STATE OF NEW MEXICO
ENERGY AND MINERALS DEPT.
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
25 April 1984

EXAMINER HEARING

IN THE MATTER OF:

Application of Getty Oil Company for downhole commingling, Lea County, New Mexico. CASE 8168

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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A P P E A R A N C E S

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I N D E X

DON STEINNERD

E X H I B I T S

MR. STOGNER: The hearing will come to order.

We'll call next Case Number 8167. I'm sorry, 8168.

MR. PEARCE: That case is on the application of Getty Oil Company for downhole commingling, Lea County, New Mexico.

MR. CARR: May it please the Examiner, my name is William F. Carr with the law firm Campbell, Byrd and Black, P. A., of Santa Fe, appearing on behalf of Getty Oil Company.

I have one witness.

MR. PEARCE: Are there other appearances in this matter?

MR. BRUCE: Mr. Examiner, my name is Jim Bruce from the Hinkle Law Firm in Santa Fe, and I'm entering an appearance on behalf of Doyle Hartman.

(Witness sworn.)

DON STEINNERD,

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. CARR:

Q Will you state your name and place of residence?

A My name is Donald James Steinnerd. I reside in Hobbs, New Mexico.

Q By whom are you employed and in what capacity?

A I'm employed by Getty Oil Company. I'm the Area Engineer in the Hobbs Area Office.

Q Have you previously testified before this Commission or one of its examiners?

A No, I have not.

Q Will you review for Mr. Stogner your educational background and your work experience?

A Yes. I graduated from the University of Missouri at Rolla in December of 1974 with a BS degree in geological engineering.

Upon graduation I went to work for Getty Oil Company in the New Orleans Area in the capacity of petroleum engineer and worked there approximately two and a half years and was transferred with Getty to Mobile, Alabama.

I terminated employment at that time with Getty in Mobile, Alabama, and went to work ultimately for the USGS here in Albuquerque, New Mexico, as a petroleum engineer in lease sale evaluations. I also worked a half a

year for the Department of Energy in their Geothermal Geopressure Program out of Las Vegas, Nevada, again in the capacity of petroleum engineer.

I terminated with the Department of Energy and went to work again with Getty Oil Company in Sweetwater, Texas, in 1981. After six months -- as a petroleum engineer.

After six months I was transferred to my present capacity as Area Engineer in Hobbs, New Mexico.

Q Does your area of responsibility include southeast New Mexico?

A Yes, it does.

Q Are you familiar with the application filed in this case on behalf of Getty Oil Company?

A Yes, I am.

Q And are you familiar with the subject well?

A Yes, I am.

MR. CARR: We tender Mr. Steinnerd as an expert witness in petroleum engineering.

MR. STOGNER: He is so qualified.

Q Mr. Steinnerd, would you briefly state what Getty seeks with this application?

A Getty seeks approval to downhole commingle a Myers Cooper Jal Unit -- seeks approval to downhole commingle the Myers Langlie Mattix -- excuse me, Langlie

Mattix oil zone and a Jalmat gas zone for downhole commingling in Cooper Jal Unit 301.

Q Do you also plan to work over each of the zones?

A Yes, we do.

Q Would you provide Mr. Stogner with a brief history of the events which result in this hearing today?

A A brief history in the events is this property was acquired by Getty from Reserve Oil and Gas.

Reserve Oil and Gas, prior to being acquired by Getty in 1975, downhole commingled this subject well without proper approval. It was recently brought to my attention that this well was in this position. I immediately contacted Mr. Carr and asked him to please bring the matter before hearing to have this well brought within compliance.

Q And has production from the Langlie Mattix and the Jalmat been commingled in this well since 1975?

A Yes, it has.

Q Have you prepared certain exhibits for introduction in this case?

A Yes.

Q Would you please refer to what's been marked for identification as Getty Exhibit Number One, identify this and review it for Mr. Stogner?

A Exhibit Number One is a plat of the Coop-

er Jal Unit and some of the surrounding properties. This particular unit is operated by Getty Oil Company.

