CASE NO.

7658

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
22 September 1982

COMMISSION HEARING

IN THE MATTER OF:

Application of Harvey E. Yates Company for a dual completion and downhole commingling, Chaves County, New Mexico. CASE 7658

BEFORE: Commissioner Ramey
Commissioner Kelley

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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I N D E X

E X H I B I T S

MR. RAMEY: Call now Case 7658.

MR. PEARCE: That is on the application of Harvey E. Yates Company for a dual completion and downhole commingling, Chaves County, New Mexico.

MR. RAMEY: Ask for appearances.

MR. HALL: I'm Joe Hall, representing Harvey E. Yates Company.

I'll have two witnesses.

MR. GALLEGOS: J. E. Gallegos, representing Viking Petroleum and Grynberg and Associates.

MR. RAMEY: Have any witnesses, Mr. Gallegos?

MR. GALLEGOS: Potentially two witnesses.

MR. PEARCE: Will any witnesses who have not been sworn, please rise?

I'd like the record to reflect that the witnesses appearing in Case 7658 have been previously sworn and remain under oath.

MR. RAMEY: I think, in the hopes of saving time, I will incorporate the testimony in Case 7657 into Case 7658.

Mr. Hall, you may proceed.

MR. HALL: Mr. Nokes.

RAY NOKES

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

DIRECT EXAMINATION

BY MR. HALL:

Q. State your name, please, and where you live.

A. Ray Nokes, Roswell, New Mexico.

Q. By whom are you employed and in what capacity?

A. Harvey E. Yates Company, Reservoir Engineer.

Q. Have you testified as an expert before the Commission or an Examiner before and had your qualifications as a reservoir engineer accepted?

A. Yes, sir.

MR. HALL: I ask that Mr. Nokes be recognized as an expert.

MR. RAMEY: He is so qualified.

Q. Mr. Nokes, are you familiar with the purpose of Case 7658?

A. Yes, I am.

Q Would you briefly state what the purpose of that case is?

A The purpose of this is approval of a multiple completion of the Seymour State Com Well No. 1, located 660 from the west line, 1980 from the north line of Section 18, Township 9 South, Range 27 East, in Chaves County, New Mexico.

Also in this, if I may, I would like to point out, the purpose of this is the perforations that are in question of 5926 to 5952; were treated on May the 15th, 1982, and required a pressure of 4573.3 psi to break them down. The previous perforations would have a hydrostatic pressure of 3796.21 psig on back side with no drawdown during the fracturing procedure of the Lower Atoka perforations on May the 21st of 1982.

MR. GALLEGOS: Mr. Chairman, this isn't response to this question. Can we get back on a question-answer basis here?

MR. RAMEY: I think that might be --

MR. GALLEGOS: The witness has taken off flying.

MR. HALL: Well, I think that, Mr. Commissioner, he is stating the general overall aspect of what the case is -- is pertinent parts of the case for the Commis-

sion at the outset and will develop the particulars as he goes on.

MR. RAMEY: All right, if he will develop the particulars, why, then we should --

MR. HALL: This is important, a narrative to --

MR. RAMEY: Yeah. I think if he had said that these perforations are in question, that would have been ample, instead of going into --

A. I apologize. These --

MR. RAMEY: -- detail at this time.

A. These perforations are in question.

MR. RAMEY: Thank you, Mr. Nokes.

Q. Okay. Mr. Nokes, what type of multiple completion is the applicant seeking in this case?

A. This is a gas/gas dual completion utilizing the -- or set out by the Commission rules and regulations.

Q. Okay, what type of downhole equipment will be used to segregate the separate zones of the multiple completion?

A. It will be of a production type mechanical completion apparatus, of which the lower zone is separated by a Baker Lok-Set 45A4 packer, and the upper is a Baker Model K Dual Snap Set 45B packer.

Q. Do you believe that this packer will prevent communication between the two zones in question?

A. Yes. We have tested the packer. To clarify a point that was made earlier, we have tested this packer with no communication from the Atoka to the Abo formation.

MR. RAMEY: That's your bottom packer.

A. Yes, sir. Correct. There is no communication from that packer with the Abo formation. A packer leakage test, which is required by the rules and regulations, after completion of the well, communication with Bill Gresset in Artesia, District Director, granted approval to waive this at which time the dual completion was granted and at which time we could produce through sales lines to prevent waste.

MR. RAMEY: So you have tested the packer but you haven't taken the actual, physical packer leakage test as yet.

A. No, sir.

MR. RAMEY: You'll do that after -- when you get the well --

A. Yes, sir.

MR. RAMEY: Thank you.

Q. Mr. Nokes, if you'd refer to what has been marked for identification as Applicant's Exhibit A, and

please identify what those pages consist of for the Commission.

A. This is an application for multiple completion, a C-107, with the attached documentation required by this application.

Q. Okay, referring to what has been marked in that exhibit as One-A, would you please briefly summarize what is shown therein?

A. This is the C-Form 107, stating the operator, the well location, the zones of interest.

Q. Which are?

A. The Abo, which is the upper zone at a depth of -- or a pay interval of 4912-29, type of production is gas, method of production is flowing, and a daily production,estimated production report.

Also, a lower zone, which is the Atoka, which is from perforations of 5926 to 6048, also a gas producing zone, also flowing, with a corresponding test, an estimated test.

Q. Would you next refer to the diagrammatic sketches, One-B through D, and, if necessary, One-K through L, and review those documents for the Commission, please, sir.

A. Exhibit One-B is a well history summary sheet, as compiled from the drilling report prepared by myself on July the 1st, 1982, indicating the well location, the ini-

tial date of drilling, the completion date, the depth, plug-back, the type of completion, which was entered as dual, the perforations, and at this point I would like to apologize for an error on the Atoka perforations, it's a typographical error. It has 5826 and it should be 5926.

Q Where is that located?

A It is on the seventh line down, where it indicates perforations, it has typed in Abo 4912 to 29 overall, Atoka, it has 5826 to 6048 overall, and it should be 5926.

Q That's up in the heading?

A Yes, sir.

Below that is a stimulation, which should be referred to, the well history on the right hand column, and continuing on it has reference to surface casing, the type of surface casing that was set, 13-3/8ths, cemented at 354 foot with 340 sacks of cement to surface.

Intermediate of 8-5/8ths to 1525 foot, cemented with 550 plus 640 additional sacks, cemented to surface.

MR. RAMEY: Was that 550 or 650?

A It is 650. I may have interpolated numbers, I'm sorry. It is 650 plus an additional 640 sacks.

Continuing on down the diagrammatic sketch,

it indicates a 2-1/16th EUE tubing, with an ID, which is not indicated on here, but of 1.751; indicating a Baker Dual Snap Set 45B packer at 4800 foot.

Perforations, on the righthand side of the diagram, indicating Abo perforations from 4912 to 29; the additional perforations of 5926 to 34 and 5944 to 52; a Baker Dok-Set Model 45A4 packer at 5972; perforations, 6008 to 16, 6026 to 28, 6043 to 48; the plugback TD of 664 -- I'm sorry, 6064 foot, cast iron bridge plug that was set at 6100 foot; perforations of 6075 to 79; squeezed perforations of 6075 to 79, and a reperforation of 6076.

Q. Okay, all those are below --

A. Yes, they are below.

Q. -- your cast iron bridge plug --

A. Correct.

Q. -- so they are not really in question in this case.

A. Correct. On the lefthand side it indicates centralizers and the depth at which they were located and also the DV.

Below that indicates the production casing which was set at 6343 foot, cemented with 1590 sacks of cement, and a cement bond log, indicating top of cement to 2370 foot. Total TD was 6385 foot.

Additional information on procedures that took place that was extracted from the drilling procedures are on the righthand side of the page.

Q All right. Would you please indicate and note any of those that are important for the Commission to be aware of?

A Yes, sir. If you will notice on 5-14-82 the Atoka was perforated at 6026 to 28. At this time it was acidized with 2500 gallons and there was an instantaneous shut-in pressure of 2500 pounds. Also it was reacidized, or we moved to a -- the bridge plug, the retrievable bridge plug, up the hole and acidized perforations of 5926 to 52 with 4000 gallons of 15 percent MOD-202.

Instantaneous breakdown pressure was 1800 pounds. This hydrostatic weight of the treatment fluid, in addition with a surface pressure of 1800 pounds, calculates to be 4573 pounds, .3 psig, total pressure to breakdown those perforations.

Instantaneous shut-in pressure was 2900 pounds with the indicated pressure, which is not on your report, but I calculated additional for you'alls benefit, of 5513 pounds, with the additional hydrostatic weight of the flush behind that treatment.

The frac gradient calculated for that

interval of perforation was .93 pounds per foot.

Q. What is the significance of that?

A. That is to indicate that the formation, when compared to the additional information that will be read about the Abo perforations, that the frac gradient is much higher than what the Abo formation is. It would take a much higher pressure to treat or break down the Atoka formation in regards to the Abo formation.

Q. In other words, that has some -- some bearing on the complete and total separation of these two zones.

A. Definitely. Yes, sir, definitely.

Q. And that would indicate that there is a separation --

A. With the additional data --

Q. -- between the two zones.

A. With the additional data, yes, sir.

Q. All right.

A. If I may continue, on the next page, on Exhibit One-C, referring to the date 5-21-82, if you will notice the hydrostatic weight of the fluid on the back side during the test, or during the frac treatment of the Atoka perforations was 3796.21 pounds per square inch. This pressure indicates from the treatment reports from Dowell that

it maintained a surface pressure of 1180 pounds from a surface in addition to a hydrostatic weight of the column behind the pipe, or the annular space, of 2616 pounds, or 16.2 pounds, totaling the 3796.21, indicating that there was no drawdown, no seepage, no leakage into the Atoka perforations while treating the upper, excuse me, the perforations from 5926 to 5952 during treatment of the perforations of 6008 to 6048.

MR. RAMEY: Let me interrupt just a moment.

A. Yes, sir.

MR. RAMEY: Okay, you had a -- you had a packer, I assume, between the upper two sets of perforations --

A. Yes, sir.

MR. RAMEY: -- and the lower three.

A. Correct.

MR. RAMEY: Okay, you filled the annular space, then, with fluid.

A. Yes, sir.

MR. RAMEY: And put 1100 pounds pressure.

A. Differential pressure as increased frac pressure, as we increased frac pressure; as it took an increased frac pressure to treat the lower zone, we correspondingly increased our annular back pressure to not damage our packer

during treatment, and the pressure that we reached was this 1180 pounds surface pressure, with the additional hydrostatic head, made it 3700 plus pounds on those perforations.

MR. RAMEY: Okay, and then you maintained this pressure for a certain period.

A. Yes, sir, it held; it did not bleed off.

MR. RAMEY: So you had an indication that the upper two perforations, then, were not taking any fluid --

A. Yes, sir.

MR. RAMEY: -- at the total pressure of --

A. Yes, sir, and I might add --

MR. RAMEY: --3796 at the perforations.

A. Yes, sir, and that was after the entire interval had been treated, which would indicate a --

MR. RAMEY: After the initial acid.

A. Yes, sir. Also, on 5-26-82, we treated the -- the Abo perforations and this is to give you an example of the frac gradient and pressure required to break down those perforations, if you'll notice on the second line the break-down pressure in the perforations was 1300 pounds. This pressure, with the additional weight of the hydrostatic column of fluid calculates to be 3065 pounds to break down the Abo formation.

The frac gradient for that formation is

.624. This is the point that I'm trying to express, that the frac gradients between the two formations are considerably different.

MR. RAMEY: Okay, now let me -- let me ask a question, just to make sure I understand.

You perforated the Abo and fraced it.

A. Yes, sir.

MR. RAMEY: All right, now, were the perforations from 5926 to 5952 open at the time?

A. No, sir.

MR. RAMEY: And you had to make some kind of a plug above those and below the Abo.

A. Okay, our packer was positioned, if you will notice, on 5-25-82 we went in with a retrievable bridge plug and set it at 5042 foot. That is above the perforations in question.

MR. RAMEY: 5-25-82, okay.

A. The lower zone had a blanking plug in the profile. We had isolated the -- the Atoka perforations that had been fraced.

MR. RAMEY: Okay. So then you were just able to frac only the --

A. Yes, sir, we isolated and treated the Abo perforations, and treated them.

MR. RAMEY: And that's where you got your frac gradient --

A. Yes, sir.

MR. RAMEY: -- .624.

Okay, thank you. You may proceed.

Q. Would you now refer to Exhibits One-K through L and indicate from those what those refer to?

A. Exhibit One-K is a Form C-103. Form C-103 is to indicate on 3-1982 that we did pressure test the casing to 1000 pounds. Then additional testing on 3-30-82 after drilling out the DV tool, the cement and the DV tool, we pressure tested the casing and the DV tool to 2500 pounds for 30 minutes. Both held without any problems.

Q. That would indicate that there are no -- no casing leaks.

A. Correct.

Q. In this wellbore.

A. Correct. Also to indicate that cement did cover the intervals that were perforated;on 4-2-82 a gamma ray cement bond log was run and indicated top of cement at 2370 foot.

Q. All right. If you would, please turn to Exhibit One-F and indicate what that is for the Commission, please?

A. This is a copy of a land plat indicating the location of our well, required by the Commission for multiple completions.

Q. Does it also contain a list of the offset operators?

A. Yes, sir, it does.

Q. And that is required under Form C-107, is it not?

A. Yes, sir.

Q. All right. If you would now please refer to what's been marked for identification as Applicant's Exhibits One-G through J, and discuss them for the Commission?

A. The exhibits that you have now are copies of the Density Neutron Gamma Ray, better known as porosity log. And then also a Dual Lateral Micro Lateral Log. This is a resistivity log. There is also a copy of Geo Vann Cement Bond Log and a temperature tracer survey.

If you will notice that the tops are marked on the logs. These tops are tops that were picked by the Geological Department in Midland. The perforations for the Abo and the Atoka zones are indicated in green, I believe.

At the bottom it indicates a cast iron bridge plug at 6100 foot with 36 foot of cement on top of that,

which is required by the Commission.

Q. Have you -- you've indicated on there where the lower packer is located.

A. The packer is not indicated on the logs. I may have been in error, but if I remember correctly, by the rules and regulations, what I have on here indicates what was required and I was afraid that I might clutter it up.

Q. Okay. Do you need to refer to anything else on that log?

A. No, sir. If you'd like, I can state for the record again, for you'alls benefit, where the packers are located.

Q. I don't think that's necessary. They're on this well history summary sheet.

MR. HALL: Would the Commission like any further testimony on the other logs?

MR. PEARCE: I'm sorry, could you make it clear for the record and for me what One-H, I, and J, are?

A. I'm sorry, Mr. Pearce.

MR. PEARCE: We have spread out before us, members of the Commission and opposing counsel, an Exhibit marked One-G, a log of this well.

A. I'm sorry, my copy is not marked. If I could look at that I'll explain what it is.

MR. PEARCE: Okay.

(There followed a discussion off the record.)

A. Okay, Exhibit One-G is the Density Neutron Gamma Ray Log.

Exhibit One-H is the Dual Lateral Micro Lateral Log.

Exhibit One-I is the cement bond log.

And One-J is a tracer survey log.

Q. Have copies of these logs been previously furnished to the OCD?

A. Yes, sir.

Q. Prior to this hearing?

A. Copies were submitted to Mr. Bill Gresset at the District level; also with the application for an administrative approval a copy of the marked logs and colored logs were sent to Mr. Ramey.

Q. Has the Oil Conservation Division been furnished with a report on the gravity, the gas/oil ratio, or gas/liquid ratio, and surface or bottom hole pressure for each of the zones in question?

A. I believe that was covered under C-105,

the completion report, State completion report.

Q. I'd like to refer to -- that was the previous hearing, Exhibits Two-A and Two-B in that hearing were the completion reports for these two zones, if the Commission would take note of those. They contain the information.

MR. RAMEY: All right. I don't see anything for the bottom hole pressures.

A. No, sir, surface pressure --

MR. RAMEY: On either of them.

A. The rules and regulations stipulate either surface or bottom hole and the surface pressure, I believe, would be indicated -- well, my copy is faded out on the edge.

