Transcript -
hearing
March 28, 1951

BEFORE THE

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

March 20, 1951

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Case No. 261:

This is an application by Cities Service Oil Company of Bartlesville, Oklahoma, to dually complete State S No. 3, located in the SE/4 NW/4 section 15, T.21 S, R. 37 E, Lea County, New Mexico, for oil/oil completion in the Ellenburger and McKee formations; perforations in the Ellenburger 7860-7900' and 7960-8000'; for the McKee 7454-7530'.

CHAIRMAN SHEPARD: The next case is Case 261.

(Mr. Graham reads the notice of publication.)

MR. ADAMS: My name is I. E. Adams. I am pro ration engineer with Cities Service and represent them in this application.

CHAIRMAN SHEPARD: You will testify?

MR. ADAMS: Yes, sir.

CHAIRMAN SHEPARD: Swear him please.

(Mr. Adams sworn.)

MR. ADAMS: This is the application of the Cities Service Oil Company for authorization to dual complete and produce its State S No. 3 and No. 4 wells located in the

Brunson area in Lea County in the McKee Sand of the Simpson group and in the Ellenburger lime, common source of supply. In the event the Commission finds the dual completion of State S No. 3 and 4 wells is impractical and unserviceable, it is requested that a figure of allowable be authorized so that one well may produce from the McKee with an allowable commensurate to that of 2 - 40-acre units, and the other well produce from the Ellenburger with an allowable also commensurate to 2 - 40-acre units.

Further, before such an allowable transfer be authorized, the productive ability of each of these reservoirs be tested to the satisfaction of this Commission.

MR. HOUSTON: We must object at this time to anything about the transfer of allowable. It isn't in his application.

MR. ADAMS: It is in the application, if you will read it. It isn't in the notice and I understand that is just an ommission.

MR. SPURRIER: Let's see if it is in the notice.

(Off the record.)

MR. SPURRIER: As a matter of clarification, I want to state right now we left that transfer deliberately out of that application, because you didn't have anything to transfer it to. You have a drilling well, you don't have a

productive well.

MR. ADAMS: We don't have a productive well, but in our opinion, this well will be on a comparative basis with well No. 4 which is - as far as the McKee and Ellenburger formations are concerned.

MR. SPURRIER: If opinions made wells, we would have a lot more.

CHAIRMAN SHEPARD: We can't consider the transfer of the allowable at this time on this application, but you may proceed with your application for dual completion.

MR. ADAMS: Thank you sir.

I would like to introduce as Exhibit No. 1 an ownership plat of the area showing the location of the leases and offsetting ownerships and wells. I will state that our State S No. 3 well was drilled to a total depth of 8034 feet. The McKee sand was encountered from 7467 to 7575. The top of the Ellenburger was at 7728. In drilling the well, we set 330 feet of 13-3/8s surface pipe and an intermediate string of 2802 feet of 8-5/8s, and a oil string of 5½ cemented at 8032 at which the top of the cement, as shown by the temperature survey on the oil string, was 2059 feet.

When the McKee sand was encountered in the drilling of the well, a drill stem test was made from 7454 to 7530. The tube was opened approximately two hours and 20 minutes and the

well flowed after cleaning out at the rate of 99 barrels of oil per hour with the gas-oil ratio of 967 cubic feet per barrel, gravity, 43.4. This in our opinion proved we could make a commercial well in the Ellenburger sand. In the Ellenburger lime the perforations are at 7860 to 7900 feet and 7960 to 8000 feet. On potential the well flowed 65 barrels through a 3864ths inch choke giving it a rated 24 hour potential of 1540 barrels. No water was produced. The gas-oil ratio was 915 cubic feet per barrel, and the gravity 32.2 and the bottom hole pressure at 7747. That would be minus subsea 4300 feet, 2530 PSI. We propose to perforate the 5½ inch oil stream opposite this proven productive section of the McKee sand. The Ellenburger has been perforated and the well completed in that horizon. The packer will be installed in that interval between the sets of perforations in the McKee and the Ellenburger, and the type and design of packer which we have used in a number of other cases that have been proven to work will be installed, which will in our opinion effectively shut off the two reservoirs.

