE SW 32-18-38	8-12-57	40
OHIO OIL CO., Tap Sample	SE SE SE 32-18-38	8-12-57	128
E. W. BENSING, Tap Sample	NE NW NE 30-18-38	8-13-57	80
ROBERT BENSING, Tap Sample	NE NW NE 30-18-38	8-13-57	80
JESS HARWELL	NW NE NE 28-18-38	8-13-57	104
DOWELL, INC., Tap Sample	NE NE NE 28-18-38	8-13-57	56
MAYFIELD, Tap Sample	NE SE NE 30-18-38	8-13-57	72
GOINS, Tap Sample	SW NE NE 30-18-38	8-13-57	343
W. E. MOON, Tap Sample	NW NE NE 30-18-38	8-13-57	104
MERTAUGH, Tap at new well	NW NE NE 30-18-38	8-13-57	56
BLAKLEY, Tap	NE SE NE 30-18-38	8-13-57	80
L. DEVERS, Tap Sample	SW SE NE 30-18-38	8-13-57	64
P. L. RIEVE, Tap Sample	SW SE NE 30-18-38	8-13-57	104
COX, Well Sample	NE SE NE 30-18-38	8-13-57	48
*DOWELL, Gas in line and spurting as sample was taken	NE SE NE 30-18-38	8-22-57	80

*Contained sulfide present as ferrous sulfide in trace quantity. No free hydrogen sulfide was found in this sample nor in any of the other samples listed above.

With samples collected and analyzed by different methods, the presence of gas contamination might have been detected.

"Exhibit 16"

EXHIBIT NO. 3

ANALYSIS OF SAMPLE
FROM ELLISON WELL
AUGUST, 1956

Air and Water	95.37%
Methane	2.30%
Ethane	0.15%
Propane	0.49%
CO_2	1.49%
Butane (plus)	0.14%
H_2S	0.06%

Analysis made by Permian Basin Pipeline using Mass Spectrometer. Sample collected by Mr. Charles Reider, then a member of the Commission Staff.

"Exhibit 16"

EXHIBIT NO. 4

ANALYSIS OF WATER IN PARTS PER MILLION FROM WATER WELLS IN HOBBS POOL AREA

NAME	LOCATION	DATE	Na	Ca	Mg	SO_4	Cl	CO_3	HCO_3
Pan American	NE SW NW 33-18-38	9-1950	35	74	10	77	50	0	226
		7-1951	54	57	16	82	53	0	202
		7-1952	32	80	21	82	57	0	232
		8-1957	9	103	21	89	60	12	201
Pan American	SE NE SE 4-19-38	9-1950	51	123	25	56	181	0	256
		7-1951	45	128	29	53	195	0	256
		7-1952	56	137	27	30	227	0	268
		8-1953	32	139	25	72	163	0	262
		6-1956	63	90	12	63	78	0	256
Pan American	NW NE NE 9-19-38	10-1950	67	89	18	109	82	0	262
		7-1951	52	79	21	93	67	0	250
		7-1952	52	86	21	96	71	0	262
		8-1953	31	124	19	114	85	12	238
		8-1955	58	80	17	103	78	0	218
		5-1956	66	86	17	113	71	0	256
Humble Federal Bowers No. 3		7-1957		190	46	22	66		
Sun Oil Co. McKinley No. 1	NE NE 5-19-38	11-1953	56	95	15	80	120	0	205
McKinley No. 2	NE NE 5-19-38	11-1953	47	81	14	98	53	0	227
Gulf Oil Corp. West Grimes		9-1952	36	70	7	48	31	0	229
		7-1953	50	59	7	44	33	0	235
		7-1954	50	62	5	45	32	0	235
		7-1955	46	65	6	45	31	0	238
		7-1956	65	96	19	119	92	0	250
East Grimes		7-1953	78	93	12	130	82	0	244
		7-1954	60	92	12	102	74	0	244
		7-1955	53	94	14	99	74	0	244

"Exhibit 16"

EXHIBIT NO. 5

ANALYSIS OF WATER SAMPLES
FROM LARGE STORM SEWER DITCH

The chloride and sulfide content of the two water samples, each designated "open sewer, Hobbs, New Mexico", submitted August 21, 1957, was negligible. Both samples gave a negative Endo Agar Test, indicating they were free of fecal contamination. They contained organic matter, both dissolved and in suspension, and considerable dissolved iron. The sodium, potassium, and calcium content was 12, 4, 24 and 9, 4, 28 parts per million, respectively.