MR. RAMEY: Some 250 pressure on the Abo with probably s75 on the Atoka.

A. I apologize. My copy is faded out on that also. I do have current pressures if that is beneficial.

MR. RAMEY: That was not shut-in pressures. That seems to be flowing tubing pressures, is that right?

A. No, sir. I do have four months of cumulative shut-in pressures, if you would like that at this time.

MR. RAMEY: Yeah, I would like that.

A. Yes, sir. On completion of the well our HEYCO pumper was instructed to take readings. Readings were taken on June 11th, 1982, for the Abo, which was 1000 pounds.

The Atoka was 1950 pounds.

Again, in July the 12th, the Abo pressure was 1050 pounds; the Atoka still 1950.

Again, on August the 12th, 1982, the Abo pressure was 1050 pounds; the Atoka was 1950.

On 9-15-82 the Abo was 1050 pounds; the Atoka was 1950, and upon that date, approximately 7:30 that afternoon, I went out and visibly read them myself to verify what the pumper had been giving.

Q And what do these figures indicate to you, Mr. Nokes?

A Utilizing this information from what we have here, with the perforations that are in question --

Q Being which perforations?

A 5926 to 5952, I believe, 5926 to 5952, which are above the lower packer which isolates the Abo and the upper zone from the Atoka of the lower zone, this indicates that there is no supercharging effect from the Abo -- I mean from the Atoka perforations to the Abo formation.

Also, at the same time with the stabilized pressures and also with the differential pressures that are indicated by 1050 as opposed to 1950, they are stabilized pressures for four months, and it indicates that there is also no drainage or dissipation of pressure from the Abo per-

forations into the Atoka perforations that are above the packer at 5972.

Q. Okay. If I could digress for a minute back to this Baker Dual Snap Set, there was some testimony in the prior case about differential pressure problems with that.

Would you --

A. Yes.

Q. -- care to tell the Commission about the tests you have done or studies you've done on that?

A. Yes, sir. In reference to what I have mentioned earlier about testing of packers, this packer was tested to 500 pounds on the tubing side.

Q. Now please be specific as to which packer you're referring to.

A. Okay. The Baker Dual Snap Set 45B packer at 4600 foot separating the Abo from the annular space was tested on the tubing side to 500 pounds. This pressure did hold. There was no leakage and I apologize because that was some communication that I had also misinterpreted earlier, until I questioned the drilling foreman and specifically asked him how the test was run and what pressures were utilized.

There was no seepage or leakage from the Abo formation up the annular space, which would be in corres-

ponding requirements of the Commission that there should not be. The pressure held and there were no problems.

Q. One other question, which you did not refer to in your prior testimony. Would you please indicate to the Commission the equipment that is set up on each of these two separate strings to separately meter and separately monitor each of the -- each of the individual --

A. Yes, sir. It is required that method readings, or a method of reading pressures for both formations be accessible or visible for interpretation.

Both strings do have, I believe it's 5000 pound gauges on them, and they do indicate individual, separated pressures, which at any time can be read by opening the wellhead.

Q. And those are the pressures that you testified have been read for about four months?

A. Yes, sir. The initial pressure that was indicated on the Abo was, I believe, one or two days after we had originally completed, but approximately one month later it had stabilized.

Q. Mr. Nokes, do you think that this completion will be in any way harmful to the two reservoirs or be unnecessarily wasteful of reservoir energy?

A. No, sir, I do not.

Q. Do you feel that the granting of this application would enhance recovery and be in the best interests of the State of New Mexico insofar as it prevents waste?

A. Yes, sir, I do.

Q. Were Exhibits One through -- Exhibit One, consisting of One-A through One-L, prepared either by you or under your supervision or in the ordinary course of business by Harvey E. Yates Company?

A. Yes, sir.

MR. HALL: I move the admission of HEYCO's Exhibit One.

MR. RAMEY: HEYCO's Exhibit One, which includes One-A through One --

MR. HALL: ONe-L.

MR. RAMEY: One-L will be admitted.

MR. HALL: I have no further questions at this time.

MR. RAMEY: Does anyone -- let me just get myself clear before I turn you over to Mr. Gallegos, Mr. Nokes.

CROSS EXAMINATION

BY MR. RAMEY:

Q. You perforated 5926 to 5952 and you iso-

lated those perforations?

I think your answer was yes on the first question?

A. Yes, sir, I believe so.

Q. You isolated those perforations and acidized.

A. Those -- the perforations from 5926 to 6048, if I'm not mistaken, were treated --

Q. I believe, Mr. Nokes, you have this reported on your Exhibit One-B --

A. Yes, sir.

Q. -- under 5-14-82 --

A. Yes, sir.

Q. -- it says you moved retrievable bridge plug from 5983 and then RTTS to 5890 --

A. Yes, sir.

Q. -- and then you acidized 5926 to 52 --

A. Yes, sir.

Q. -- with 4000 gallons.

A. Yes, sir.

Q. Okay.

A. I apologize for taking the time, I just wanted to verify my information from the drilling report.

Q. Yeah. Okay, now you did not -- you did not swab back or anything from these perforations? You made

no test?

A. Of that individual zone, not to my knowledge, no. I think they swab tested, to be quite honest, the entire treated zone of 5926 to 6048.

Q. So evidently, you concluded from just the treatment of those perforations that they would not be productive.

A. That I cannot answer, sir, I do not know. I do know from the series of events that took place, that we did treat, but tested all the zones, and as a result of the test of that entire zone a tracer survey followed, which indicated that the fluid was being taken from the lower perforations and the tracer survey does indicate that on the tracer survey itself.

Q. And when the, say, the Commission saw fit to grant your dual completion the way it is, could you at some later date after you receive a connection for this well run a temperature survey through the long string while you're producing the upper string and determine whether or not these lower perforations are giving up any -- any fluids or gas?

A. To comply with the volumes that the Commission states? Am I following?

Q. Just to determine whether or not they're productive.

A. If I may ask, what perforations are you referring to?

Q. The lower perforations, 59 --

A. The lower perforations?

Q. -- 26 to 5952, the lowest perforations.

A. Liquid production?

Q. Lower perforations in the Atoka that are in the annular space with the Abo perfs.

A. Okay, I'm not sure that I'm following your question, Mr. Ramey, I'm sorry.

MR. HALL: Mr. Commissioner, I think we'll be able to put on Mr. Deans later on, who can answer that question for you.

MR. RAMEY: Okay. All right, I'll reserve my question for Mr. Deans.

Okay, I think I'm clear on this.

Any other questions, Mr. Gallegos?

MR. GALLEGOS: Yes, sir, but I'd like to ask a recess at this time.

MR. RAMEY: All right.

MR. GALLEGOS: We've got a lot of documents to look over here.

MR. RAMEY: All right, that's fine. Will you take fifteen or twenty minutes?

MR. GALLEGOS: Please, fifteen to twenty minutes. Thank you.

MR. RAMEY: All right.

(Thereupon a recess was taken.)

MR. RAMEY: The hearing will come to order.

You may proceed, Mr. Gallegos.

MR. GALLEGOS: Thank you, Mr. Chairman.

CROSS EXAMINATION

BY MR. GALLEGOS:

Q. Mr. Nokes, how long have you been a reservoir engineer for HEYCO?

A. Since I was employed with them December of this last year.

Q. December of 1981?

A. Yes, sir.

Q. What had been your prior employment?

A. Production engineer with Southland Royalty in Midland, Texas.

Q. Are you a full time employee of HEYCO? By that I mean do you confine yourself to doing engineering

for that company or do you consult and take on assignments for any other company?

MR. HALL: Mr. Commissioner, I'd like to ask what the nature of these questions are. We've already had Mr. Nokes qualified as expert reservoir engineer for this case.

MR. RAMEY: Would you like to respond?

MR. GALLEGOS: Does that mean I can't cross examine him as to his interests and his experience?

MR. RAMEY: I think he just asked what the -- what the point of the questions were.

MR. GALLEGOS: That's the point.

MR. RAMEY: I think the questions are proper, Mr. Hall.

MR. GALLEGOS: I would rather cross examine and ask a few questions like this than attempt to object to his qualifications and have a big harangue at that time.

MR. RAMEY: Yes, you can go ahead.

MR. GALLEGOS: Thank you.

A. Would you repeat, please?

Q. Do you confine your services, or have you since you've been employed by HEYCO confine your services of reservoir engineering to working for that company?

A. Yes, sir.

Q. Is there anybody else in the company who also performs like services?

A. No, sir.

Q. When did you become involved, first become involved with the drilling of the Seymour State No. 1, Mr. Nokes?

A. I don't know that I can answer accurately and tell you a date as such.

Q. Well, what's your first recollection of knowing about the facts of this well being drilled or going to be drilled by your company?

A. Whenever they proposed to drill it.

Q. And that would have been in the fall of 1981?

A. No, sir, whenever -- after I came on board on December the 1st, 1981. Sometime after that point in time I became knowledgeable of that fact.

Q. And that -- and that as a drilling project was already underway when you came on board? Correct?

A. I cannot answer that. I don't know.

Q. Well, weren't you aware of the cable tool rig drilling on this location in December of 1981 when you started working for HEYCO?

A. From drilling reports, yes, sir.

Q. At what date in December did you become employed by HEYCO?

A. As I stated, December the 1st, 1981.

Q. Mr. Nokes, Mr. Deans testified in January and into February of 1982 your company was concerned about going ahead with the rotary rig because of the possible appeal of the forced pooling order by Grynberg and Associates. So you were made aware of that situation, were you not?

A. No, sir. I -- like I say, I read drilling reports.

Q. And you didn't know anything that was going on as far as the administrative proceedings to -- to pool the mineral interests in this well or who the other participants were?

A. No, sir, I'm a reservoir engineer.

Q. And so you were just taking whatever steps you ordinarily take to achieve the drilling and completion of this well as you would with any other well, correct?

A. I'm not sure that I follow your question, sir.

I evaluate data.

Q. Well, did you proceed in your evaluation of data on this well in any way different than any other well that you worked on in the some nine months that you've

been with the company?

A. I try to do as thorough a job as I can.

Q. Did you have anything to do, or any role whatsoever to play in the decision as to when the rotary rig would be moved on, when the completion rig would be moved on, any of those decisions?

A. No, sir.

Q. Are you acquainted with the rules of the New Mexico Oil Conservation Division as to the dual completion of wells?

A. What I have read, yes, sir.

Q. Well, you have read those -- those rules, I take it?

A. Yes, sir, I have a copy with me.

Q. Mr. Nokes, the application in Case 7658 on behalf of your company says that you are requesting, first of all, a dual completion of this well. That's a correct statement of part of the objective of this application, isn't that true?

A. A multiple completion, yes, sir.

Q. All right. It goes on to say that you are requesting downhole commingling so that the Abo perforations from 4912 to 4929 would be commingled with Upper Atoka perforations from 5926 to 5952. Is that one of the ob-

jectives of this application?

A. I agree that that is what the -- that the state has advertised and I do concur with their definition, because that is the only definition you could qualify that to be.

Q. Are you attempting by your testimony to now express that in fact there will be no commingling of the identified Abo perforations with the identified Upper Atoka perforations in the way in which this well is completed?

A. If I may reiterate, the Commission has indicated that is a commingle of perforations. That is exactly what it is, a commingle of perforations.

Q. I'm not asking you, sir, what the Commission has indicated.

A. Yes, sir.

Q. I'm asking you, the reservoir engineer, what you're saying is happening here. Is there a commingling of the Abo perforations and the Atoka perforations, those two strata?

A. By geological definition, yes, sir.

Q. All right. Now, sir, will you tell me how that well will be equipped so that the pressure of the Abo strata, reservoir pressure of the Abo strata, and the reservoir strata of what we call the Upper Atoka stratas can

be metered?

A. No, sir, I cannot.

Q. Let's talk a little bit about what you have told us about the pressures from those strata and see if we can understand what the stated facts are.

As I understand it, there was one instance in the history of the completion of this well when the Abo strata was isolated from the Upper Atoka strata. Isn't that correct?

A. That's right, I believe so, yes, sir.

Q. You put in a temporary plug so that you could fracture the Abo, correct?

A. The purpose of the blanking plug is to isolate a lower zone.

Q. Well, in this instance the purpose was to isolate away the lower zone so that you could fracture the Abo, isn't that correct?

A. Yes, sir.

Q. The Abo which was some 1000 feet up-hole from the Atoka that you were isolating, correct?

A. Yes, sir.

Q. All right, and you completed that fracturing operation, isn't that correct?

A. With a retrievable bridge plug separating.

Q. The answer is yes.

A. Yes, sir.

Q. And at that point it would have been a simple and typical operation to swab out the well and test the pressure from the Abo formation alone, would it not?

A. I believe we did that, sir.

Q. You did that?

A. The Abo perforations, yes, sir.

Q. All right.

A. The Abo perforations, I believe so.

Q. All right, give us the data on that, then.

A. Okay.

Q. If you're referring to one of the exhibits here for your answer, let us know what you're talking about.

A. Yes. I am not sure that it is in the exhibit that we have here. I do have a copy myself but -- of the drilling report. It is indicated on the drilling report, if I may read that.

Q. Well, don't we have --

MR. HALL: It would be Exhibit Number One in Case 7657.

Q. Okay, well, the record in Case 7657 has been adopted into this case, so you can refer to those exhibits.

A. Okay, I apologize. I was thinking of my information.

Q. Well, tell us where you're at if you've found something that's --

A. Okay, yes.

Q. You think is pertinent.

A. Okay. On page eleven of the drilling report, dated 5-28-82, if I may read it.

Overnight 24-hour flowing tubing pressure 190 psi on 1/2 inch choke. Frac load and CO_2.

And if I may, that reflects back to the C-107 for the test that is indicated under Section E.

Q. Let me see here.

MR. HALL: That is, for the Commission's information, that is Exhibit One-A in the Case 7658, that he's referring to.

Q. Okay, I have One-A before me now. Would you show me where that pressure is reflected?

A. Pressure? On Exhibit One-A?

Q. Yeah, C-107.

A. I thought you requested a test.

Q. Well, we were talking about the testing of pressure for the questions I was asking you about, and you pointed out the 190 psi, and I thought you said that's

also reflected on the C-107.

A. Yes.

Q. And I was just asking you to --

A. In the production that was reflected on the C-107, in Section E.

Q. Okay. Is what you are saying, Mr. Nokes, that that figure of production was derived from this same May 28, 1982, test?

A. Yes.

Q. Okay. And that was based on a pressure, natural reservoir pressure of 190 pounds per square inch, correct?

A. It was based on a stimulated production pressure; natural and stimulated are two separate --

Q. All right.

A. -- pressures.

Q. All right, I stand corrected, pressure after fracturing.

A. Yes, sir.

Q. Now, with the isolation of the Upper Atoka from the Abo do you have a test on the pressure of the Upper Atoka alone?

A. No, sir, I do not.

Q. And that was --

A. I am not aware of a pressure as such of that isolated zone. No, sir.

Q. And you don't -- you're -- no test was made to determine that pressure?

A. I can -- I -- no, sir, I guess not.

Q. And that would include both before and after the acidizing steps that were taken on that zone, correct?

A. Which zone?

Q. The Upper Atoka; talking about 5926 to 5952.

A. No pressures that I know of were taken on that zone, no, sir.

Q. All right. What tests have you made, Mr. Nokes, to ascertain the qualities of the Abo gas and the Atoka gas from this well?

A. At this point in time I do not know of any tests that have been run; at which time the well is not only completed and put on line we run multipoint back pressure tests, as required by the Commission, and gas samples are taken, as well as condensate, if there is, for evaluation. That process has not been taken at this time.

Q. That, in effect, results in a chemical analysis --

A. Yes, sir.

Q. -- of the test -- of the production from the different formations, correct?

A. As a chromatograph, yes, sir.

Q. The qualities reflected by those analyses would tell one, would they not, whether the gas was being produced from the Atoka or the Abo?

A. That I cannot tell you.

Q. Well, you would expect those formations to have unique chemical analyses, I mean unique unto themselves.

A. The gas that would be produced from a zone would be analyzed and that gas would be representative of that formation.

Q. Okay. Are you acquainted with the fact, Mr. Nokes, that the commingling or joining of gases from different formations can set up chemical conditions that will result in corrosion?