The Ellenburger would be produced through the tubing and the McKee sand through the annulus between the tubing and the casing. We do not believe there will be any inter-communication between the zones or any cammingling. The oil will be separately produced, tanked, and gauged from the two

reservoirs.

The packer we plan on installing is more or less standard in Oklahoma, Texas, and Kansas, the regular model - Baker Model D, retainer production packer.

In Texas we have over 40 of these in use and in Oklahoma possible 15 or 20 and in Kansas 67. In view of the present national emergency under which a substantial percentage of steel and other essential materials and metals have been allocated to the military and to the war production effort, as we all know, there is a very crucial shortage of tubular goods. We believe that by having a dual completion we will be a ble to have material avaialable for the drilling of other wells, exploratory wells, extending other producing fields that we would otherwise not have for our use.

And the drilling of our State S No. 3 well, the total tonnage amounting to in excess of 130 tons. We utilized also 1200 sacks of cement, which is also on the critical lists. In drilling the well over ten thousand man hours of labor were expended; all of which would have to be duplicated in case we had to drill twin wells.

We are also cognizant of the four point program of Mr. Chapman and have similar clippins as the one presented by Tidewater but I don't believe there would be any use in duplicating those here. It is our intention, if allowed to

dually complete the well, to fully comply with Rule 304 of the Commission or any other applicable orders that the Commission might make. The well would be so equipped that pressure or any other data which the Commission might desire to take could be made in order to insure that the zones are satisfactorily separated.

Exhibit No. 2 - I would like to introduce the electrical log of our well. And mostly for informatory purposes a copy of the Texas Statewide Order which shows the dual completion authorized in various Texas fields along with their requirements, and the tests that they make to insure there is no cammingling or inter-communication between the zones. I think that is all I have.

CHAIRMAN SHEPARD: Any questions?

MR. HOUSTON: Mr. Adams do you propose to re-file your application so as to include a transfer of allowable?

MR. ADAMS: Yes, sir.

MR. HOUSTON: That would be filed and be taken up at the next hearing then and there will be an alternative application, is that right?

MR. ADAMS: In view of the fact that our State S. 4 well can't be completed because it is in the process of drilling, I think it is around 6000 feet now, while we haven't hit the

top of the McKee sand. I will say that our next application will be just like this one, to dual complete the three and four wells, - this is already to dual complete three but to dual complete four or transfer allowable between number 3 and 4 well.

MR. HOUSTON: You propose to go ahead and dually complete 3 before 4 is completed?

MR. ADAMS: Not without the authorization of the Commission.

MR. HOUSTON: I mean if it is authorized. You want them to go ahead and act on this application at this time?

MR. ADAMS: If they would do so, yes.

MR. LAVERING: I have a question from the witness. You made a point of 10,000 man hours saved.

MR. ADAMS: Yes.

MR. LAVERING: In the dual completion. Isn't it true that the dual completion takes considerable longer to complete than a drilled well?

MR. ADAMS: Naturally it takes longer.

MR. LAVERING: Considerably longer.

MR. ADAMS: Considerably longer but comparatively -

MR. LAVERING: (Interrupting) Isn't it true after you have it dually completed it takes greater supervision to cope with the problems of production and thereby increases

maintenance on that type of well.

MR. ADAMS: I think very little.

MR. LAVERING: You don't think over a period the extra time required to dually complete and repair those wells periodically, which it has been testified here is the history of past wells, plus the supervision for maintenance, will balance up.

MR. ADAMS: It has been our experience in other fields we haven't had to have additional labor for dual completion.

CHAIRMAN SHEPARD: Anyone else?

MR. DEWEY: Mr. Adams have you any comment to make on any of your dual completions in West Texas? You have made some in certain fields, haven't you?

MR. ADAMS: We have made four in the Shaft-Lake field of Andrew County. I think roughly 14 or 15 in the Dollar Hayde field, - I think that is also in Andrew County. The border of the Texas-New Mexico line which you mentioned a while ago.

MR. DEWEY: Do you have any in the Wheeler pool?

MR. ADAMS: Yes, we have two in the Wheeler pool.