"Exhibit 16"

EXHIBIT NO. 6

ANALYSIS OF WASTE WATER

Phillips Gasoline Plant

Sample No. 1 - Waste water direct from plant
Date Collected - 8/6/57

Phenolphthalein end point = 550 ppm
Methyl orange (M-orange) = 620 ppm
Total hardness = 0
Chlorides = 196 ppm
Ph = 11.55
Orthophosphate = 45 ppm
Hydrogen sulfide = 0 ppm

Not considered potable but is soft. Will not scale.

Sample No. 2 - Waste water from large pit behind Phillips Plant
Date Collected - 8/6/57
Algae growth moderate

Phenolphthalein end point = 0 ppm
Methyl orange (M-orange) = 196 ppm
Total hardness = 1700 ppm
Chlorides = 3450 ppm
Ph = 7.55
Orthophosphate = 20 ppm
Hydrogen sulfide = 0 - 1.7 ppm

Not considered potable due to hardness and chlorides.

"Exhibit 16"

EXHIBIT NO. 7

WATER WELLS IN THE HOBBS POOL AREA WHICH COULD BE UTILIZED FOR OBSERVATION PURPOSES

Well Location	Accessibility of Well: For Measurement Of Water Level	For Collection of Water Sample From Tap or Discharge Pipe	For Collection of Water Sample By Thief or Trip Sampler	Present Use	Remarks
NE SW 13-18-37	x		x	Abandoned	Sampled 8/14/57
NW SW SE 13-18-37	x	x		Stock	Windmill
NW SE SE 23-18-37	x		x	Abandoned	Sampled 8/14/57
SE SE SE 24-18-37		x		Domestic	Windmill
SW NE SE 17-18-38	?	?	?		Not checked
NE SE SW 16	?	?	?		Not checked
SW SW SW 19	x		x	Abandoned	
NE NW NW 20		x		Irrigation	Sampled 8/13/57
SE/4 21	?	?	?		Many wells. Not checked
NW NW 27	?	?		Standby	City Well #13
SW SW SE 27	?	?	?	Municipal	City Well
N/2 28	?	?			Many wells. Not checked.
NW SW NE 29	x		?	Abandoned	Contained oil 8/14/57
SW NE SE 29	x		x	Abandoned	N. most of two wells

"Exhibit 16"

EXHIBIT NO. 7

Well Location	Accessibility of Well: For Measurement Of Water Level	Accessibility of Well: For Collection of Water Sample From Tap or Discharge Pipe	Accessibility of Well: For Collection of Water Sample By Thief or Trip Sampler	Present Use	Remarks
SW NE NW 30	x	x	x	Domestic	
NE/4 30	x	x		Domestic, Irrig.	Many Wells, Contaminated area.
NE NE SW 30	x		x	Abandoned	
SW NE SW 30-18-38	x		x	Abandoned	
SE SE SW 30	x	x		Domestic	Windmill
SW NE SE 30	?	x		Domestic	Three wells present. Sample from contaminated well.
NE NE SW 31	x		x		Not checked
SE SW SE 31	x	?		Abandoned	
NE NE NE 32	x		x	Abandoned	Plugged with timber
NE SW NE 32	x		x	Abandoned	Plugged with bull plug
NE NE NE 32	x		?		Many wells. Not checked.
S/2 32	?	?			Many wells. Not checked.
NE/4 33	?			Domestic	
SW SE SW 33	x				