A. If there is evidence to indicate incompatibility, yes, sir.

Q. And at this point you have no knowledge one way or the other whether that incompatibility exists between the Atoka gases and the Abo gases in this well, isn't that correct?

A. Correct.

Q. The same answer would follow as to whether or not the combination of those gases would result in the production of a poisonous gas, isn't that true?

A. In a poisonous gas?

Q. Yes.

A. To my knowledge that is -- I do not have knowledge of that, no.

Q. I see. Mr. Nokes, when you tell us that you did a shut-in pressure test, or made an observation of a shut-in pressure, at dates in June, July, August, and September, do I understand you were simply making a meter reading at the wellhead for the two areas of the well that are isolated?

A. Gauged pressure readings for each zone.

Q. And so one -- one pressure that you referred to as Abo would in fact reflect the pressures that result from whatever is happening in that hole between 5972 and 4800 feet, correct?

A. I would believe so.

Q. And, for example, if the -- if you assume with me the Atoka formations that are within that space are discharging gas at a pressure of 1900 pounds, and the Abo formations are discharging gas at a pressure of 300 pounds, you could have a combined stabilized pressure of 1000 pounds,

could you not?

A. I cannot answer that question.

Q. You don't know one way or the other?

A. There again, I cannot answer that question. I do not know.

Q. So when you read this shut-in pressure, all you're really telling us is that whatever pressure is resulting between 4800 feet and 5972 is being reflected on that meter.

A. Yes, sir.

Q. As I understand it, the tests, including the log test, said to you and others in your company, that there was probable production from the Upper Atoka in the 5926 to 5952 area, probably producing formations, correct?

A. Evaluated from what source?

Q. Evaluated from your drill -- well, from what sources did you evaluate it?

A. I would assume from the drill stem test. If I recollect correctly, the drill stem test covered that interval, encompassing that and the productive perforations that we know are productive at this point.

Q. Didn't your electric log support that same view?

A. Electric logs do not give you production.

They give you possibilities of hydrocarbons in place.

Q. Well, that's what I was asking about. In other words, the potential for production at that level was reflected by that testing, correct?

A. If I'm following you correctly, yes, sir.

Q. All right, and because of that, those test results, HEYCO took the steps, did it not, to perforate about a twelve foot section and an eight foot section of what we're been referring to as the Upper Atoka formation, correct?

A. From 5926 to 34 and 5944 to 52, yes, sir.

Q. All right, and then it took the further steps to acidize those formations, correct?

A. With the addition of the other intervals.

Q. The other intervals it acidized?

A. Yes, sir.

Q. I didn't mean to exclude those others, but it did take that step.

A. Yes, sir.

Q. All right, why did it not fracture those Upper Atoka formations?

A. That question I cannot answer because that was not a decision made by myself.

Q. Why did not HEYCO set the bottom Baker packer 50 foot higher in the hole above the two Atoka forma-

tions and 1000 feet below the Abo formation?

A. The decision on that is not my decision and I cannot answer that.

Q. Well, as a reservoir engineer what sense does that make to you, if any?

A. My evaluation of what was done is what is relfected on a temperature survey log, indicating that the productive zones were of the 6008 interval down to 6048 interval, as indicated by temperature survey tests.

Q. And the production zones after fracturing?

A. After treatment; after the acidizing which has previously been asked about.

Q. Well, the question is simply this: Why didn't -- why was not the packer set above all of the Atoka zones so that there would be no question but what they were isolated from the Abo zones?

A. There again that, that was not my decision and there again, I had no input to where that packer was set. Supposition indicates that the productive zones were as I indicated and that's what was treated.

Q. Maybe you can help me, as I look at the drilling report that you referred to, Exhibit One in the 7657 case, I did not come across a drill stem test on the Abo formation. Was one of the tests, one of those tests

directed to the Abo?

A. Was a drill stem test --

Q. Yes.

A. -- directed to the Abo? No, sir.

Q. Are you aware of any discussions or communications between HEYCO and Transwestern concerning the reliable identification of the gas that would be purchased by Transwestern from the short string of this well, as to having an Atoka source or an Abo source?

A. I have no knowledge at this time of any Transwestern communication, other than we are pursuing a contract. That is all.

Q. You are aware, are you not, Mr. Nokes, that the Abo gas that comes from that short string would be in a different price category than Atoka gas which comes through the short string?

A. Yes, sir, I'm aware of that.

Q. Okay. If you have any production difficulties from the gas being emitted through the short string, can you tell us how you are going to know what formations to direct your remedial work?

A. Through the short string?

Q. Yes.

A. This is a question that has been pointed

out by Mr. Ramey earlier, that HEYCO and myself have talked about, and a temperature survey can be run and to determine possibly if there is any production from what we consider inactive perforations in the Upper Atoka once the well is put on production.

Q. Well, I had in mind the situation, Mr. Nokes, that you've been on production for six months or a year and suddenly you lose your production, and you're thinking about some sort of remedy or repair of that well from the short string.

What I'm asking you is can you tell us how you are going to know what formation you should direct that remedial work to, the Atoka or the Abo?

A. There again, if it was myself evaluating the well, I would first run a temperature survey to see if there was any production coming from in the Abo perforations and in that interval.

Q. Either Abo or Atoka?

A. Yes, sir, but there again, that would be something that would have to be taken at a time which there has been some type of an effective drawdown from the Abo formation to effectively show something other than what our shut-in pressure has been indicating for a 4-month period.

MR. GALLEGOS: That's all the questions

I have, Mr. Chairman.

MR. RAMEY: Any other questions of Mr. Nokes?

MR. HALL: If I may redirect a couple.

REDIRECT EXAMINATION

BY MR. HALL:

Q. Mr. Nokes, referring back to the application C-107, is it not true that you filed this initially with the District Office for administrative approval? Is that correct?

A. No, sir, if I may clarify that. A complimentary copy is sent to the District Office but the directed copy, or two copies, are sent to Mr. Ramey for his evaluation prior to this administrative approval;that was compiled by myself, I did converse with Bill Gresset to find out what areas that I needed to cover because I was not familiar with who was to receive what.

Q. Okay.

A. But as a result it does go to the Commissioner himself.

Q. Referring to the downhole commingling aspect of the advertisement which was focused on, you did not in your application mention downhole commingling, did you?

A. No, sir. I specifically requested for an approval for a multiple completion for the Seymour State.

Q. So your position in this hearing that there is still no commingling between the two zones has not changed from the time you initially filed for approval of this multiple completion, is that correct?

A. Would you repeat the question?

Q. So your position that -- that you were filing for a multiple completion between two completely separate zones has not changed between the time you filed for a -- an application for multiple completion and today in this hearing, is that correct?

A. Yes, sir. The application that I submitted was for two zones separated and they were two productive zones, that I consider two productive zones.

Q. And it has always been Harvey E. Yates Company's position that there was no commingling between these two zones, is that correct?

A. That is correct.

MR. HALL: I have no further questions.

MR. RAMEY: Any other questions of Mr. Nokes?

MR. GALLEGOS: I have no further questions.

MR. RAMEY: Mr. Nokes, do you happen to know what the pressure is from some of the other Abo wells, the shut-in pressures?

A. No, sir, I sure don't.

MR. RAMEY: Any other questions? You may be excused, Mr. Nokes.

A. J. DEANS

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

DIRECT EXAMINATION

BY MR. HALL:

Q. State your name, please, sir.

A. A. J. Deans.

Q. And where do you live, Mr. Deans?

A. Roswell, New Mexico.

Q. And by whom are you employed and in what capacity?

A. Harvey E. Yates Company, Vice President of Operations.

Q. All right, and your qualifications have been accepted in the Case 7657, which was heard just prior to this case?

A. Yes.

Q. And you are aware of the purpose of this case, 7658?

A. Yes.

Q. Just referring you to one particular aspect of the downhole commingling case in --

MR. GALLEGOS: I thought this wasn't a downhole commingling case. What is the position of it?

A. Dual completion case.

MR. HALL: A multiple completion.

A. Okay.

Q. Referring to this Bake Lok-Set 45A, which is between the Lower Atoka, three Lower Atoka perfs and the upper two Atoka perfs, would you be able to enlighten the Commission as to the reasons that this packer was left in -- in position?

A. In the beginning we were going to frac. Our plans were to frac 6043 to 6048. When we set the packer between the two sets of perfs they communicated prior to the frac job.

We moved the packer up between 6016 and 6026, tried it again, and it communicated again.

Set the packer up at 5972 and they didn't communicate. So we fraced. We fraced those three sets of

perfs together because that was the best indication that we had from our acid jobs that there was -- of where the gas was that we received on our DST's.

After we went to the expense of the frac job and got the gas logging that we received, we had a position profile nipple in the top of the packer that we could isolate those three sets of perfs and not turn formation water -- I mean KCL water loose, or any other fluid loose, on this fresh Atoka reservoir and possibly damage it any worse than it had been damaged.

And that's the reason that it's in the shape that it's in. We didn't want to retrieve -- we didn't want to kill the well and retrieve that packer. We felt that the upper two sets of perfs were not thieving nor contributing and that there was no problem with it if everybody understood it.

And that's the only reason that we went on with this whole application is that we wanted to try to avoid -- in order to pull that packer out and isolate the complete Atoka from the complete Abo, we're going to have to kill both zones and possibly damage them. Right now a bird in the bush is worth two in the hand, or something, vice versa.

Q. Okay.

A. That's the sum total of it all, is we were trying to avoid damage -- possibly damaging the Atoka formation.

MR. HALL: I have no further questions.

MR. RAMEY: Any questions of Mr. Deans?

MR. GALLEGOS: Yes, sir. Let me have just a moment, if I may.

CROSS EXAMINATION

BY MR. GALLEGOS:

Q. It seems to me, Mr. Deans, I saw various instances where you killed this well previously in the course of drill stem tests, and so forth, did you not?

A. That's probably the reason the well's not produced as good on completion as it did while we were drilling it. Yes.

Q. Because you did so many drill stem tests and every time you killed the well?

A. Every time -- the well is in a killed condition all the time you're drilling it. The terminology is that you have a well under control.

Q. Well, what were you referring to when you said probably why the well is in the condition it's in? What do you mean?

A All the time we were drilling it our hydrostatic mud column is heavier than the formation reservoir, so it probably absorbs some solids, foreign materials, and damages the reservoir.

Q And are you suggesting that this well was in that kind of a condition with that kind of pressure on the reservoirs for an inordinately long period of time?

A No.

Q All right, then what did you mean by the statement?

A It means any time you drill a well you possibly damage your reservoirs with your drilling fluids.

Q And the longer you take to drill a well and the more you keep that kind of pressure against the reservoirs, the more chance there is of damaging it?

A Possibly, you never know.

Q Same thing, you never know if you move the packer and go on 50 feet with it, it might --

A That's right.

Q It might turn out just fine.

A It might not hurt a thing. We're talking about a lot of money, lost revenue, I mean.

Q Uh-huh. Well, let's talk about trying to get some idea of the difference between what's happening with

production from the Abo formation and what we call the Upper Atoka formation.

Mr. Nokes pointed out that there was a 1/2 inch choke test on the Abo following the fracturing of that formation, correct?

A. Uh-huh, that's correct.

Q. Any kind of test on that formation which would be a shut-in or the equivalent of tha shut-in test to get the idea of the pressure from that reservoir?

A. There probably was. We don't have it recorded. We'd have to check the completion form and we'd see.

Q. All right, that information is probably available.

A. Probably. We have a hint on June 2nd, shut-in tubing pressure of 850 pounds. That's the Abo by itself.

Q. Okay. You take that from the Daily Drilling Report, Exhibit Number One, right?

A. Yes.

Q. Mr. Deans, you were aware of the disagreement between HEYCO and Mr. Grynberg as to Grynberg being a participant in an Abo completion but opposing participation in Atoka or Pennsylvanian formation?

A. Yes.

Q. Completions, were you not?

A. Yes.

Q. And so you were aware as the Seymour State No. 1 was being drilled and completed that there was a contention that focussed around revenue from and expense going into these two different and separate formations, correct?

A. Correct.

Q. As I understand your testimony, you originally set this packer that ended up at 5972 down above the perforations at 6043, correct?

A. That's correct.

Q. And you fractured at that --

A. No.

Q. -- level? No?

A. No.

Q. You -- what did you do? What was the --

A. We started to pump in to establish a rate and found that the -- the perforations just above it at 6026 to 6028 communicated behind pipe.

Q. And so at that point you took the step of moving the packer up -- well, did you move it up in two stages?

A. Right.

Q. Okay, so you moved it up one stage, 20

or 30 feet, and set it back in? Or --

A. Right.

Q. -- secured it.

A. The first time we set it between the two bottom sets. The second time we set it was between 6008 and 16 to 6026 set, and then the third time where it is now, 5972.

Q. You didn't have to kill the well to make those revisions in the packer?

A. It was in dead conditions.

Q. Okay.

MR. GALLEGOS: That's all the questions I have. Thank you.

MR. RAMEY: Any other questions of Mr. Deans.

REDIRECT EXAMINATION

BY MR. HALL:

Q. One further question as to Mr. Ramey's earlier question about the temperature survey. Would that be possible to be carried out as he --

A. I think so. I think it would be a good way to tell whether these Atoka perfs are taking or contributing, either way, with some extended temperature surveys

periodically.

MR. RAMEY: But you could -- you could detect any production coming from those perforations?

A. We should get an indication, yes.

MR. RAMEY: Any other questions of Mr. Deans? You may be excused.

Anything further? Mr. Gallegos?

MR. GALLEGOS: Yes, sir. May I have just a moment with the witness to see if can shorten it down?

MR. RAMEY: Okay.

MR. GALLEGOS: We'll call Mr. McWilliams.

JIM McWILLIAMS

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

DIRECT EXAMINATION

BY MR. GALLEGOS:

Q. State your name, please.

A. Jim McWilliams.

Q. Mr. McWilliams, did you testify in the next preceding case, 7657, and at that time give your qualifications and your employment status with Grynberg and Associates?

A. Yes.

Q. Okay. I'd like for you to address yourself, Mr. McWilliams, to certain of the exhibits that have been presented here.

First of all, Applicant's Exhibit Number One, the well history summary sheet on the Seymour State No. 1.

A. Uh-huh.

Q. Have you had an opportunity to read over that exhibit and become acquainted with it?

A. Yes.

Q. And have you also heard the testimony that's been given on that exhibit by both Mr. Deans and Mr. Nokes of the HEYCO Company?

A. Yes.

Q. Okay, so have you also had an opportunity to read over and become familiar with Applicant's Exhibit Number One in the Case 7657, which is the Daily Drilling Report?

A. Yes, sir.

Q. All right, and have you also had an opportunity to see the four logs that were provided here, at least -- I guess it's identified as Exhibits One-G, the gamma ray log?

A. Yes, I've seen the one that was marked.

Q. Okay, and the various forms that were filed with the Oil Conservation Division, the C-107, C-103, and C-105 forms?

A. Yes.

Q. Okay. Now, sir, based on the facts that have come to your attention by reason of the examination of these exhibits and hearing the testimony presented by the witnesses, I would like to question you concerning the portion of this well that we refer to as being producable through the short string; that is, from above depth 5972 to depth 4800, and ask you whether you have an opinion as to the probability that gas is being produced in that area from the Atoka formations perforated at 5926 through 34 and 5944 through 52.

A. All right, that -- that section was acidized; it was never fraced. It was never isolated from the lower section to determine if there was a definite flow rate.

I personally feel there's a good chance that it is making some gas. There is nothing to indicate to me from the information we have here that it is not producing any gas.

Q. And that was my next question. Based on standard engineering practice and in your experience in

the industry, is there any reasonable basis on which it can be concluded that those Upper Atoka formations are not producing gas?

A. I've seen nothing here that would say that it is not producing gas, definitely.

Q. A reference has been made to temperature testing of this area in question. What could be done and what would be the extent of the knowledge that would be obtained if a temperature test were run on this portion of the well?

A. If there was enough gas -- I don't really know the bottom limit of a temperature test. A temperature log would certainly show a real substantial quantity of gas if it is indeed coming in upon particular point. As I say, I don't know that it would be 100 percent reliable if you had a very small quantity of gas.