The subject well in question is Well No. 301. It is in the northwest quarter of the northwest quarter of Section 18.

Q And that well has a box around it on this exhibit?

A Yes, it does.

Q And what does that indicate?

A That is basically a 40-acre box, which is a 40-acre spacing designation proration unit for the Langlie Mattix.

Q Does this plat also show other wells in the immediate area?

A Yes, it does.

Q Where are the nearest Hartman wells to the proposed downhole commingling?

A It is my understanding Mr. Hartman has a well approximately one-half mile due north of Cooper Jal Unit 301.

Q What is the status of the land involved in this case, State, Federal or fee land?

A This is fee land.

Q Are there other wells in the immediate area for which downhole commingling of the Jalmat gas zone and the Langlie Mattix oil zone has been approved?

A Yes, there has been one well, Cooper Jal

Unit No. 244, which is approximately one-half mile southeast of our wellbore, received approval to downhole commingle by Order R-6173 on November 8th, 1979.

Q And that well appears on Exhibit One. There's a number 12. It doesn't relate to that but it's in close proximity to it, is that correct?

A That's correct.

MR. CARR: Mr. Examiner, there's also a Well No. 244 immediately north of this location. We're not talking about that well. That well's in another unit and it's just coincidence that it also has the 244 designation.

Q Are water flooding operations currently being conducted in both Langlie Mattix and in the Jalmat Pools in the immediate area?

A Yes, they are.

Q Is the ownership of each of the zones to be commingled common?

A Yes, it is.

Q Would you now refer to Getty Exhibit Number Two and review this for the Examiner?

A Exhibit Number Two is a wellbore schematic. On the left side of the page is a schematic of the present completion. On the right side is the schematic of the proposed completion upon approval of doing the proposed work in the Jalmat-Langlie Mattix. Tubing has been omitted in these diagrams. We have open-ended tubing presently set

at approximately 3456 at the bottom -- at the 7-inch casing seat.

Q Now, when the well was originally completed was there a packer or bridge plug set?

A Originally this well was completed as a Langlie Mattix producer. Subsequently it was plugged back and produced as a single well in the Jalmat. There was a bridge plug separating the two zones.

Q And that was pulled by Reserve?

A Yes, it was, in October of 1975.

Q Would you now refer to Exhibit Number Three and review this?

A Exhibit Number Three is a brief well history for this well. The well was completed as a single Seven Rivers-Queen producer in January of 1942.

Subsequently the Langlie Mattix was plugged back by use of a 7-inch cast iron bridge plug at the depth of 3250 and the Jalmat-Yates was opened up in the wellbore. It produced and is still producing today.

In April of '74 the Jalmat started producing a small amount of water and was placed on pump.

Subsequently, then, in October of '75 Reserve Oil and Gas removed the bridge plug and downhole commingled both zones as they stand today.

Q Will you now identify Exhibit Number Four and review the information contained thereon?

A Exhibit Number Four are two recent tests.

The first page of that is the test of the fluid production from the tubing, which shows it currently producing approximately 38 barrels of oil per day, excuse me, barrels of water per day, 11 barrels of oil per day, and 4 Mcf of gas.

The second page is a test of the fluids being produced through the annulus. It is essentially dry gas being produced at the rate of 61 Mcf per day.

Q And the first page is Langlie Mattix and the second page is generally Jalmat.

A That's correct.

Q Okay. Would you now refer to Exhibit Number Five, identify this and explain what is shows?

A Exhibit Number Five is a graph of production starting back in 1972 which strictly shows only the gas production from the well; the fluid production is not -- is not on this particular graph.

This gas production values are those taken from the NMOCD C-115 forms.

Q Are both wells in this well capable of only marginal production?

A No, they are not.

Q What would be the effect on Getty if downhole commingling authority was not given by the Commission?

A If downhole comminle authority was not given, Getty as operator would recommend that the Jalmat gas be squeezed and the well recompleted as a single Langlie

Mattix well.

Q And what effect would this have on the correlative rights of Getty?