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EXHIBIT NO. 7

Well Location	Accessibility of Well: For Measurement Of Water Level	Accessibility of Well: For Collection of Water Sample From Tap or Discharge Pipe	Accessibility of Well: For Collection of Water Sample By Thief or Trip Sampler	Present Use	Remarks
NE SW SW 34	X		x	Domestic	
SW SW SW 34	x		x	Abandoned	
NW SE SW 34		x			
N/2 34	?	?			Many wells. Not checked
S/2 3-19-38	?	?			Many wells. Not checked
N/2 4	?	?			Many wells. Not checked
SW SW SW 4-19-38	x		x	Abandoned	
SE NE SE 4	?	x		Domestic	Sampled 8/12/57
N/2 5	X	X			Many wells. Not checked
NE NE SE 6	x		x	Abandoned	Timber plug
SW NE NE 6	?	x		Stock	Windmill
NE/4 9-19-38	?	?			4 wells here. None checked.
SW NE SE 10	?	x		Domestic	Windmill
SE SW SE 10	x		x	Abandoned	

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"Exhibit 16"

HOBBS AREA & RELATED POOLS

CASING LEAKS & LEAKS REPAIRED JULY 1957

OPERATOR LEASE - POOL COMP. - POOL	WELL & UNIT	S-T-R	CASING PROGRAM (All fractions Dropped) Surface	Intermediate	Production	Liner Patch Liner Full String	Date Leak Found	String and Depth of Leak	Repaired Date	Remarks
AMERADA PET. CO.										
State B Bowers	5-O	29-18-38	10" 220/200	7" 1665/300	5" 3136/300					
State B Sept 11'30 Hobbs	1-F	29-18-38	12" 210/200	9" 2740/400	7" 3997/500					
State B Sept 6 '30 Hobbs	2-G	29-18-38	12" 221/250	9" 2756/500	7" 3995/200		8/25/53	7" 1788/1810	12/22/53	
ATLANTIC RFG. CO.										
Grimes Hobbs	1-O	20-18-38	12" 232/200	9" 2790/500	6" 4037/300					
CITIES SERVICE OIL CO.										
Fowler May 14'30 Hobbs	1-A	31-18-38	12" 242/N.R.	9" 2744/N.R.	7" 3938/N.R.		9/22/53	7" 964/1894 2187/2211	10/29/53	
Fowler Apr 16'34 Hobbs	4-H	31-18-38	12" 242/100	9" 2760/300	7" 3955/150	5" New String 4190?/635	7/26/54	7 x 9 2700	8/16/54	
CONTINENTAL OIL CO. (Min Cost $1,900 Max Cost $15,000 Avg. $6,516)										
Grimes July 14'34 Hobbs	1-O	28-18-38	12" 222/180	9" 1637/300	7" 3975/400	5" Liner @ 3927/4277	9/23/53	7" 370?	11/21/53	
							7/7/54	5" 292/412	7/16/54	
Grimes May 13'35 Hobbs	3-J	28-18-38	10" 245/150	7" 1635/300	5" 4015/300		9/11/56		2/3/57?	
State A-29 Hobbs	3-K	29-18-38	15" 252/1000	9" 2729/600	7" 3953/300		8/29/56	7" x 5"	7/1/57	Leak in well head Tested 150 p.s.i. O.K.
State A-29 Apr 16'47 Bowers	5-K	29-18-38	10" 380/200	7" 1573/425	5" 3197/450					
State A-33 Sept 16'30 Hobbs	1-H	33-18-38	12" 209/165	9" 2738/500	7" 3976/275	No leak indicated in well file				
State A-33 Nov 12'31 Hobbs	4-J	33-18-38	15" 232/425	9" 2757/600	7" 3928/325	5" Liner 3871/4232	10/22053	7" 524 1116/1176	11/13/53	
State A-33 Mar 1'32 Hobbs	6-N	33-18-38	15" 223/387	9" 2754/600	7" 3971/350	5" 3911/4236	7/6/54	7" 259	7/26/54	
State A-33 Feb 1'33 Hobbs	7-G	33-18-38	15" 237/235	9" 2756/600	7" 3970/350	5" 4243/300	7/26/54	7" x 9" ?	12/3/54	
GETTY OIL CO. (Opr. by Tidewater) Min Cost $2,500 Max Cost $25,000.										
McKinley July 4'30 Hobbs	1-G	30-18-38	12" 245/200	9" 2758/600	7" 3856/250	5" 99jts. 4% gel. 405	9/10/53	7" 400/500	7/1/54	

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"Exhibit 17"