Q. Would that also show if gas is going out? For example, if the Abo gas is going into the Atoka?

A. I would think so. I would think that it might show if the formation were taking some fluid or gas.

Q. Okay, what can the temperature test reveal, if anything, as to the quantity of gas being produced by the formations that are within that elevation of the well?

A. I don't think it would measure quantity.

It would be relative. It might, the curve might lead you to say that this zone is producing twice as much as this one down here, but as to the amount, I don't think it would tell anything.

Q. What is the temperature test? What is it really --

A. You lower a temperature bomb, a recording temperature bomb down the hole and as it goes past the perforations if a perforation is producing gas, the gas naturally is cooler than the fluids in the hole, or air, so you would get a kick on it.

Q. And that's basically what you'd end up with, that kind of a reading?

A. Yes, sir.

MR. GALLEGOS: That's all the questions that I have.

MR. RAMEY: Mr. Hall?

MR. HALL: I have a couple.

CROSS EXAMINATION

BY MR. HALL:

Q. Mr. McWilliams, you're representing Viking's and Mr. Grynberg's position here today?

A. Yes.

Q. What exactly is Viking's position as to this multiple completion? Are you opposing the multiple completion?

A. I am opposing a multiple completion in this form, yes.

Q. And are you asking that the operator take the risk of damaging and possibly losing the whole well to move the packer up between the Abo and Atoka?

MR. GALLEGOS: Well, I object. Let me point out that it's entirely immaterial what the protestants, or Grynberg's position is. The rules of this Commission specify, Rule 12-A, that that risk is wholly that of the operator if it performs a completion of this sort without first having approval of the Commission, and that's set by Commission rule.

It makes no difference what a witness says or doesn't say about that.

MR. RAMEY: Okay, we'll sustain the objection. I think you're probably correct there, Mr. Gallegos.

Q. But as it stands, Viking is protesting a multiple completion as it is nowset up, is that correct?

A. I would like to point this out. I've had no communication with Viking on this matter. It so happens that it's all come through Mr. Grynberg's office, so

I've had it with Mr. Grynberg and his geologist.

Q. Okay. What I'm trying to establish is whether the position of Viking has changed from the outset of this -- this whole procedure when they were strongly contending for a multiple completion. I just don't understand the position that you're taking.

A. I don't know that Viking is aware of the situation it's in now.

Q. Well, is not Viking the -- the named party in the compulsory pooling order that is in effect?

A. Well, obviously they are, but I -- all my work on this situation has been done at the direction of Mr. Grynberg, so I don't know precisely what their position is in this affair.

But I know that I'm here to represent Mr. Grynberg's company.

Q. So technically, we haven't had any -- any evidence or any indication that Mr. Grynberg has any -- any role in this case whatsoever.

A. Well, I --

MR. GALLEGOS: I object to that. That's legal argument and we'll have some evidence to that, but I don't think that's anything but argument.

MR. RAMEY: Sustain the objection.

MR. HALL: I don't have any further questions.

MR. RAMEY: Any other questions for Mr. McWilliams?

CROSS EXAMINATION

BY MR. RAMEY:

Q Let me ask one question. You say you are not sure of the extent that a temperature survey would -- would indicate cross flow or volume of cross flow?

A Well, it will indicate gas flowing into casing, yes. I'm a little bit concerned about how much will come in or how little will come in to where it will not indicate it. I know I've seen some very questionable temperature logs. It apparently was a small amount of gas but it was gas.

So, no, it will give you a good substantial flow of gas without a doubt. You get smaller ones, I don't think it will. I don't think it's that delicate. Or sensitive would be the better word.

Q I feel certain the Commission will investigate what can be done with temperature surveys before we (inaudible).

A I see.

MR. RAMEY: Any other questions of Mr. McWilliams?

MR. GALLEGOS: We have nothing further, Mr. Ramey.

MR. RAMEY: You may be excused, Mr. McWilliams.

MR. GALLEGOS: We call Debbie Hill.

DEBBIE HILL

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

DIRECT EXAMINATION

BY MR. GALLEGOS:

Q. Would you state your name, please?

A. My name is Debbie Hill.

Q. Who are you employed by?

A. I'm employed by Jack Grynberg and Associates.

Q. At what business address?

A. 1050 17th Street, Suite 1950, Denver, Colorado, 80265.

Q. What is your position with the company?

A. I am a Senior Landman.

Q. How long have you been in the business of being a landman for an oil and gas company?

A. Almost two years.

Q. And did you have any experience in that business before being employed by Grynberg and Associates?

A. I've had experience in New Mexico with Alan Antweil.

Q. Are you acquainted with and through the course of all negotiations and proceedings having to do with the Seymour State No. 1 and have you worked on that project?

A. Yes, I have.

Q. And have those files and the accumulation of various documents in those files been part of your responsibility with the company?

A. They have.

Q. First of all, Ms. Hill, would you state to the Commission what is the status of the mineral interest ownership in the west half of Section 18, as between Viking Petroleum Company and Grynberg and Associates?

A. Jack Grynberg and Associates has been paying the share of Viking Petroleum, Incorporated, which is 25 percent of the cost of the well, and we have tendered that share to HEYCO, for -- for the Abo.

Q. Okay, and did the 80 acres among the

320 acres, or the 80 acres that is the mineral interest that is in dispute as far as Viking-Grynberg are concerned, is that under a lease held by Celeste Grynberg?

A. Yes, it is.

Q. And is there an assignment back from Viking Petroleum Company to Grynberg and Associates?

A. Yes, there's a written agreement and an assignment that involves Viking giving the working interest to Jack Grynberg and Associates.

Q. Now you mentioned the payment of $90,000 by Grynberg to HEYCO in connection with the drilling of this well. About when did that take place?

A. It took place in late April or early May.

MR. HALL: Mr. Commissioner, I'd like to ask that counsel establish the purpose of this line of questioning, what it has to do with downhole commingling and a multiple completion of a well.

MR. GALLEGOS: It has to do with the vital interest of my clients in the separate and discrete completion and production from the Abo formation as opposed to other lower formations, and that's exactly what's in issue here.

Q. Would you identify Exhibit Number Three?

A. This exhibit is an order from the Chaves County District Court, which suspends certain provisions of

this Commission relating to the risk penalty for the Abo formation, and allows for us to pay $90,000, which is 25 percent of the share of the cost down -- of the drilling and completion costs down through the Abo that was determined by this Court.

Q. That $90,000 constitutes 25 percent of the estimated costs of the drilling and the completion of this well to the bottom of the Abo formation, correct?

A. Right.

Q. And what is the position, and what has been the position, of Viking Petroleum Company and Grynberg and Associates concerning dual completion of this well?

A. Our position has always been consistent, and that is that we have always been in agreement with dual completion but have opposed totally commingling between the Abo and any other formation below that to the Atoka.

MR. GALLEGOS: That's all the questions I have.

MR. RAMEY: Any questions of this witness?

MR. GALLEGOS: We move admission of Exhibit Number Three.

MR. RAMEY: Exhibit Three will be admitted.

MR. GALLEGOS: Thank you.

MR. RAMEY: The witness may be excused.

MR. GALLEGOS: That completes our evidence,

Mr. Chairman.

MR. RAMEY: Do you have anything further, Mr. Hall?

MR. HALL: No, sir.

MR. RAMEY: Are there any closing statements? Mr. Gallegos?

MR. GALLEGOS: I would summarize, Mr. Chairman, by pointing to the provisions of Commission Rule 12 -- 112-A, governing multiple completions and state to this Commission that the completion of this well is clearly in violation of that rule and for that reason it cannot be accepted in its present state and should not be allowed.

Secondly, I would point out that this case has, does, and continues to involve, and make very important, critically important for the rights of the parties the distinction between production from the Abo formation and the lower formations.

That is the crux of the disagreement between my clients and HEYCO and has been from the outset; that it was prudent and reasonable to drill to the Abo and that Grynberg and Viking would participate by agreement, consent basis to that, and would not otherwise.

And now we have an operator with full knowledge of that dispute, and the depth of that dispute to

the extent of it being in District Court in Chaves County, New Mexico, and with full knowledge of the rules of this Commission coming in and making a completion of this well that frustrates the rules of the Commission and stands to make it impossible for there to be a judicial or administrative determination of the relative rights of the parties, correlative rights of the parties, in these pools. And it simply cannot stand the way it is, and we ask the Commission to enter an appropriate order that will allow dual completion -- that has never been opposed -- but a completion that will segregate those producing strata.

MR. RAMEY: Thank you, Mr. Gallegos. Mr. Hall?

MR. HALL: Mr. Commissioner, all I can say is that Harvey E. Yates Company feels we have put on sufficient evidence to establish that there is no commingling between the two zones.

We would further say that as to Viking or Grynberg's position that they stand to -- they might stand to lose if there is the commingling that they allege, we would point out that there is higher pressure right now in the Atoka than the Abo and if either of the two parties would benefit unduly thereby, it would be the Grynberg interest from leakage from the Atoka up to the Abo because of the higher

pressure therein, and that we -- but by that we do not concede that there is any commingling or any crossing of this whatsoever, and we just ask that we be allowed to complete this well as originally presented.

MR. RAMEY: Thank you, Mr. Hall.

Does anyone have anything further to add in Case 7658?

If not, the Commission will take the case under advisement and the hearing is adjourned.

(Hearing concluded.)

CERTIFICATE

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

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
August 26, 1982

COMMISSION HEARING

IN THE MATTER OF:

Application of Harvey E. Yates Company for a dual completion and downhole commingling, Chaves County, New Mexico.

CASE 7658

BEFORE: Joe D. Ramey, Director

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil Conservation Commission: W. Perry Pearce
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

MR. RAMEY: Call Case 7658.

MR. PEARCE: Case 7658, application of Harvey E. Yates Company for a dual completion and downhole commingling, Chaves County, New Mexico. It is requested that this case be continued to September 22, 1982.

MR. RAMEY: The case is hereby continued to September 22, 1982.

HEYCO

PETROLEUM PRODUCERS

HARVEY E. YATES COMPANY

P. O. BOX 1933 SUITE 300, SECURITY NATIONAL BANK BUILDING 505/623-6601
ROSWELL, NEW MEXICO 88201

January 17, 1983

New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501
Attn: Mr. Joe D. Ramey
Division Director & State Petroleum Engineer

Re: Seymour State Com #1
Unit E, Sec. 18, T-9S, R-27E
Chaves County, NM
Order No. R-7112 & Case No. 7658

Dear Mr. Ramey:

Please find attached a copy of the logs run on the captioned well which were required by Order No. R-7112 of Case No. 7658. Said procedure was witnessed by Mr. Mike Williams of the Artesia District office and myself.

As explained by the logging company operator, no evidence of crossflow was seen, nor production of any sorts from the perforations at 5926' to 5944'. We respectfully request commission approval for the current downhole assembly previously under question.

Upon approval, the required 4-point or Multi-point Back Pressure Tests and Packer Leakage Tests will be performed. If there is further need for additional information, please contact my office.

Sincerely yours,

Ray F. Nokes
Reservoir Engineer

RFN:dy

Enclosures

cc: Oil Conservation Division
Artesia, NM

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 7658
Order No. R-7112

APPLICATION OF HARVEY E. YATES COMPANY FOR A DUAL COMPLETION AND DOWNHOLE COMMINGLING, CHAVES COUNTY, NEW MEXICO

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 22, 1982, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 19th day of October, 1982, the Commission, a quorum being present, having considered the testimony, the record, and the exhibits, 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, Harvey E. Yates Company, seeks authority to complete its Seymour State Com Well No. 1, located in Unit E of Section 18, Township 9 South, Range 27 East, NMPM, Chaves County, New Mexico, as a dual completion (conventional) to produce gas from undesignated Abo and Atoka pools.

(3) That the Abo formation in said well was perforated in the interval from 4912 feet to 4929 feet and the Atoka formation from 5926 feet to 5934 feet, from 5944 feet to 5952 feet, from 6008 feet to 6016 feet, from 6026 feet to 6028 feet, and from 6043 feet to 6048 feet.

(4) That the packer used to separate zones in said well was set at 5972 feet.

(5) That the Abo formation perforations (4912 feet to 4929 feet) and the Upper Atoka formation perforations (5926 feet to 5934 feet and 5944 feet to 5952 feet) in said well are exposed in the same common annular space.

(6) That based on the high pressures necessary to effectively treat the Atoka formation, applicant alleges the the Upper Atoka formation perforations in said well (5926 feet to 5934 feet and 5944 feet to 5952 feet) are not productive and would not act as a thief zone for production from the Abo formation.

(7) That commingling between the Abo and Atoka formations should not be permitted in said well.

(8) That a temperature survey and a noise log should indicate whether or not the two Upper Atoka perforated intervals in said well are productive of hydrocarbons, or would act as a thief zone for production from the Abo.

(9) That if said test establish that two Upper Atoka perforated intervals in said well are not productive of hydrocarbons and would not act as a thief zone for production from the Abo formation, the dual completion should be approved as proposed, and the Division Director should have authority to approve the downhole commingling of the Abo perforations and the uppermost two sets of Atoka perforations in the same common annular space of the subject well.

(10) That if the two Upper Atoka perforated intervals in said well are productive, or act as a thief zone for production from the Abo formation, the packer should be reset below the Abo perforated interval and above the two Upper Atoka perforated intervals.

(11) That the portion of this case which refers to downhole commingling should be denied.

(12) That approval of the subject application, as conditioned, will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Harvey E. Yates Company, is hereby authorized to complete its Seymour State Com Well No. 1, located in Unit E of Section 18, Township 9 South, Range 27 East, NMPM, Chaves County, New Mexico, as a dual completion (conventional) to produce gas from an undesignated Abo gas pool and gas from an undesignated Atoka gas pool through parallel strings of tubing.

PROVIDED HOWEVER, that the applicant, after the said well has produced for 30 days into a pipeline, shall cause a temperature survey and a noise log to be run in the well under the supervision of the Artesia district office of the Division.

PROVIDED FURTHER, that should the above tests indicate production from the two Upper Atoka perforated intervals or crossflow between the Abo formation and the Atoka formation, the packer in said well shall be reset so as to isolate the Abo and Atoka formations from each other.

PROVIDED FURTHER, that should said tests establish that the aforesaid Upper Atoka perforated intervals are non-productive and that there is no crossflow between the Abo formation and the Atoka formation, the Division Director is hereby authorized to approve the downhole commingling of said Abo perforations and the uppermost two sets of Atoka perforations in the same common annular space of the subject well.

PROVIDED FURTHER, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Division Rules and Regulations insofar as said rule is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take packer leakage tests upon completion and annually thereafter during the Annual Shut-In Pressure Test Period for the Atoka pool.

(2) That that portion of this case relating to downhole commingling of Abo and Atoka production in the subject well is hereby denied.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

ALEX J. ARMIJO, Member

ED KELLEY, Member

JOE D. RAMEY, Member & Secretary

S E A L
fd/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR
LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

October 20, 1982

Mr. Thomas J. Hall, III
Attorney
Harvey E. Yates Company
P. O. Box 1933
Roswell, New Mexico 88201

Re: CASE NO. 7658
ORDER NO. R-7112

Applicant:

Harvey E. Yates Company

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

Other J. E. Gallegos

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 7558
Order No. R-7112

APPLICATION OF HARVEY E. YATES COMPANY FOR A DUAL COMPLETION AND DOWNHOLE COMMINGLING, CHAVES COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 22, 1982, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 19th day of October, 1982, the Commission, a quorum being present, having considered the testimony, the record, and the exhibits, 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, Harvey E. Yates Company, seeks authority to complete its Seymour State Com Well No. 1, located in Unit E of Section 18, Township 9 South, Range 27 East, NMPM, Chaves County, New Mexico, as a dual completion (conventional) to produce gas from undesignated Abo and Atoka pools.

(3) That the Abo formation in said well was perforated in the interval from 4912 feet to 4929 feet and the Atoka formation from 5926 feet to 5934 feet, from 5944 feet to 5952 feet, from 6008 feet to 6016 feet, from 6026 feet to 6028 feet, and from 6043 feet to 6048 feet.