A Getty would lose their capability of producing the Jalmat gas.

Q Are the zones flowing or artificially lifted?

A The zones are presently being artificially lifted.

Q What pressure do you anticipate in each of the zones to be downhole commingled?

A I would estimate that the Jalmat is probably at a pressure less than 200 pounds; the Langlie Mattix, estimated, maybe approximately 1500 pounds.

Q Would these pressure differentials, in your opinion, result in gas migration between the zones?

A No.

Q If the well was shut in would migration between the zones occur of fluid or gas?

A It possibly could occur if shut-in time was for an extended period of time.

Q And how do you propose that this problem be handled?

A If this well is subsequently shut in for in excess of thirty days, we request that Getty Oil Company as operator contact the District Office and make arrangements with them to isolate the zone in question with the ex-

ception of shut-in periods for proration problems with gas.

Q So for any problem other than just a prorationing related problem, if you're shut-in for more than thirty days you would notify the District Office and then it would be their decision as to whether or not the zones should be isolated.

A That is correct.

Q Have you taken production data and calculated average rates of production from each of the zones involved?

A We have not.

Q How do you propose that production be allocated to each of the commingled zones in this well?

A Well, Getty woud recommend that when we proceed with the workover that we have planned in the Langlie Mattix and the Jalmat that prior to placing both wells back on production the Jalmat would be isolated by use of a cast iron bridge plug, tested separately, and then the bridge plug would be removed and the wells combined and commingled.

Q And then based on that data you would work out an allocation formula?

A That's correct.

Q And you would do that with the District Office.

A That's correct.

Q Do you anticipate there would be any

problems with the compatibilities of the fluids produced from each of the zones?

A No, I do not.

Q Do you believe that what you are proposing would result in any damage to the Hartman wells located a mile to the north of the proposed downhole commingling?

A No, I do not.

Q And why not?

A Basically in this area we have had similar wells even closer than the distance between our well and Mr. Hartman's wells, whereby we have been injecting in the Langlie Mattix as well as the Cooper -- as well as the Jalmat and we have not seen significant problems effecting the Jalmat gas production in those wells.

Specifically wells that we have been injecting in is about one-half mile south and slightly west of the Cooper Jal Unit 2. 301 is a well, 233 and 146. It's been injecting in the Jalmat since 1971.

Just left of that is a flowing Jalmat gas well, Well No. 303.

There's been another well immediately south, the Cooper Jal Unit No. 301, still in Section 18.

Three locations south is also a dual injector in the Jalmat as well as the Langlie Mattix, also injecting since 1971, and the well we previously mentioned, 244, downhole commingled and still producing in the Jalmat gas.

Q Do you believe that your proposal to re-enter this well and isolate the zones if in fact it is shut-in for an extended period of time provides sufficient protection to any operator in the area, protection from damage due to water encroachment?

A Yes, I do.

Q Are the reservoir characteristics of the two pools that you propose to commingle such that underground waste will not be caused by the proposed commingling?

A Yes, they are.

Q In your opinion will granting this application result in the increased recovery of hydrocarbons?

A Yes, I do.

Q Will the value of the commingled production exceed the value of the production from each of the individual zones?

A Yes.

Q Will economic savings result from the proposed downhole commingling?

A Yes.

Q In your opinion, Mr. Steinnerd, would granting this application be in the best interest of conservation, the prevention of waste and the protection of correlative rights?

A Yes, I do.

Q Were Exhibits One through Five prepared by you?

A They were prepared under me.

Q Have you reviewed them and can you testify as to their accuracy?

A Yes, I can.

MR. CARR: At this time, Mr. Stogner, we would offer Getty Oil Company Exhibits One through Five into evidence.

MR. STOGNER: Exhibits One through Five will be admitted into evidence.

MR. CARR: That concludes my direct examination of Mr. Steinnerd and we pass the witness for cross examination.

MR. STOGNER: Mr. Bruce, your witness.

MR. BRUCE: I have no questions of the witness.

MR. STOGNER: Thank you, Mr. Bruce.