HOBBS AREA & RELATED POOLS

CASING LEAKS & LEAKS REPAIRED JULY 1957

OPERATOR LEASE/DATE COMP - POOL	WELL & UNIT	S-T-R	CASING PROGRAM (All fractions Dropped) Surface	Intermediate	Production	Liner Patch Liner Full String	Leak Found	String and Depth of Leak	Repaired Date	Remarks
GETTY OIL CO. (Continued)										
McKinley July 15 '30 Hobbs	2-H	30-18-38	12" 251/200	9" 2756/600	7" 3858/250	5" 4202/450	6/3/54	7" 227/903	7/7/54	$35,000+
McKinley Aug 21 '30 Hobbs	4-B	30-18-38	12" 245/200	9" 2753/600	7" 3998/250		9/6/56	Could not get circulation	9/12/56	
McKinley May 29 '47 Bowers	6-G	30-18-38	11" 1474/400		5" 3160/200		9/4/56	Could not get circulation	9/14/56	
McKinley July 13 '47 Bowers	7-B	30-18-38	8" 1503/400		5" 3175/200		9/4/56		9/6/56	
GULF OIL CORP.										
Graham St. A Aug 10 '32 Hobbs	2-A	24-18-37	13" 229/300	9" 2790/600	7" 3975/250		12/7/55		1/10/56	
Grimes, W.D. Nov 1 '32 Hobbs	2-H	33-18-38	13" 221/175	9" 2761/500	6" 3959/250	5" Liner 3914/4169	4/17/56	7" ?	5/22/56	
Grimes, W.D. Aug 16 '34 Hobbs	3-B	33-18-38	13" 292/200	9" 2746/350	7" 3930/250	5" 4086/75	(7/2/46)	5" 3589/3775	(7/10/46)	
Grimes, W.D. Nov 16'34 Hobbs	4-A	33-18-38	13" 285/200	9" 2739/350	7" 3970/150	5" Liner 3919/4175	(10/9/53)	489/499	(3/5/54)	
Grimes, W.D. Oct. 16'35 Hobbs	2-N	21-18-38	13" 281/225		7" 4109/1300	5" 2508/4870/4224	2/14/56 12/28/54	7" 425/1687	5/21/56 1/4/55	
Grimes, W.D. A Apr. 18'30 Hobbs	1-D	32-18-38	15" 200	9" 3000	6" 4200		12/28/53	6" 1049/1080	4/12/54	
Grimes, W.D. A June 13'30 Hobbs	2-D	32-18-38	15" 200 N. A.	9" 3000 N.A.	6" 4200 N.A.		5/24/53	7" Sur. Nipple	7/4/53	Replaced Surface Connections
Grimes, W.D. Feb 16'31 Hobbs	7-C	32-18-38	13" 220 N.A.	9" 2750 N.A.	7" 3950 N.A.		6/21/54	7" above 1208	6/28/54	
Grimes, W.D. July 1'34 Hobbs	8-E	32-18-38	15" 238/200	9" 2757/350	7" 3954/200		4/2/54	7" 1725/1935	4/10/54	
Grimes, W.D. Sept 16'34 Hobbs	9-L	32-18-38	13" 212/200	9" 2740/350	7" 3966/150		10/8/53	7 x 9"	5/15/54	
HUMBLE OIL & REF. CO.										
Fed. Bowers A Oct 1'30 Hobbs	8-O	30-18-38	12" 220/210	9" 2738/650	7" 3974/300		2/27/46	7" @ 60'	3/14/46	
" " " " "	8-O	30-18-38					9/ /47		10/10/47	
Fed. Bowers A Sept 1'30 Hobbs	5-I	30-18-38	12" 210/200	9" 2739/650	7" 3963/300	5" 3905	Aug.28'47	7" @ ?	9/15/47	