(4) That the packer used to separate zones in said well was set at 5972 feet.

(5) That the Abo formation perforations (4912 feet to 4929 feet) and the Upper Atoka formation perforations (5926 feet to 5934 feet and 5944 feet to 5952 feet) in said well are exposed in the same common annular space.

(6) That based on the high pressures necessary to effectively treat the Atoka formation, applicant alleges the the Upper Atoka formation perforations in said well (5926 feet to 5934 feet and 5944 feet to 5952 feet) are not productive and would not act as a thief zone for production from the Abo formation.

(7) That commingling between the Abo and Atoka formations should not be permitted in said well.

(8) That a temperature survey and a noise log should indicate whether or not the two Upper Atoka perforated intervals in said well are productive of hydrocarbons, or would act as a thief zone for production from the Abo.

(9) That if said test establish that two Upper Atoka perforated intervals in said well are not productive of hydrocarbons and would not act as a thief zone for production from the Abo formation, the dual completion should be approved as proposed, and the Division Director should have authority to approve the downhole commingling of the Abo perforations and the uppermost two sets of Atoka perforations in the same common annular space of the subject well.

(10) That if the two Upper Atoka perforated intervals in said well are productive, or act as a thief zone for production from the Abo formation, the packer should be reset below the Abo perforated interval and above the two Upper Atoka perforated intervals.

(11) That the portion of this case which refers to downhole commingling should be denied.

(12) That approval of the subject application, as conditioned, will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Harvey E. Yates Company, is hereby authorized to complete its Seymour State Com Well No. 1, located in Unit E of Section 18, Township 9 South, Range 27 East, NMPM, Chaves County, New Mexico, as a dual completion (conventional) to produce gas from an undesignated Abo gas pool and gas from an undesignated Atoka gas pool through parallel strings of tubing.

PROVIDED HOWEVER, that the applicant, after the said well has produced for 30 days into a pipeline, shall cause a temperature survey and a noise log to be run in the well under the supervision of the Artesia district office of the Division.

PROVIDED FURTHER, that should the above tests indicate production from the two Upper Atoka perforated intervals or crossflow between the Abo formation and the Atoka formation, the packer in said well shall be reset so as to isolate the Abo and Atoka formations from each other.

PROVIDED FURTHER, that should said tests establish that the aforesaid Upper Atoka perforated intervals are non-productive and that there is no crossflow between the Abo formation and the Atoka formation, the Division Director is hereby authorized to approve the downhole commingling of said Abo perforations and the uppermost two sets of Atoka perforations in the same common annular space of the subject well.

PROVIDED FURTHER, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Division Rules and Regulations insofar as said rule is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take packer leakage tests upon completion and annually thereafter during the Annual Shut-In Pressure Test Period for the Atoka pool.

(2) That that portion of this case relating to downhole commingling of Abo and Atoka production in the subject well is hereby denied.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

ALEX J. ARMIJO, Member

ED KELLEY, Member

JOE D. RAMEY, Member & Secretary

SEAL
/d/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-107
Revised 2-1-82

Applicant's Exhibit 1
7658
NMOCD
Aug 24, 1982

APPLICATION FOR MULTIPLE COMPLETION

Operator	County	Date
Harvey E. Yates Company	Chaves Co.	7-6-82
Address	**Lease**	**Well No.**
P. O. Box 1933 Roswell, NM 88201	Seymour State #1	

Location of Well	Unit	Section	Township	Range
	E	18	9-S	27-E

All Applicants for multiple completion must complete Items 1 and 2 below.

1. The Following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Abo		Atoka
b. Top and Bottom of Pay Section (Perforations)	4912 - 29'		5926 - 6048'
c. Type of production (Oil or Gas)	Gas		Gas
d. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
e. Daily Production ☐ Actual ☒ Estimated Oil Bbls. Gas MCF Water Bbls.	1,189 MMCF -0- BO -0- BW during tst		1,472 MMCF -0- BO -0- BW during tst

2. The following must be attached:

a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.

b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.

c. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112-A.)

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed _____ Title Reservoir Engineer Date July 6, 1982

(This space for State Use)

Approved By _____ Title _____ Date _____

NOTE: If the proposed multiple completion will result in an unorthodox well location and/or a non-standard proration unit in one or more of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

#7658

1-9

HARVEY E. YATES COMPANY

Well History Summary Sheet

Operator Harvey E. Yates Co. **Well Name & #** Seymour State #1 **Lease #** Fee

District Roswell **Made By** Ray F. Nokes **Date** July 1, 1982

Location 660' FWL & 1980' FNL, Sec 18, T-9S, R-27E Chaves Co., NM

Spud Date 11-30-81 **Compl. Date** 4-11-82 **TD** 6385' **PBTD** 6307' Original

Type Well Oil ___ Gas X Other (Dual) **Field** Wildcat

I P ___ **Zone** ___

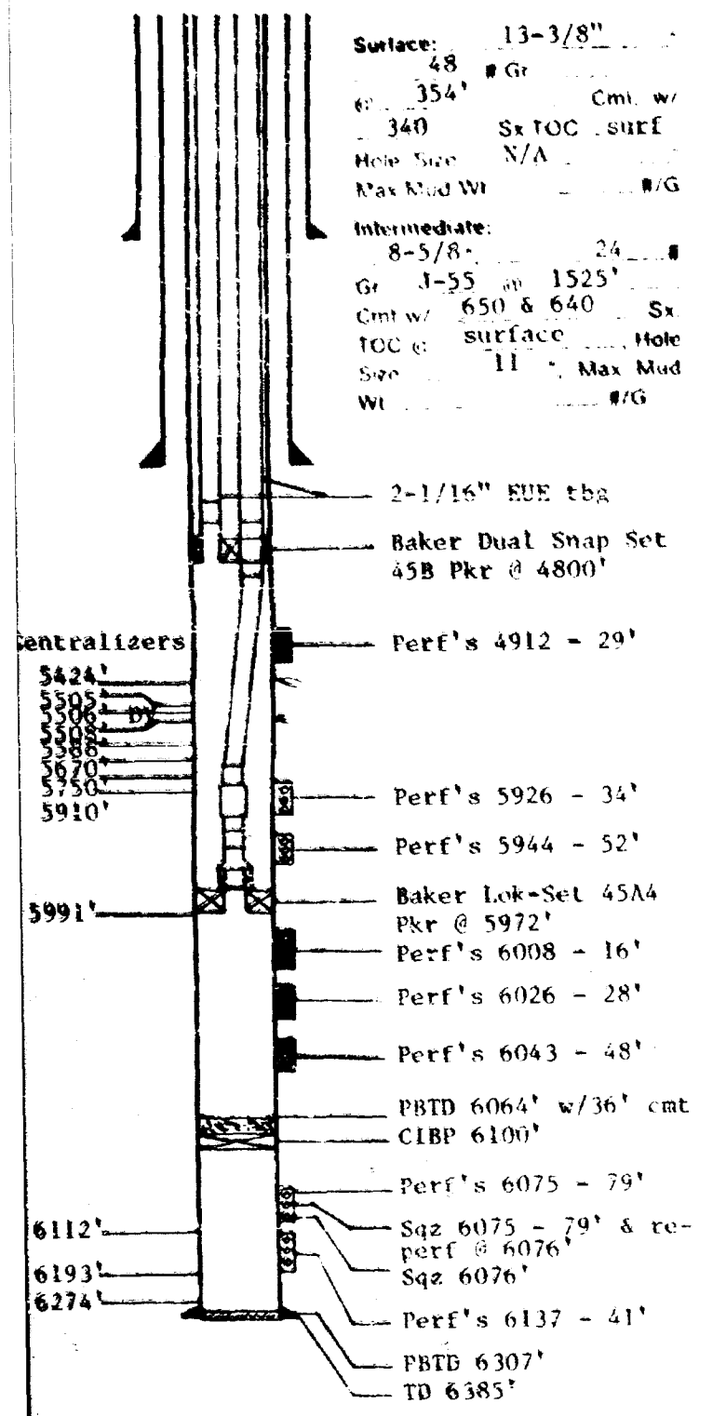
Perfs.: Abo: 4912 - 29' (OA) Atoka: 5826 - 6048' (OA) **Total Holes** ___

Stimulation See Well History below

Cumul Oil ___ **MCF** ___ **Water** ___

Recent Test ___ **Lift Equipment** ___

Misc. Elevation: 3811.8' GL Refer to CBL for TOC & Bond record.



Surface: 13-3/8" 48 # Gr @ 354' Cmt. w/ 340 Sx TOC surf Hole Size N/A Max Mud Wt ___ #/G

Intermediate: 8-5/8" 24 # Gr J-55 @ 1525' Cmt w/ 650 & 640 Sx TOC @ surface Hole Size 11" Max Mud Wt ___ #/G

Production: 5-1/2" 15.5 #, J-55 Gr @ 6343' Cmt w/ 1590 Sx TOC @ 2370' by CBL Hole Size 7-7/8" Mx Mud Wt ___ #/G

TD 6385'

#7658
1-5

WELL HISTORY

4-4-82	Perf's Miss (6075-79') w/2 spf
4-6-82	Acdz w/500 gals 20% MSR-100, Max press 2800#; Min press 2000#.
4-7-82	Re-acdz w/2400 gals 20% MSR-100, Max press 2750#; Min press 2200#.
4-8-82	Run Tracer Surv to locate wtr source.
4-9-82	Sqz off perf's @ 6075-79' w/150 sx cmt to 3000#. Wtr was coming fr 6081-91'. Drlg out.
4-14-82	Perf'd Miss (1" Inter) @ 6076' w/4 shot & acdz w/500 gals 15% HCL. Max press 2650#, min press 1650#.
4-15-82	Re-acdz w/1000 gals 15% HCL. Max press 1200#, min press 800#. Swbd to flow @ 218 MCF (35# on 172" ck).
4-17-82	Re-acdz w/2000 gals 28% Ne/Fe Acid on vac. Swbg.
4-21-82	Sqz off perf's @ 6076' w/150 sx cmt to 3500#. Drlg out.
4-24-82	Perf'd Miss (6137-41') w/2 jspf. Swbg.
4-27-82	Acdz w/250 gals 20% MSR-100. Max press 2800#, min press 300#.
4-28-82	Set CIBP @ 6100' & dumped 36' cmt on top. PBTD @ 6064'.
4-29-82	Perf'd Atoka (6043-48') w/2 jspf. 13 hr SITP @ 1750 psig.
5-1-82	Acdz w/500 gals 15% MSR-100. Max press 2500#, min press 1800#. Swbd to flow @ 95# FTP on 5/16"ck. 230 MCF.
5-4-82	Re-acdz w/1500 gals 7-1/2% MSR-100. Max press 4200#, min press 2000#.
5-5-82	SITP @ 1750 psi. Swbg & flwg.
5-6-82	SITP 1600 psi. Kill well w/3% KCL. PO Perf'd Atoka (5926-34') (5944-52') & (6008-16')
5-7-82	Guns did fire. (Thought they had not Swbg.
5-11-82	Acdz w/4000 gals 7-1/2% MSR-100. Max press 3600#, min press 2700#. Swbg.
5-12-82	Ran Tracer Surv. Perf's fr 6043-48' taking majority of fluid & RA material.
5-14-82	Perf'd Atoka (6026-28'-4 holes). POH. GIH w/RTTS & RBP. Set RBP @ 6038' & RT @ 5985'. Acdz fr 6008-28' w/2500 gals 15% Mod-202; brk dn @ 1600 psi. Max press prior to ball out 3300#. ISIP 2500#, 5" 2300#. Move RBP to 5983' & RTTS to 5890'. Acdz 5926-52' w/4000 ga 15% Mod-202; brk dn @ 1800#. (1800# + Hydrostatic wt of Mod-202 = 4373.3 psig total press to brk dn perf's. (Max surf press during trtmt 5000#, min press 4100 ISIP 2960#, 5" 2800#.

See attached page for continued report of completion.

5-15-82 POH w/RTTS & RBP. Swbg.

5-21-82 Set pkr @ 5972'; frac w/15,500 gals Versagel 1500 & 3000 gals CO_2 & 28,400# 20/40 sd. Max press 4350#; min press 3920#. ISIP 3120#, 5" 2730#, 10" 2550#, 15" 2340#. Hydrostatic weight of fluid on back side during tst 3796.21 psig. (1160# + 2616.2#). Swbg.

5-22-82 Swbg to rec load, well KO flwg after 6 runs & flwd on 1/4" ck @ 1000 psi for 3 hrs. Rate 1.472 MMCFD.

5-23-82 SITP 1650 psi. Flwd on 1/2" ck @ 275 psi for 3 hrs. Rate 1.722 MMCFD.

5-25-82 SITP 1800 psi. Set 1.5" blank plug in profile @ 5961'. Blew dn & kill well w/3% KCL. GIH w/RBP. Set @ 5042'. Tst RBP, OK. SDFN.

5-26-82 Perf'd Abo @ 4912', 13', 23', 24', 25' & 4929' w/2 jspf. Acdz w/3000 gals 10% Mod-101. Brk dn perf's @ 1300 psi. (2236.74 psi hydrostatic wt). Max press 4000#, min press 1200#. ISIP 900 psi, 5" 600 psi. Swbg. Total pressure on formation during treatment= 1300 + 2236.74=3536.74#.

5-27-82 Frac Abo (4912-29') w/30,000 gals WG-6 (20,000 gals KCL + 10,000 gals CO_2) w/30,000# 20/40 sd & 4500# 10/20 sd. Max press 4900# (7257.56# hydrostatic wt while pmpg @ perf's), min press 4600#. ISIP 1520#, 5" 1400#, 10" 1350#, 15" 1300#. Overnight FTP 190# on 1/2" ck. Rate 1.189 MMCFD.

6-2-82 POH w/2-7/8" work string. GIH w/2-1/16" tbg on long string side.

6-3-82 GIH w/2-1/16" tbg on short string side.

6-4-82 Sting into pkr on short side & space out tbg. Pkr would not set. Stinger not going into pkr.

6-5-82 Cont to attempt to sting into pkr. Pkr was activated & set during attempts to set stinger into pkr. Unable to unseat pkr due to inability to set stinger into pkr on short side.

6-6-82 Etc.

6-7-82 Etc.

6-8-82 Etc. Still unable to rel assembly.

6-9-82 Pull blanking plug fr long side. Flw to rec 3% KCL fl. SITP on long string (Atoka) 1625 psi.

6-10-82 Flwg fr short side @ 150 psi FTP. Long string SITP 1950 psi.