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Steinnerd, if you'll please, Exhibit Number Two, do you presently have tubing in this well?

A Yes, we do.

Q And what's it set at?

A It's open ended tubing set at approximately 3456.

Q And the Jalmat-Yates perfs are still open, right?

A Yes, they are.

Q When did Getty acquire this well?

A Getty acquired Reserve Oil and Gas in either 1980 or 1981, I forget which year exactly.

Q In the proposed completion, where do you plan to set the tubing there if this is a single -- if this -- if the downhole commingling is approved?

A Tubing would be set in the Langlie Mattix perforations near the bottom of the perforations inside the 5-inch casing.

Q Do you propose to set a packer?

A No, we do not.

Q Let me see if I've got this right on your pressures. The Jalmat, you said, has a shut-in pressure of about 200 psi?

A I would estimate a bottom hole pressure in the area of 200 psi.

Q And the Langlie Mattix shut-in pressure, bottom hole pressure, around 1500 psi?

A I would estimate that.

Q Has this well had any pressure data on it in its history?

A There may --

Q In either zone?

A -- be some other pressure data prior to

1975.

I might point out, Mr. Examiner, both the Jalmat and the Langlie Mattix are currently being flooded in the unit. In this part of the unit the Jalmat is mostly gas production in the immediate vicinity; however, it is in my opinion still continuous with the rest of the reservoir over the unit.

Q Are both zones in your opinion nonmarginal production?

A Yes, Mr. Examiner. We make approximately 11 barrels of oil out of the Langlie Mattix and approximately 61 out of the Jalmat. I believe that would qualify as nonmarginal gas in the Jalmat.

Q You don't feel it would be economically feasible to dual complete this well after your workover was done?

A No, I do not, Mr. Examiner. The Langlie Mattix makes water and the price of gas that we receive in the Jalmat would not justify us using a packer. We've been unable to treat. The Jalmat also makes a slight amount of water. We'd probably have to in all practical purposes also have to put another pumping unit on the well, and it would overall increase our operating costs and ultimately lower the economic -- raise the economic limit.

Q Does Getty presently have any dual completed Langlie Mattix-Jalmat wells in the area?

A Yes, we do, the Well 244.

Q That is a dual?

A That is a dual -- excuse me, no, Mr. Examiner, we do not have, to my knowledge. That is a single completion.

Q So it was downhole commingling.

A Yes.

Q That Well No. 244 that you referred to earlier, that was approved by R-6173?

A That is correct, Mr. Examiner.

We have dual injection wells but I do not believe we have dual producing wells, if that was your question.

Q Yes, sir. Well, most of the Getty wells in this area, are they are single Jalmat or single Langlie Mattix wells?

A They are both, Mr. Examiner, both -- both horizons are unitized and we have -- we have both Langlie Mattix as well as Jalmat producers.

The notation alleging, if you'd look at that at the bottom of Exhibit One, points out that all these wells wsith 100 series for the most part are all Langlie Mattix producers. The 200 series are Jalmat oil producers and the 300 series wells are Jalmat gas producers.

Q I appreciate that. Thank you for clearing that up for me.

A You're welcome.

Q Would Getty have any objection whenever

you complete your workover of this well or even before you start the workover of getting shut-in pressure on both these zones? Would that cause any hardship on Getty?

A It would require an expense by Getty. I feel that the estimated pressures, the Langlie Mattix may vary some. The Jalmat is probably very close to that pressure or possibly even -- possibly less.

If it was required by the Commission we could do it.

MR. STOGNER: I have no further questions for Mr. Steinnerd.

Is there anybody else that has any questions of this witness?

If not, he may be excused.

MR. CARR: Nothing further, Mr. Examiner.

MR. STOGNER: Mr. Bruce, do you have anything at all?

MR. BRUCE: No, sir.

MR. STOGNER: Does anybody else have anything in Case Number 61 -- I'm sorry, 8168 this morning?

If not, this case will be taken under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case 8168, heard by me on April 25, 1985.

Examiner
Oil Conservation Division