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HOBBS AREA & RELATED POOLS

CASING LEAKS & LEAKS REPAIRED JULY 1957

OPERATOR LEASE - DATE COMP - POOL	WELL & UNIT	S-T-R	CASING PROGRAM (All fractions Dropped) Surface Cement	Intermediate	Production	Liner Patch Liner Full String	Leak Found	String and Depth of Leak	Repaired Date	Remarks
HUMBLE OIL & REF. (Continued)										
Fed. Bowers A Aug 23'30 Hobbs	4-P	30-18-38	12" 204/200	9" 2750/650	7" 3960/300		10/2/47	7" @ ?	10/24/47	
Fed. Bowers A Aug 12'30 Hobbs	2-J	30-18-38	12" 242/225	9" 2750/650	7" 3960/300	5" 4208	8/7/47 8/2/53	7" @ ? Temp Anchs. 18' 2160&3676		
" "	"	"								
Fed. Bowers A Aug28'30 Hobbs	3-M	29-18-38	12" 203/200	9" 2736/650	7" 3960/300	5" 3940 circ	8/7/47	7" numerous holes	9/29/47	
MAGNOLIA PET. CO.										
Berry Nov 18'30 Hobbs	1-K	31-18-38	13" 245 N.A.	9" 2800 N.A.	7" 3955 N.A.	5" Liner 3347/4190	9/6/56		11/11/56	
OHIO OIL CO.										
State 30 Oct 3'30 Hobbs	3-L	30-18-38	12" 243/225	9" 2751/550	7" 3900/350		1/30/57		3/8/57	
State 32 Aug 14'30 Hobbs	3-I	32-18-38	12" 205/225	9" 2750/475	7" 3968/350	5" 4244/65sx	6/29/54	7" 266/1567/1200 & 1567	9/3/54	
State 32 Oct 5'30 Hobbs	5-O	32-18-38	16" 221/250	9" 2750/556	7" 3925/225	5" 4235	7/26/54	7" aprox. 1200	9/9/54	
PAN AMERICAN PET. CORP.										
Byers NE-4 Mar 1'33 Hobbs	26-H	4/19/38	16" 199/85	10" 1570/75	8" 3961/150	5" 4205/675	3/8/47	8" @ 3140	3/8/47	
Byers NE-4 Aug 13'30 Hobbs	33-G	4/19/38	16" 152/360	10" 1523/75	8" 3250/60	6" 3952/50	9/24/53	6" 1865	6/1/55	
"	"	"					3/3/55	7" @ 1500	3/7/55	
H.D.McKinley NE-5 Oct. 20'30 Hobbs	1-C	5-19-38	16" 162/55	10" 2749/300	6" 3920/150		6/13/57			
McKinley Oct 7'30 Hobbs	6-D	5-19-38	13" 185/75	10" 2782/350	6" 3977/150		9/10/53		3/17/54	
McKinley Dec 9'30 Hobbs	26-F	5-19-38	13" 212/150	9" 2780/300	6"3950/150		10/13/53?		12/2/54	
McKinley Jan 1'45 Hobbs	29-E	5-19-38	13" 210/200	9" 2780/500	7" 3999/300		10/17/53	7" 2095/2126	11/3/54	
State A "5" May 16'33 Hobbs	8-B	9-19-38	16" 217/100	10" 2810/450	7" 3993/100		6/20/57			

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Eddie 17"