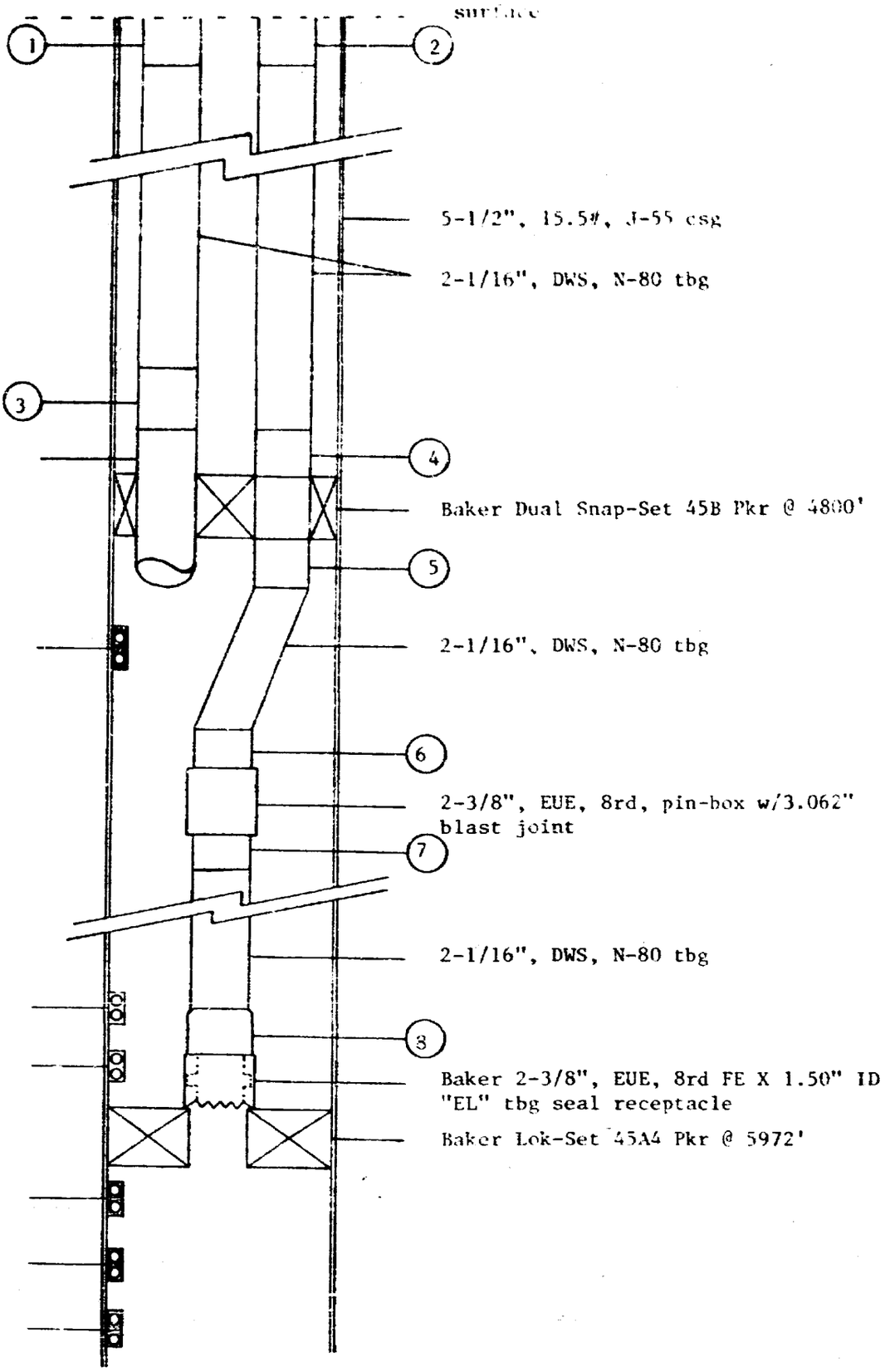
6-11-82 SITP long side 1950#; SITP short side 1000#. WOPL

Ray F. Nokes
Reservoir Engineer
Harvey E. Yates Co.
Roswell, New Mexico 88201

#1
1-C

SEYMOUR STATE #1

(Down Hole Production Assembly)



Number:

1) 2-1/16" IJ 10rd X 2-1/16" DWS Pin X 12" long change over
2) 2-1/16" IJ 10rd X 2-1/16" DWS Pin X 24" long change over
3) 2-1/16" DWS Box X 2-1/16" IJ 10rd Pin X 24" long change over
4) 2-1/16" DWS Box X 2-1/16" IJ 10rd Pin X 24" long change over
5) 2-1/16" IJ 10rd Box X 2-1/16" DWS Pin X 24" long change over
6) 2-1/16" DWS Box X 2-3/8" EUE 8rd Pin X 24" long change over
7) 2-1/16" DWS Pin X 2-3/8" EUE 8rd Pin X 12" long change over & 2-3/8" EUE 8rd collar
8) 2-1/16" DWS Box X 2-3/8" EUE 8rd Pin X 12" long change over

#7658
1-d

Ray F. Nokes
Reservoir Engineer
Harvey E. Yates Company

SEYMOUR STATE #1

OFFSET OPERATORS & ADDRESSES

ELK OIL
P. O. Box 310
Roswell, NM 88201

PLAINS RADIO BROADCASTING COMPANY
P. O. Box 9354
Amarillo, TX 79105

PIONEER PRODUCTION
P. O. Box 2542
Amarillo, TX 79189

FRED POOL DRILLING
Clovis Star Rt., Bos 13000
Roswell, NM 88201

VIKING PETROLEUM
2700 Center Bldg.,
2761 E. Skelly Drive
Tulsa, OK 74105

YATES PETROLEUM
207 South 4th
Artesia, NM 88210

NM658
1-e

ENERGY AND MINERALS DEPARTMENT

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OPERATOR		

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1

5a. Indicate Type of Lease: State [X] Fee [ ]

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL [ ] GAS WELL [X] OTHER-

7. Unit Agreement Name

2. Name of Operator: Harvey E. Yates Company

8. Farm or Lease Name: Seymour State Com

3. Address of Operator: P. O. Box 1933, Roswell, New Mexico 88201

9. Well No.: 1

4. Location of Well: UNIT LETTER F, 1980 FEET FROM THE North LINE AND 660 FEET FROM THE West LINE, SECTION 18, TOWNSHIP 9S, RANGE 27E, NMPM.

10. Field and Pool, or Wildcat: Wildcat

15. Elevation (Show whether DF, RT, GR, etc.): 3811.5' GR

12. County: Chaves

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK [ ]	PLUG AND ABANDON [ ]	REMEDIAL WORK [ ]	ALTERING CASING [ ]
TEMPORARILY ABANDON [ ]	CHANGE PLANS [ ]	COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [ ]
PULL OR ALTER CASING [ ]		CASING TEST AND CEMENT JOB [X]	
OTHER [ ]		OTHER [ ]	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

3/19/82 Depth 6385' Total Depth. Ran 166 jts (6656.25') 5 1/2" OD 15.5#/ft J-55 LT&C New Csg & set @ 6343'. Cmtd 1st stage w/190 sx Cl "H" plus 1/4# Flocele, 6# salt, .5% Halad H, 3/4% CFR-2 & 10% 100 Mesh Sd. PD @ 2:30 p. m. 3/18/82. 2nd stage Cmtd w/1300 sx 50/50 Poz mix plus 4% Gel. Tailed in w/100 sxs Cl "C" neat. Plug did not land. Pressured casing to 1000 psi. WOC.

3/20/82 MIRUCU. RIH w/4 3/4" bit. Top of Cmt plug @ 5324. Drld cmt to DV tool @ 5504' KB. worked bit thru DV Tool. Press test casing & DV tool to 2500 psi/30 min. Held o.k.

4/02/82 Ran GR-CBL log from PBTD 6307' to TOC @ 2370'.

4/04/82 Perf Miss form from 6075' to 6079' (4' w/8 shots). Ran 2 7/8" OD EUE tubing w/Lok-Set Pkr. Set @ 6060'. RU Swab. Rec 17 BLW w/show of gas.

4/06/82 Acidized perfs 6075' to 6079' w/500 gals 20% MSR-100. Swab 41 BLW. Flwd @ est rate of 150 MCFPD.

4/07/82 Reacidized w/2400 gals 20% MSR-100. Swab load plus 25 Bbls form water.

4/08/82 Ran Tracer Survey. Survey indicated form water coming from interval 6081'-6091'.

4/09/82 Sqz Perfs 6075 - 6079' w/200 sxs Class "H" w/.4% Halad. MxP 3000 psi

4/10/82 TIH w/bit. Tagged cement @ 5989'. Drlg cmt & retainer @ 6000'. POH.

4/14/82 Perf Fusselman @ 6076' (one foot) w/4 JSPF. Acidized w/500 gals 15% HCl-Swab

4/15/82 Swab dry Acidize w/1000 gal 15% HCl swab & flow test.

4/17/82 ReAcidize w/2000 gal 28% NE/FE. Swab load.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Perk T Sandel TITLE Engineer DATE 5/11/82

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

#7658
1-K

4/20/82 POH w/tbg & pkr, GIH w/retainer & set @ 6015'.
4/21/82 Sqz Perfs 6075 - 79' w/150 sxs Cl "H" w/2% Halad-4 Mxp 3500 psi. Pull out of Ret & rev out 30 sxs to pit. GIH w/bit, DC's & 2 7/8" tbg.
4/22/82 Tagged Cmt @ 6005'. Drld Cmt & ret to 6075'. Circ Csg clean. Tst Sqz w/3500 psi/30 min. OK. WOC.
4/24/82 Perf 6137'-6141' w/2 spf. GIH w/Lok-Set, O/O Tool, & 2 7/8" tbg set Pkr @ 6104'. RU swab. Rec 26 BF.
4/27/82 Swab dry. Pump 250 gal 20% MSR-100 & displaced into perfs 4137-41': Swab 51 BLW
4/28/82 Rel Pkr & POH. RIH w/CIBP & set @ 6100' & drop 36' of Cmt on CIBP PBTD 6064'. GIH w/Vann system, position guns to perf 6043' to 6048' w/2 SPF.
4/29/82 Set Pkr @ 6009'. Drop bar & fire guns. GTS & Flwd @ rate of 218 MCF/D.
4/30/82 Flwd for 6 hrs. Final FTP 110 psi thru 20/64" Choke @ rate of 288 MCF/D.
5/01/82 Acidized Perfs 6043-48 w/500 gal 15% MSR-100. Swabbed & flow tested.
5/04/82 SITP 1500 psi. Reacidized perfs 6043-48 w/1500 gal 7 1/2% MSR-100 & 22 ball sealers. Swab & flow tested.
5/05/82 Testing
5/06/82 Kill well. Rel Pkr & POH. GIH w/Vann System, ran correlation log to position guns to perf 5934' to 5952'; and 6008 to 6016'. Set pkr @ 5894'. Drop bar. Guns did not fire.
5/07/82 SITP 1200 psi. RU Jarrell & fished bar OOH. Swab tbg dry. Loaded tbg w/3% Kcl water. Rel Pkr & POH. Guns Fired but PAVA partially closed.
5/08/82 TIH w/LOK-Set, O/O Tool, & 2 7/8" tbg. Set Pkr @ 5803'. Swab 30 BF w/trace oil & gas rate of 200 MCF/D.
5/09/82 SITP 1500 psi. Blew down to pit. Good gas. Rate approx 229 mcf/D.

#7658
I-L

5-6-82

IN THE DISTRICT COURT FOR THE FIFTH JUDICIAL DISTRICT
FOR THE COUNTY OF CHAVES, STATE OF NEW MEXICO

ENDORSED COPY:
ORIGINAL FILED DISTRICT COURT
May 5, 1982
JEAN WILLIS, CLERK

VIKING PETROLEUM, INC.,

Petitioner,

vs.

OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO, and HARVEY E. YATES COMPANY,

Respondents.

No. CV-82-77

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 7657 7658 Exhibit No. 3
Submitted by: V.K.
Hearing Date: 9-22-82

ORDER SUSPENDING CERTAIN PROVISIONS OF OIL CONSERVATION COMMISSION ORDER NO. R-6873, PROVIDING FOR THE TENDER OF DRILLING AND COMPLETION COSTS AND ESTABLISHING A BRIEFING SCHEDULE ON THE MERITS

THIS MATTER came before the Court for hearing on April 26, 1982 upon the motion of petitioner, Viking Petroleum, Inc., for an Order staying or suspending during the pendency of the above-entitled cause the following provisions of Order No. R-6873 of the New Mexico Oil Conservation Commission, issued January 7, 1982:

> (4) That within 15 days from the date the schedule of estimated well costs is furnished to him, any non-consenting working interest owner shall have the right to pay his share of estimated well costs to the operator in lieu of paying his share of reasonable well costs out of production, and that any such owner who pays his share of estimated well costs as provided above shall remain liable for operating costs but shall not be liable for risk charges.
>
> * * *
>
> (7) That the operator is hereby authorized to withhold the following costs and charges from production:
>
> (A) The pro rata share of reasonable well costs attributable to each non-consenting working interest owner who has not paid his share of estimated well costs within 30 dyas from the date the schedule of estimated costs is furnished to him.

(B) As a charge for the risk involved in the drilling of the well, 200 percent of the pro rata share of reasonable well costs attributable to each non-consenting working interest owner who has not paid his share of estimated well costs within 30 days from the date the schedule of estimated well costs is furnished to him.

The Court, having reviewed the pleadings, having heard the arguments of counsel for all parties, being otherwise advised in the premises, and acting pursuant to §70-2-25(C), NMSA 1978, as amended, HEREBY ORDERS as follows:

1. That insofar as the above-quoted provisions of Order No. R-6873 require or required the payment by petitioner, Viking Petroleum, Inc., of estimated well costs to the respondent, Harvey E. Yates Co., within 15 days from the date the schedule of estimated well costs was furnished to petitioner, those provisions are hereby suspended subject to the condition set forth below, pending the ultimate disposition of this cause by the Court. Petitioner's statutory right to appeal Order No. R-6873 to the District Court under §70-2-25, NMSA 1978, as amended, is not waived in any manner by the operation of said provisions.

2. That the suspension of the above-quoted provisions of Order R-6873 shall be subject to the following condition. On or before five (5) banking days from the entry of this Order, petitioner, Viking Petroleum, Inc., shall tender to the respondent, Harvey E. Yates Co., the amount of Ninety Thousand Dollars ($90,000.00) as and for Petitioner's proportionate share of the estimated cost of drilling and completing, from the surface to the base of the Abo formation, that certain well in the W 1/2 §18, T9S R27E, Chavez County, New Mexico, which is the subject of this cause.

3. That in the event the petitioner prevails in vacating all or part of Order R-6873 in this appeal, and is permitted by this Court, or by the Commission on remand

consistent with the determination and final judgment of this Court, to pay its proportionate share of the cost of drilling and completing the subject well from the surface to the base of the Abo formation, without a charge or penalty for the risk involved in such drilling and completion, then the Ninety Thousand Dollars ($90,000.00) tendered by petitioner shall be applied by the respondent, Harvey E. Yates Co., in satisfaction of petitioner's right and obligation to pay its proportionate share of the reasonable drilling and completion costs rather than having those costs paid out of petitioner's share of production from the subject well. Should the actual drilling and completion costs from the surface to the base of the Abo formation subsequently be determined by the Court, or by the Commission on remand, to be more or less than Ninety Thousand Dollars ($90,000.00), an adjustment in the above amount paid to respondent, including interest at the rate set forth above, shall be accordingly made. Moreover, should any part of the charge for risk in the drilling of the subject well, as presently allowed under the above-quoted provisions of Order R-6873, be vacated by the Court in this appeal, an appropriate adjustment will be made by the Court, or by the Commission on remand, to restore to the respective parties their full and lawful interest in the production from the subject well.

4. That should the respondents prevail in this appeal, such that Order R-6873 is ultimately affirmed in all material respects, the Ninety Thousand Dollars ($90,000.00) tendered by petitioner to Harvey E. Yates Co. as required above, shall be returned in full to the petitioner, together with interest thereon from the date the tender is made, at the rate set forth in §58-8-3(B), NMSA 1978, as amended, [ten percent], and petitioner shall be deemed to have elected to pay its pro rata share of reasonable well costs in the subject well

out of its share of production, including the charge for the risk involved in the drilling of such well as provided the Order R-6873.

5. That the following schedule for the submission by the parties of written briefs on the merits of this appeal is hereby established:

A. Petitioner's Brief-in-Chief shall be filed on or before June 10, 1982.

B. Respondents' Responsive Briefs shall be filed on or before July 12, 1982.

C. Petitioner may file a Reply Brief on or before July 19, 1982.

D. Petitioner shall file a certified copy of the transcript of proceedings and exhibits introduced before the Oil Conservation Commission in the proceedings below simulataneously with its Brief-in-Chief.

E. Oral argument may be set, at the discretion of the Court, following submission of all briefs.

/s/ W. J. Schnedar
DISTRICT JUDGE

Submitted By:

JONES, GALLEGOS, SNEAD & WERTHEIM, P.A.
Attorneys for Petitioner Viking Petroleum, Inc.

By _____
ARTHUR L. JARAMILLO

Approved:

_____
W. PERRY PEARCE
Special Assistant Attorney
General Counsel for the Respondent Oil
Conservation Commission

_____
for THOMAS J. HALL, III
Attorney for Respondent Harvey E. Yates, Co.

Dockets Nos. 29-82 and 30-82 are tentatively set for September 15 and September 29, 1982. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - THURSDAY - AUGUST 26, 1982

OIL CONSERVATION COMMISSION - 9 A.M.
MORGAN HALL, STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO

CASE 7656: Application of Cities Service Company for determination of reasonable well costs, Lea County, New Mexico. Applicant, in the above-styled cause, pursuant to the provisions of Section 70-2-17 C, NMSA, 1978 Comp., and Paragraph (5) of Division Order No. R-6781, seeks a determination of reasonable well costs for two wells drilled under the provisions of said Order No. R-6781 by Doyle Hartman on lands pooled by said order.