MR. DEWEY: They are all successful?

MR. ADAMS: As far as I know, I have never heard anything to the contrary.

MR. DEWEY: You think they will remain that way throughout their completion life?

MR. ADAMS: No, there will be problems will come up of course. For example, in Shafter Lake the formation has stopped flowing and we are installing pumping equipment there to pump dually the two horizons.

MR. DEWEY: Would you like to comment on the experience on the Shafter Lake pool relative to the other operators in those pools that you would like to comment on?

MR. ADAMS: I wouldn't want to comment on Wheeler because I am not too familiar, but in Shafter Lake the dual completions have been satisfactory to my knowledge.

MR. DEWEY: Did you hear me in the former testimony in the former case?

MR. ADAMS: Yes, sir, I was here.

MR. DEWEY: I made the statement that three out of seven of all dual completions were bad, for one reason or another. Do you think that is about the experience? Do you think that is what has been experienced in West Texas dual completions? You think these figures are representative?

MR. ADAMS: No, sir, I do not.

MR. DEWEY: You think it is abnormal.

MR. ADAMS: I believe it is.

MR. DEWEY: You think there are about 25 percent failures?

MR. ADAMS: I wouldn't like to give a percentage figure. I don't know what you consider a failure. If the formation ceases to flow that doesn't necessarily condemn the dual completion.

MR. DEWEY: That is all. I would like to request that the reporter be instructed to incorporate my statement in the former hearing and make it a part of this hearing.

CHAIRMAN SHEPARD: It will be granted.

MR. DEWEY: And also include the testimony in the case that was held about two and a half years ago.

CHAIRMAN SHEPARD: It will be done.

(See Case No. 260 for the above incorporation.)

CHAIRMAN SHEPARD: Anyone else? Mr. Morrell?

MR. MORRELL: No.

MR. LAVERING: How much experience have you had in these two reservoirs, Hare and Brunson? How many wells do you have in that field?

MR. ADAMSP I think we had five or four Ellenburger wells. We don't have any Simpson wells to my knowledge, except this potential well which is a good one.

MR. LAVERING: I asked a previous witness whether or not reservoir conditions and practical experience weren't a prerequisite which should be of paramount importance in the

promulgation of dual completions, and I would like to ask you the same question.

MR. ADAMS: What do you mean by reservoir conditions?

MR. LAVERING: The type of reservoir, characteristics, as to flowing capacity, things that affect the recovery of oil from the well bore.

MR. ADAMS: As long as the reservoir is flowing I can see no complications. How long it will produce by natural flow I don't know.

MR. LAVERING: What percentage of the recoverable production do you anticipate obtaining under those zones flowing.

MR. ADAMS: I don't know.

MR. LAVERING: That is all.

CHAIRMAN SHEPARD: Anyone else. We will hold this open and you may reapply, and we will thereafter consider the dual completion and the allowable together.

MR. ADAMS: The question of the date comes up there. How long it will take for the hearing. I don't know when this second well will be down to the Ellenburger, and I understand until it is, we won't be able to apply from your former ruling So, whether or not we can get it heard in April I don't know. How much time would the Commission allow.

MR. SPURRIER: 40 days. You should have you application

in 30 days before the hearing.

MR. ADAMS: Your next hearing is set for April 24th.

MR. McCORMICK: How soon do you plan to complete your second well that is now drilling.

MR. ADAMS: Mr. Dodie will you answer that question?

MR. DODIE: 25 to 30 days.

MR. McCORMICK: I would suggest as soon as you complete and test that you then file your application, and it will be taken up as quickly as possible after that.

CHAIRMAN SHEPARD: Probably be in May.

MR. ADAMS: Be at the May hearing then.

MR. SPURRIER: Yes, you could file application and telephone us when the well comes in.

MR. ADAMS: If we had tests to show that before completion both horizons were productive, that would suffice?

MR. SPURRIER: Sure.

CHAIRMAN SHEPARD: I see we have a visitor back here who served on this Commission longer than anyone else. Stand up Governor Miles.

(Applause)

CHAIRMAN SHEPARD: We will be in recess until 1:30.