HOBBS AREA & RELATED POOLS

CASING LEAKS & LEAKS REPAIRED JULY 1957

OPERATOR LEASE & DATE DCMP - POOL	WELL & UNIT	S-T-R	CASING PROGRAM (All fractions Dropped) Surface	Intermediate	Production	Liner Patch Liner Full String	Leak Found	String and Depth of Leak	Repaired Date	Remarks
PAN AMERICAN PET. CORP (Cont)										
State A-7 Aug 16'30 Hobbs	G-D	10-19-38	16" 158/50	10" 1543/75	8" 4016/40		9/23/53	8" 0/227	11/2/54	
Terry 1 Sept 1'32 Hobbs	11-I	9-19-38	16" 196/100	10" 1593/75	8" 4031/150	DV 3874/450 5" 4196/100	9/28/53	8" 1224	11/2/54	
Terry 2 June 1'32 Hobbs	G-L	10/19/38	16" 204/125	10" 1597/75	8" 4034/150	5" 4175/100 DV 3939/450 &5	11/11/53	8" 1182/1160	10/17/54	
State B Sept 15'30 Hobbs	2-F	23-18-38	12" 3 200	9" 2800	7" 4012	5" 4242/100	9/25/53	7"	4/7/54	
State A Tr 10 Dec 16'31 Hobbs	26-F	23-18-38	16" 209/125	10" 2752/400	8" 3946/140	5" 4220/300	8/26/46	No leak found	8/12/46	
State A Tr 3 Nov 30'30 Hobbs	26-H	4-19-38	16" 193/50	10" 3275/650	8" 3933/100	5" 4190/83	6/13/47	8" & 1043	7/14/47	Liner 3939/4195
State A Tr 1 Feb 16'32 Hobbs	11-C	4-19-38	16" 201/125	10" 2754/400	8" 3976/150	5" 4212/75	6/30/48	8" & 838	8/24/48	Liner 3900/4212
B. H. Turner Tr 1 Sept 1'34 Hobbs	G-D	34-18-38	16" 223/90	10" 1646/350	7" 3975/150	5" 3972/50	2/17/43	7" 815/1180	3/4/43	Liner 3872/4221
SHEDAN OIL CO.										
State B Oct 11'35 Hobbs	1-F	25-18-37	12" 205/175		7" 4039/500				8/12/54	No record on well file.
State C June 21'34 Hobbs	2-K	24-18-37	12" 212/150	9" 2823/200	7" 3983/150	5" 3917 4171/50	1/2/51	7" & 2163	1/8/51	
SHELL OIL COMPANY (Cost to add packers & Erect Oil in annulus to Flowing wells in Hobbs Pool $30,000(1953 & 1946)										
Rice Sept 4,'32 Hobbs	1-P	13-18-37	12" 228/200	9" 2786/600	7" 3922/250		2/14/57	7" 1500 p.s.i for 30 min.WF.	5/27/57	
Rice Dec. 14'35 Hobbs	3-I	13-18-37	12" 264/200	9" 1591/600	7" 3960/160		8/4/54	7" above 400'	9/3/54	
State B June 12'34 Hobbs	2-C	33-18-38	12" 296/150	9" 2760/150	7" 3930/250	5" 3884/250	9/2[illegible]/53	7" 526/557	11/16/53	

"Exhibit 17"

HOBBS AREA & RELATED POOLS

CASING LEAKS & LEAKS REPAIRED JULY 1957

OPERATOR / LEASE - DATE COMP - POOL	WELL & UNIT	S-T-R	CASING PROGRAM (All fractions Dropped) Surface Cement	Intermediate	Production	Liner Patch Liner / Full String	Leak Found	String and Depth of Leak	Repaired Date	Remarks
TEXAS PACIFIC COAL & OIL CO.										
State G July 2'30 Hobbs	1-P	24-18-37	20" 105/125	12" 1521/300	9" 2815/700	7" 3880/200	9/30/53	7" 2350	3/15/57	
State G Nov 7'30 Hobbs	3-J	24-18-37	12" 215/200	9" 2810/400	7" 3878/300		No Leak just remedial		7/9/56	
TIDEWATER OIL CO.										
Bome Hardin Nov 6'30 Hobbs	3-B	19-18-38	12" 217/200	9" 2750/600	7" 3952/300		12/18/42	7" x 9"	2/23/43	
Grimes Oct 4'30 Hobbs	3-I	29-18-38	15" 228/200	9" 2715/600	7" 3900/300	5" 3691 4233/120	10/18/46	7" 368/403	11/1/46	
Grimes (PAA) Sept 15'30 Bowers	2-H	29-18-38	15" 230/200	9" 2718/600	7" 3880/300	5" 3350/100	9/25/46	7" Bad Conditions	9/27/46	

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"Exhibit 17"

A Summary on the Results of Eliminating Underground Waste and Fresh Water Contamination in the Hobbs Pool Area.

Introduction

The recent published (Glover Huddleston) reports of oil contaminating the fresh water aquifers near the City of Hobbs has caused numerous inquires. The most frequent question asked was how did the oil originate into the water sands? The first answer of course is that the discovery of the Hobbs pool in 1928 when Hobbs consisted of a General Store and a Schoolhouse, was the main reason. Without meaning to be facetious other contributing factors were:

1. The Corrosive nature of the Hobbs Pool oil.
2. The age of much of the well equipment
3. The type of older equipment
4. The type of some well equipment used during natural emergencies and during several steel strikes.