CASE 7657: Application of Harvey E. Yates Company for non-rescission of Order No. R-6873, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the non-rescission of Order No. R-6873, which order pooled certain lands to be dedicated to a proposed Ordovician test well to be drilled thereon, being the W/2 of Section 18, Township 9 South, Range 27 East. Said order provided that should the unit well not be drilled to completion, or abandonment, within 120 days after commencement thereof, operator shall appear and show cause why the pooling order should not be rescinded.

CASE 7658: Application of Harvey E. Yates Company for a dual completion and downhole commingling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Seymour State #1 located in Section 18, Township 9 South, Range 27 East, in such a manner that Abo perforations from 4912 feet to 4929 feet would be commingled with Upper Atoka perforations from 5926 feet to 5952 feet and the aforesaid intervals dually completed with Lower Atoka perforations from 6008 feet to 6048 feet and produced through parallel strings of tubing.

STATE OF NEW MEXICO

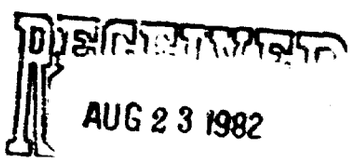
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION COMMISSION

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

APPLICATION OF HARVEY E. YATES COMPANY FOR MULTIPLE COMPLETION, CHAVES COUNTY, NEW MEXICO.

CASE NO. 7390
CASE NO. 7657
CASE NO. 7658



MOTION TO QUASH OR MODIFY

SUBPOENA DUCES TECUM

On August 23, 1982, Harvey E. Yates Company was served with a Subpoena Duces Tecum, a copy of which is attached to and made a part hereof, to produce certain documents at an Oil Conservation Commission hearing on August 26, 1982.

In response to said Subpoena Duces Tecum, Harvey E. Yates Company would show:

1. As to Item No. 1 - Those items were mailed to Viking Petroleum, Inc. on August 18, 1982.

2. As to Item No. 1 - Those items, with the exception of all related invoices were mailed to Viking Petroleum, Inc.'s attorney, at his request, on August 18, 1982.

3. As to Item No. 2 - That information is contained in copies of the Daily Drilling Report for the Seymour State Com #1 well and in copies of the Application for Multiple Completion, Form C-107, both of which were mailed to Viking Petroleum, Inc.'s attorney, at his request, on August 18, 1982.

4. The above-listed documents represent a significant cost in time, effort, and material on the part of Harvey E. Yates Company.

5. Inasmuch as Viking Petroleum, Inc. or its attorney has already received from Harvey E. Yates Company copies of documents containing all the information sought in Items 1 and 2 of the said Subpoena Duces Tecum, said Subpoena Duces Tecum represents an unnecessary, unreasonable and oppressive demand upon Harvey E. Yates Company.

WHEREFORE, Harvey E. Yates Company prays:

A. That the said Subpoena Duces Tecum be quashed as an unnecessary, unreasonable and oppressive demand upon Harvey E. Yates Company.

B. That if the Subpoena Duces Tecum is not quashed, Viking Petroleum, Inc., be required to establish why it is unable to obtain from within its own organization, or from its own attorney, documents and information it has already been furnished.

C. That if the Subpoena Duces Tecum, as written or as modified, is upheld, that Viking Petroleum, Inc., be required to advance to Harvey E. Yates Company, the reasonable costs of producing the required documents.

D. For such additional relief as the Oil Conservation Commission may deem just and proper.

Respectfully submitted,

HARVEY E. YATES COMPANY

By: Thomas J. Hall, III
Attorney

This is to certify that a copy of ~~the~~ delivered
the foregoing motion was ~~mailed~~ to
counsel for Viking Petroleum, Inc.,
and to counsel for the Commission
this 23rd day of August, 1982.

Thomas J. Hall, III

HEYCO

PETROLEUM PRODUCERS

HARVEY E. YATES COMPANY

P. O. BOX 1933 SUITE 101 SECURITY NATIONAL BANK BUILDING 505/623-6601
ROSWELL, NEW MEXICO 88201

August 18, 1982

Viking Petroleum, Inc.
2700 Center Building
2761 East Skelly Drive
Tulsa, Oklahoma 74105

Re: SEYMOUR STATE COM #1
Section 18
T-9S, R-27E, N.M.P.M.
Chaves County, New Mexico
OCC Order No. R-6873

Gentlemen:

Enclosed, pursuant to the requirements of Commission Order No. R-6873, is an itemized schedule of actual well costs on the above-referenced well. The schedule contains all costs through July 31, 1982. Although additional invoices may be received, we do not, at this time, anticipate receiving any.

Sincerely,

Thomas J. Hall, III
Attorney

TJH:seb

Enclosures

P 324 561 255
RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO
Viking Petroleum, Inc.
2761 East Skelly Drive
Tulsa, Oklahoma 74105

TOTAL POSTAGE AND FEES

POSTMARK OR DATE

Schedule of well costs -
Seymour State Com #1

PS Form 3800, Apr. 1976

HEYCO

PETROLEUM PRODUCERS

HARVEY E. YATES COMPANY

P O BOX 1933 SUITE 300 SECURITY NATIONAL BANK BUILDING 505/623-6601
ROSWELL NEW MEXICO 88201

CERTIFIED - RETURN RECEIPT REQUESTED

August 18, 1982

Mr. Arturo L. Jaramillo, Esq.
Jones, Gallegos, Snead & Wertheim
Post Office Box 2228
Santa Fe, New Mexico 87501

Re: SEYMOUR STATE COM #1
Section 18
T-9S, R-27E, N.M.P.M.
Chaves County, New Mexico
(HEYCO Ref: 9142)

Dear Art:

In connection with the Oil Conservation Commission hearing to be held August 26th, enclosed are copies of HEYCO's proposed exhibits.

1. HEYCO's Daily Drilling Report on the well.
2. C-107 Application for Multiple Completion with attachments (less logs).

Also enclosed is a copy of an itemized list of costs on the well.

Sincerely,

Thomas J. Hall, III
Attorney

TJH:seb

Enclosures

P 324 561 258

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO
Arturo L Jaramillo, Esq.
STREET AND NO.
P.O. Box 2228
P.O., STATE AND ZIP CODE
Santa Fe, N.M. 87501

POSTAGE $

CERTIFIED FEE

SPECIAL DELIVERY

RESTRICTED DELIVERY

RETURN RECEIPT SERVICE
SHOW TO WHOM AND DATE DELIVERED

OPTIONAL SERVICES
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY

CONSULT POSTMASTER FOR FEES

TOTAL POSTAGE AND FEES $

POSTMARK OR DATE

SEYMOUR STATE COM #1
Daily Drilling Reports
C-107 Application

PS Form 3800, Apr. 1976

CASE NO. 7390
CASE NO. 7657
CASE NO. 7658

SUBPOENA DUCES TECUM

THE STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

To THOMAS J. HALL -- HARVEY E. YATES COMPANY Greeting:

We command you to be and appear August 26, 1982 before the Oil Conservation Commission of the State of New Mexico, at The Oil Conservation Commission Conference Room in the State Land Office Building, in the City of Santa Fe, then and there to testify in the Case of Application of Harvey E. Yates in Case No. 7390, 7657 & 7658,

on behalf of Viking Petroleum, Inc.,

and also that you bring with you and produce at the time and place aforesaid (1) all documents and reports reflecting, on an item by item basis, the costs incurred by Harvey E. Yates in drilling, completing and operating that certain well identified as Seymore State No. 1 in Sec. 18, T. - 9 S, R-27E. Chaves County New Mexico, including all monthly well and operations analysis reports and all other summaries of costs incurred, together with all invoices for tangible and intangible costs relating to the described well. (2) (continued - see attached)

And this do you under penalty of the law

WITNESS JOE D. RAMEY, Secretary-Director of the Oil Conservation Commission of the State of New Mexico, and the seal of said Commission, this 18 day of August A.D. 1982

Joe D. Ramey

(2) all documents and reports constituting or reflecting the results of each and every test performed by or on behalf of Harvey E. Yates as operator of the described well, for determining the rate of flow of natural gas from each of the formations underlying the Seymore State No. 1 well described above.

HEYCO

PETROLEUM PRODUCERS

HARVEY E. YATES COMPANY

P. O. BOX 1933 SUITE 300 SECURITY NATIONAL BANK BUILDING 505/623-6601
ROSWELL, NEW MEXICO 88201

Page 1658

July 12, 1982

New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501
Attn: Mr. Joe D. Ramey
Division Director and State Petroleum Engineer

Re: Request for Administrative Approval for Multiple Completion for the Seymour State #1 in Sec. 18, T-9S, R-27E, Chaves County, New Mexico

Dear Mr. Ramey:

Please find attached two (2) copies of Form C-107 and support data for the above captioned well.

Mr. Jack McMinn with Yates Energy and myself have conversed with Mr. Bill Gressett with the O.C.D. in Artesia and it is my understanding that Jack has spoken with yourself regarding the aforementioned matter. To explain the situation, a brief but detailed account of the activities during completion are included on the Well History Summary Sheet.

The perforations of 5926' to 5952' which are in question were treated on May 14, 1982 and required 4573.3 psig to break them down. The previous perforations withheld a hydrostatic pressure of 3796.21 psig on the backside with no draw down, during the fracturing procedure of the Lower Atoka perforations on May 21, 1982. After perforating the Abo from 4912' to 4929', it required only 3536.74 psig to break down the perforations as reported on May 26, 1982. Shut in tubing pressures on June 11, 1982 were 1950 psig for the Atoka and 1000 psig for the Abo.

It is our opinion that the location of the packer at 5972' would not affect the production from the Abo perforations from 4912' to 4929'. The perforations from 5926' to 5952' are considered to be unable to give up any production as was indicated while testing on May 14, 1982; nor would they act as a thief zone to draw from the Abo perforations as revealed by the diversities in pressures during treatment. Also, the additional danger of possible damage to the Abo formation as well as expense to chemically cut the tubing and replace the packer above the Atoka perforations of 5926' to 5952' is an extremely important point which we hope will not have to be considered.

It is respectfully requested that administrative approval be granted for the dual completion of the Seymour State #1.

Thank you for your time and concern in the matter. If further information is necessary regarding this matter, please contact my office.

Sincerely yours,

Ray F. Nokes
Reservoir Engineer
Harvey E. Yates Company

RFN:dy

Enclosures

cc: N.M.O.C.D.
Attn: Bill Gressett
Artesia, NM 88210
two (2) copies

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

7658

Form C-107
Revised 2-1-82

APPLICATION FOR MULTIPLE COMPLETION

Operator	County	Date
Harvey E. Yates Company	Chaves Co.	7-6-82
Address	**Lease**	**Well No.**
P. O. Box 1933 Roswell, NM 88201	Seymour State #1	

Location of Well	Unit	Section	Township	Range
	E	18	9-S	27-E

All Applicants for multiple completion must complete Items 1 and 2 below.

1. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Abo		Atoka
b. Top and Bottom of Pay Section (Perforations)	4912 - 29'		5926 - 6048'
c. Type of production (Oil or Gas)	Gas		Gas
d. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
e. Daily Production ☐ Actual ☒ Estimated Oil Bbls. Gas MCF Water Bbls.	1.189 MMCF -0- BO -0- BW during tst		1.472 MMCF -0- BO -0- BW during tst

2. The following must be attached:

a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.

b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.

c. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112-A.)

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed Ray T. Graham Title Reservoir Engineer Date July 6, 1982

(This space for State Use)

Approved By _____ Title _____ Date _____

NOTE: If the proposed multiple completion will result in an unorthodox well location and/or a non-standard proration unit in one or more of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

HARVEY E. YATES COMPANY

Well History Summary Sheet

Operator Harvey E. Yates Co. **Well Name & #** Seymour State #1 **Lease #** Fee

District Roswell **Made By** Ray F. Nokes **Date** July 1, 1982

Location 660' FWL & 1980' FNL, Sec 18, T-9S, R-27E Chaves Co., NM

Spud Date 11-30-81 **Compl. Date** 6-11-82 **TD** 6385' **PBTD** 6307' Original

Type Well: Oil ____ Gas X Other (Dual) **Field** Wildcat

I P ____ **Zone** ____

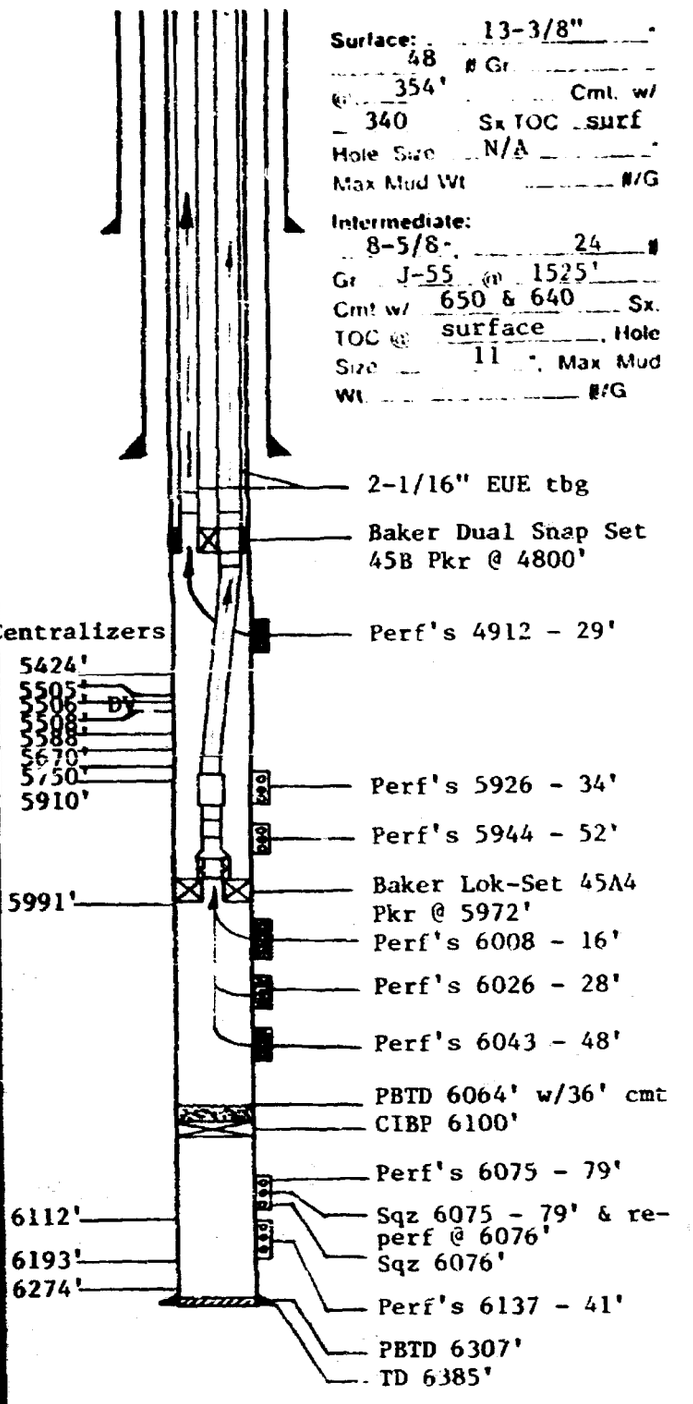
Perfs: Abo: 4912 - 29' (OA) Atoka: 5826 - 6048' (OA) **Total Holes** ____

Stimulation See Well History below

Cumul. Oil ____ **MCF** ____ **Water** ____

Recent Test ____ **Lift Equipment** ____

Misc. Elevation: 3811.8' GL Refer to CBL for TOC & Bond record.



Surface: 13-3/8" ", 48 # Gr ____, @ 354' Cmt. w/ 340 Sx TOC surf Hole Size N/A ", Max Mud Wt ____ #/G

Intermediate: 8-5/8", 24 # Gr J-55 @ 1525' Cmt w/ 650 & 640 Sx. TOC @ surface, Hole Size 11", Max Mud Wt ____ #/G

Production: 5-1/2", 15.5 #, J-55 Gr. @ 6343', Cmt w/ 1590 Sx. TOC @ 2370' by CBL, Hole Size 7-7/8" Mx Mud Wt. ____ #/G

TD 6385'

WELL HISTORY

4-4-82	Perf's Miss (6075-79') w/2 spf
4-6-82	Acdz w/500 gals 20% MSR-100, Max press 2800#; Min press 2000#.
4-7-82	Re-acdz w/2400 gals 20% MSR-100, Max press 2750#; Min press 2200#.
4-8-82	Run Tracer Surv to locate wtr source.
4-9-82	Sqz off perf's @ 6075-79' w/150 sx cmt to 3000#. Wtr was coming fr 6081-91'. Drlg out.
4-14-82	Perf'd Miss (1' inter) @ 6076' w/4 shot & acdz w/500 gals 15% HCL. Max press 2650#, min press 1650#.
4-15-82	Re-acdz w/1000 gals 15% HCL. Max press 1200#, min press 800#. Swbd to flow @ 218 MCF (35# on 1/2" ck).
4-17-82	Re-acdz w/2000 gals 28% Ne/Fe Acid on vac. Swbg.
4-21-82	Sqz off perf's @ 6076' w/150 sx cmt to 3500#. Drlg out.
4-24-82	Perf'd Miss (6137-41') w/2 jspf. Swbg.
4-27-82	Acdz w/250 gals 20% MSR-100. Max press 2800#, min press 300#.
4-28-82	Set CIBP @ 6100' & dumped 36' cmt on top. PBTD @ 6064'.
4-29-82	Perf'd Atoka (6043-48') w/2 js . 13 hr SITP @ 1750 psig.
5-1-82	Acdz w/500 gals 15% MSR-100. Max press 2500#, min press 1800#. Swbd to flow @ 95# FTP on 5/16"ck. 230 MCF.
5-4-82	Re-acdz w/1500 gals 7-1/2% MSR-100. Max press 4200#, min press 2000#.
5-5-82	SITP @ 1750 psi. Swbg & flwg.
5-6-82	SITP 1600 psi. Kill well w/3% KCL. POH Perf'd Atoka (5926-34') (5944-52') & (6008-16')
5-7-82	Guns did fire. (Thought they had not. Swbg.
5-11-82	Acdz w/4000 gals 7-1/2% MSR-100. Max press 3600#, min press 2700#. Swbg.
5-12-82	Ran Tracer Surv. Perf's fr 6043-48' taking majority of fluid & RA material.
5-14-82	Perf'd Atoka (6026-28'-4 holes), POH. GIH w/RTTS & RBP. Set RBP @ 6038' & RTT @ 5985'. Acdz fr 6008-28' w/2500 gals 15% Mod-202; brk dn @ 1600 psi. Max press prior to ball out 3300#. ISIP 2500#, 5" 2300#. Move RBP to 5983' & RTTS to 5890'. Acdz 5926-52' w/4000 gal 15% Mod-202; brk dn @ 1800#. (1800# + Hydrostatic wt of Mod-202 = 4573.3 psig total press to brk dn perf's. (Max surf press during trtmt 5000#, min press 3100 ISIP 2900#, 5" 2800#.

See attached page for continued report of completion.

5-15-82 POH w/RTTS & RBP. Swbg.

5-21-82 Set pkr @ 5972'; frac w/15,500 gals Versagel 1500 & 3000 gals CO_2 & 28,400# 20/40 sd. Max press 4350#; min press 3920#. ISIP 3120#, 5" 2730#, 10" 2550#, 15" 2340#. Hydrostatic weight of fluid on back side during tst 3796.21 psig. (1180# + 2616.2#). Swbg.

5-22-82 Swbg to rec load, well KO flwg after 6 runs & flwd on 1/4" ck @ 1000 psi for 3 hrs. Rate 1.472 MMCFD.

5-23-82 SITP 1650 psi. Flwd on 1/2" ck @ 275 psi for 3 hrs. Rate 1.722 MMCFD.

5-25-82 SITP 1800 psi. Set 1.5" blank plug in profile @ 5961'. Blew dn & kill well w/3% KCL. GIH w/RBP. Set @ 5042'. Tst RBP, OK. SDFN.

5-26-82 Perf'd Abo @ 4912', 13', 23', 24', 25' & 4929' w/2 jspf. Acdz w/3000 gals 10% Mod-101. Brk dn perf's @ 1300 psi. (2236.74 psi hydrostatic wt). Max press 4000#, min press 1200#. ISIP 900 psi, 5" 600 psi. Swbg. Total pressure on formation during treatment= 1300 + 2236.74=3536.74#.

5-27-82 Frac Abo (4912-29') w/30,000 gals WG-6 (20,000 gals KCL + 10,000 gals CO_2) w/30,000# 20/40 sd & 4500# 10/20 sd. Max press 4900# (7257.56# hydrostatic wt while pmpg @ perf's), min press 4600#. ISIP 1520#, 5" 1400#, 10" 1350#, 15" 1300#. Overnight FTP 190# on 1/2" ck. Rate 1.189 MMCFD.

6-2-82 POH w/2-7/8" work string. GIH w/2-1/16" tbg on long string side.

6-3-82 GIH w/2-1/16" tbg on short string side.

6-4-82 Sting into pkr on short side & space out tbg. Pkr would not set. Stinger not going into pkr.

6-5-82 Cont to attempt to sting into pkr. Pkr was activated & set during attempts to set stinger into pkr. Unable to unseat pkr due to inability to set stinger into pkr on short side.

6-6-82 Etc.

6-7-82 Etc.

6-8-82 Etc. Still unable to rel assembly.

6-9-82 Pull blanking plug fr long side. Flw to rec 3% KCL fl. SITP on long string (Atoka) 1625 psi.

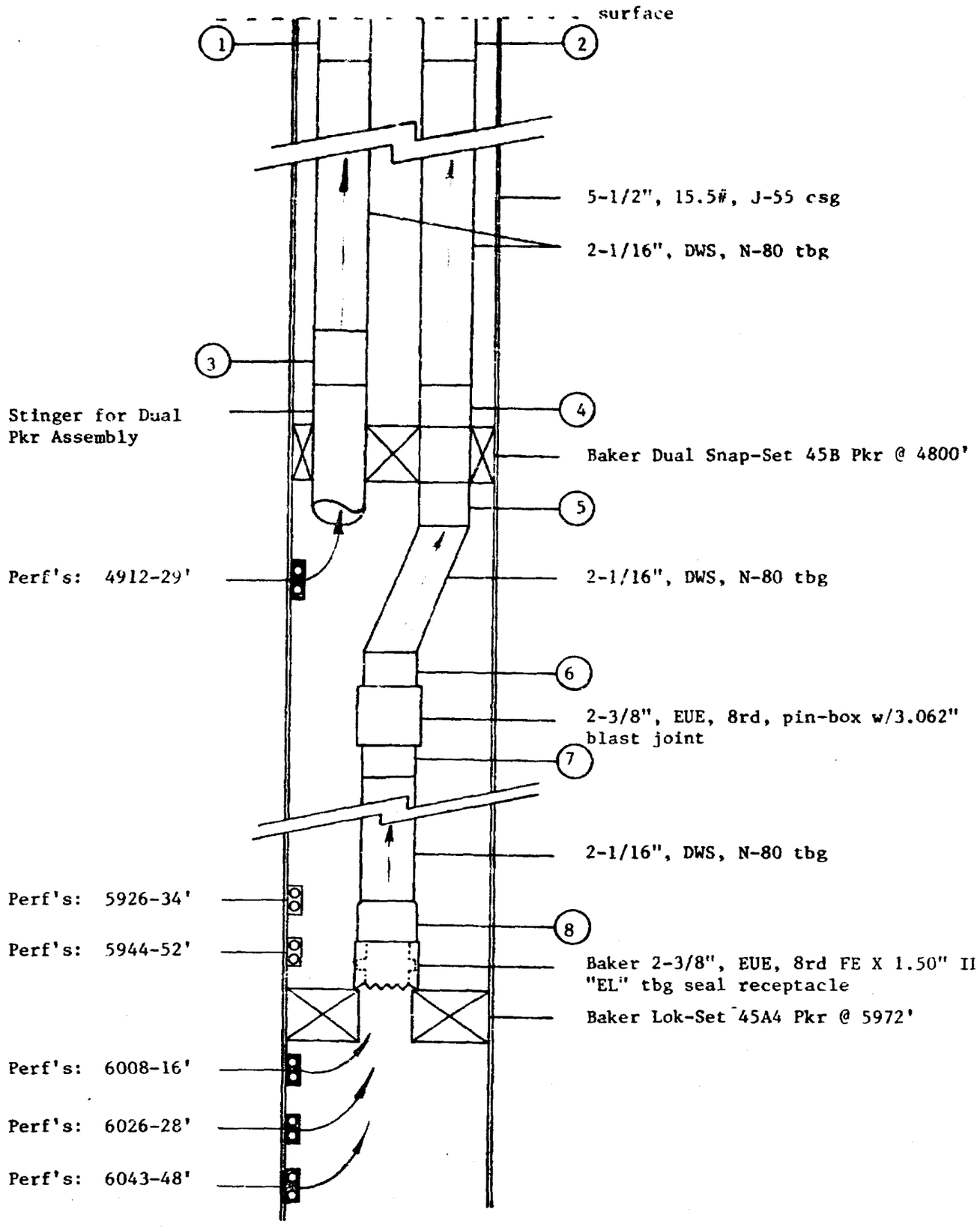
6-10-82 Flwg fr short side @ 150 psi FTP. Long string SITP 1950 psi.

6-11-82 SITP long side 1950#; SITP short side 1000#. WOPL

Ray F. Nokes
Reservoir Engineer
Harvey E. Yates Co.
Roswell, New Mexico 88201

SEYMOUR STATE #1

(Down Hole Production Assembly)



Number:

1) 2-1/16" IJ 10rd X 2-1/16" DWS Pin X 12" long change over
2) 2-1/16" IJ 10rd X 2-1/16" DWS Pin X 24" long change over
3) 2-1/16" DWS Box X 2-1/16" IJ 10rd Pin X 24" long change over
4) 2-1/16" DWS Box X 2-1/16" IJ 10rd Pin X 24" long change over
5) 2-1/16" IJ 10rd Box X 2-1/16" DWS Pin X 24" long change over
6) 2-1/16" DWS Box X 2-3/8" EUE 8rd Pin X 24" long change over
7) 2-1/16" DWS Pin X 2-3/8" EUE 8rd Pin X 12" long change over & 2-3/8" EUE 8rd collar
8) 2-1/16" DWS Box X 2-3/8" EUE 8rd Pin X 12" long change over

Ray F. Nokes
Reservoir Engineer
Harvey E. Yates Company

SEYMOUR STATE #1

OFFSET OPERATORS & ADDRESSES

ELK OIL
P. O. Box 310
Roswell, NM 88201

PLAINS RADIO BROADCASTING COMPANY
P. O. Box 9354
Amarillo, TX 79105

PIONEER PRODUCTION
P. O. Box 2542
Amarillo, TX 79189

FRED POOL DRILLING
Clovis Star Rt., Bos 13000
Roswell, NM 88201

VIKING PETROLEUM
2700 Center Bldg.,
2761 E. Skelly Drive
Tulsa, OK 74105

YATES PETROLEUM
207 South 4th
Artesia, NM 88210

ROUGH

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION ~~DIVISION~~ FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 7658

Order No. R- 7112

APPLICATION OF ~~HARVEY~~ HARVEY E. YATES COMPANY
FOR A DUAL COMPLETION X AND DOWNHOLE COMMINGLING,
CHAVES COUNTY, NEW MEXICO.

ORDER OF THE ~~DIVISION~~ COMMISSION

BY THE ~~DIVISION~~ COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on September 22, 1982, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico hereinafter referred ~~Examiner~~ _____. to as the "Commission"

NOW, on this _____ day of October, 1982, the ~~Division Director~~ Commission, having considered the testimony, the record, and the ~~recommendations of the Examiner~~ exhibits, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Harvey E. Yates Company, seeks authority to complete its Seymour State Com Well No. 1, located in Unit E of Section 18, Township 9 South, Range 27 East, NMPM, Chaves County, New Mexico, as a dual completion (conventional) to ~~(combination)~~ ~~(tubingless)~~

~~oil~~ produce gas from ~~the~~ undesignated Abo and Atoka Pools

(3) That the Abo formation in said well in the interval from was perforated 5912 to 5929 feet and the Atoka formation from 5926 ~~5944~~ feet to 5934 feet, from 5944 feet to 5952 feet, ~~5999-6008 ft, 6026-28 ft,~~ from 6008 feet to 6016 feet, from 6026 feet to 6028 feet, and from 6043 ~~and 6043-48 feet.~~ feet to 6048 feet.

(4) That the packer used to separate zones in said well was set at 5972 feet.

(5) That the Abo formation (4912 feet to 4929 feet) perforations and the Upper Atoka formation perforations (5926 feet to 5934 feet and 5944 feet to 5952 feet) in said well are exposed in the same common annular space.

(6) That based on the necessary to effectively treat the Atoka formation, applicant alleges pressures, the applicant suggests that the Upper Atoka formation perforations (5926 feet to 5934 feet and 5944 feet to 5952 feet) in said well are not productive, and would act as a thief zone for production from the Abo formation.

(7) That commingling between the Abo and Atoka formations should not be permitted in said well.

(8) That a temperature survey and a noise log should indicate whether or not the two Upper Atoka perforated intervals in said well are productive of hydrocarbons, or would act as a thief zone for production from the Abo.

(9) That if said tests establish that the two Upper Atoka perforated intervals in said well are not productive of hydrocarbons, and would not act as a thief zone for production from the Abo formation, the dual completion should be approved as proposed and the Division Director should have authority to approve the downhole commingling of the Abo perforations and the uppermost two sets of Atoka perforations in the same common annular space of the subject well.

(10) That if the two Upper Atoka perforated intervals in said well are productive, or act as a thief zone for production from the Abo formation, the packer should be re-set below the Abo perforated interval and above the two Upper Atoka perforated intervals.

(11) That the portion of this case which refers to downhole commingling should be ~~dismissed~~ denied.

(2) That approval of the subject application, as ~~submitted~~ completed, will prevent waste & protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, ~~Harvey E. Yates Company~~, is hereby authorized to complete its ~~Seymour State Com~~ Well No. 1, located in Unit E of Section 18, Township 9 South, Range 27 East, NMPM, Chaves County, New Mexico, as a dual completion (conventional) ~~(combination)~~ ~~(tubingless)~~ to produce gas from ~~the~~ an undesignated Abo gas pool ~~and~~ Atoka Pool, and gas from an undesignated Atoka gas pool through parallel strings of tubing.

PROVIDED HOWEVER, that the applicant, ~~will perform a temperature survey after the~~ said well has produced for 30 days into a pipeline, shall cause a temperature survey and a noise log to be run in the well under the supervision of the Artesia District office of the Division.

PROVIDED FURTHER, that should the above tests indicate production ~~or cross-flow between the Abo perforated interval~~ from the two Upper Atoka perforated intervals or cross-flow between the Abo formation and the Atoka formation, the packer in said well ~~between these intervals~~ shall be reset so as to isolate the Abo and ~~from the~~ Atoka formations from each other.

FURTHER

PROVIDED ~~HOWEVER~~, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Division Rules and Regulations insofar as said rule is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take packer leakage tests upon completion and annually thereafter during the Annual Shut-in Pressure Test Period for the Atoka Pool.

(2) That that portion of this case relating to downhole commingling of Abo and Atoka production in the subject well is hereby denied.

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

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

PROVIDED FURTHER, that should said tests establish that the aforesaid upper Atoka perforated intervals are non-productive and that there is no cross flow between the Abo formation and the Atoka formation, the Division Director is hereby authorized to approve the down-hole commingling of said Abo perforations and the uppermost two sets of Atoka perforations in the same common annular space of the subject well.