The above items can be attributed to the operator, nature and emergencies.

5. Failure to recognize the problem and reporting to responsible body.

This can be attributed to both the operator and the various government bodies including the City of Hobbs, the State Engineer and the Oil Conservation

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"Exhibit 18"

to the drilling of water wells that penetrated all fresh water aquifers without isolating uncontaminated zones from those that were contaminated.

The responsibility here lies with those people that have drilled water wells.

The above remarks makes it appear that everyone has been [illegible] however that is not true in that the Hobbs pool is one of the classic oil reservoirs of the world, and true conservation under the direction of Mr. Staley had its beginning in this field. Government bodies and engineers from all parts of the country have studied the principal [illegible] for this field that became guides for developing fields through out the country.

Further the Hobbs Pool was the first important oil reservoir found in this entire area. If the Hobbs pool had not been discovered or had it been delayed a few years it is entirely possible that New Mexico's economy would not be based on the oil industry as it is now but on the tourist industry.

By 1930 six months after the second well was completed Hobbs was a town of over 12,000 people. Before the end of 1930 over 130 wells were completed and had a rated potential of over 1,000,000 BOPD. This probably is far more oil than all of the some 9600 well in southeastern N.M. could produce today. Indicating somewhat the terrific impact the discovery of the Hobbs pool had on the oil industry and the economy of N.M.

"Exhibit 18"

Presently there are 345 producing wells in the Hobbs structure. These wells have produced some 153,000,000 barrels of oil

Drilling and Production Methods Prior to 1931

20 wells surface drilled with Rod Beds

Set about 200 feet of 15½" surface pipe cementing to surface.

9⅝ set and cemented at about 2750 feet. Then about 4100 feet 7" set & cemented. Then 3 inch tubing to about 15' of bottom

Avg cost about 90,000

By the end of 1941 265 Hobbs Pool wells were producing.

During the Bowers development some 85 wells were drilled

A typical casing program was 400' 9⅝, 3100' 5½

Enough Historical background

1) The fact that casing leaks existed was first brought to the attention of the New Mexico Oil Conservation Commission by letter from the Humble Oil & Rfg. Co. on August 12, 1953. The Director of the OCC called a meeting of Hobbs Pool operators on August 25, 1953 and issued a directive that tests for casing leaks be performed before Oct. 1, 1953.

The Humble Bowers 2 A well produced some 8,000 bbls of oil from the surface [illegible]

"Exhibit 18"

Hobbs Bowers 2-A 2335'S
2310'E Sec 30 18-38

15½ / 1162 / cmt
12½ / 2412 / 225
9⅝ / 2750 / 650
7 / 3960 / 300
5½ / 11230 / 300

Aug 2, 1953 Temp. Survey indicated leaks @ 18 feet, 216 feet, 3676 feet. Pressured up between Tubing + 5½ + 5½ + 7" 7 + 9⅝ no leak. Cellar was dug to 12 feet + fluid was entering thru an open ½" valve on surface csg. The well flowed to pits at 186.20 BOPH.

Total circulation oil produced thru surface csg thru Sept 8, 1953 was 8,212 BO.

(2) To insure that the operators [illegible] [illegible] [illegible] [illegible]

On March 15, 1954 at a [illegible] [illegible] [illegible] Mr. [illegible] was [illegible], they [illegible] [illegible] that [illegible] [illegible] due to leaks in [illegible] day.

[illegible] was at that time conducting [illegible] (1)

(3) In August of 1956 [illegible] [illegible] [illegible] [illegible] [illegible] program for S.E. N.Mex. [illegible] it was brought to the attention of operators that [illegible] [illegible] [illegible] [illegible] Sec. [illegible] 21 S, R-38 E. Mr. Porter [illegible] of the O.C.C. and Mr. Johnny Walker [illegible] of O.C.C. [illegible] [illegible] Mr. Porter [illegible] [illegible] that all wells must be [illegible] [illegible] [illegible] [illegible] Mr. Porter [illegible] [illegible] that [illegible] (1)

"Exhibit 18"