STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING)
CALLED BY THE OIL CONSERVATION)
DIVISION FOR THE PURPOSE OF)
CONSIDERING:) CASE NO. 10908

APPLICATION OF SNYDER OIL CORPORATION

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: Michael E. Stogner, Hearing Examiner
Jim Morrow, Hearing Examiner

February 17, 1994

Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Division on February 17, 1994, at Morgan Hall, State Land Office Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico, before Deborah O'Bine, RPR, Certified Court Reporter No. 63, for the State of New Mexico.

MAR 21 1994

CUMBRE COURT REPORTING
P.O. Box 9262
Santa Fe, New Mexico 85704-9262
(505) 984-2244 FAX: 984-2092

I N D E X

February 17, 1994
Examiner Hearing
CASE NO. 10908

E X H I B I T S

A P P E A R A N C E S

FOR THE DIVISION: ROBERT G. STOVALL, ESQ.
General Counsel
Oil Conservation Commission
State Land Office Building
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

FOR THE APPLICANT: TANSEY, ROSEBROUGH, GERDING & STROTHER, P.C.
621 West Arrington
Farmington, New Mexico 87401
BY: TOMMY ROBERTS, ESQ.

EXAMINER STOGNER: I'm going to call this hearing to order for Docket No. 6-94. I'm Michael Stogner, appointed hearing officer for today's cases.

The first matter that we'll call today is Case No. 10908, which is the application of Snyder Oil Corporation for downhole commingling, San Juan County, New Mexico.

At this time I'll call for appearances.

MR. ROBERTS: Mr. Examiner, my name is Tommy Roberts. I'm an attorney with the Tansey law firm in Farmington, New Mexico. I'm appearing on behalf of the applicant, Snyder Oil Corporation. I have one witness to be sworn.

EXAMINER STOGNER: Are there any other witnesses? Will the witness please stand to be sworn at this time.

(Witness sworn.)

EXAMINER STOGNER: Mr. Roberts.

JOE WILBANKS,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

EXAMINATION

BY MR. ROBERTS:

Q. Would you state your name and your place of residence for the record?
A. Joe Wilbanks, Farmington, New Mexico.
Q. By whom are you employed?
A. On Site Technologies, Limited.
Q. In what capacity?
A. As engineering manager.
Q. How long have you been employed by On Site?
A. A year and a half.
Q. What kind of work does On Site do?
A. We do petroleum engineering consulting work.
Q. What are your job responsibilities?
A. To supervise consultants in the field and do economic analysis in the office and regulatory compliance.
Q. What is the relationship of On Site Technologies to the applicant in this case, Snyder Oil Corporation?
A. We're their agent.
Q. How long has that relationship existed?
A. Approximately nine months.
Q. What kind of work does On Site perform on behalf of Snyder?

A. We perform regulatory work and on-site supervision.

Q. Have you testified on any prior occasions before the Oil Conservation Division or Commission?

A. No.

Q. Briefly describe your formal education subsequent to high school.

A. I obtained a B.S. in petroleum engineering and a B.S. in geology from Texas A&M University.

Q. And briefly describe your occupational background subsequent to completion of your formal education.

A. I worked four years as an engineer for Cities Service in Midland, Texas, and I have been a consultant for the last ten years.

Q. Do you have any professional registrations or certifications or affiliations?

A. Society of Petroleum Engineers, Four Corners Geological Study, API.

Q. Have you testified on any prior occasions before any other oil and gas industry regulatory agency and had your qualifications as an expert in the field of petroleum engineering accepted and made a matter of record?

A. Yes.

Q. And what were those agencies?

A. Texas Railroad Commission and Oklahoma Oil and Gas Commission.

Q. Are you familiar with the application in this case?

A. Yes.

Q. Have you prepared certain exhibits to be submitted in conjunction with your testimony?

A. Yes.

MR. ROBERTS: Mr. Examiner, I would tender Mr. Wilbanks as an expert petroleum engineer.

EXAMINER STOGNER: Mr. Wilbanks is so qualified.

Q. (BY MR. ROBERTS) Mr. Wilbanks, would you briefly describe the purpose of this application?

A. Yes. Snyder seeks approval to downhole commingle the Gallup and Basin Dakota gas pool production within the wellbore of Con Hale #2E located in the southwest southwest, Section 15, Township 26 North, Range 8 West.

Q. Has the Gallup formation in this area been dedicated to a pool?

A. It's dedicated as a wildcat pool.

Q. What kind of hydrocarbon substances are produced from each of these zones?

A. The Gallup produces gas and oil, and the Dakota produces gas and condensate.

Q. Let me have you refer to what's been marked as the Applicant's Exhibit No. 1 and ask you to identify that exhibit.

A. Exhibit 1 is a base plat of the area surrounding the Con Hale 2E. You have a one-mile radius drawn in there with the offset operators marked and the zones in which those wells are completed in.

Q. How is the location of the Con Hale 2E well designated on this plat?

A. It's within the outlined green area, which is the 40-acre Gallup proration unit, spacing unit.

Q. What is the size of the spacing proration unit which has been established for the Dakota formation?

A. It is 320 acres.

Q. How has that been depicted on this plat?

A. That is the pink line outlined.

Q. Identify for the record the operators of the offset wells.

A. In Section 16, you have Hallwood Petroleum. Then to the south and east, you have Meridian, and also Merit to the west.

Q. Are these well operators also the owner of leasehold operating rights in the leases covering these lands offsetting the Con Hale 2E well?

A. Yes.

Q. Who is the owner of the mineral interests under the lands dedicated to the Con Hale 2E well?

A. They are Federal minerals.

Q. I want you to turn to what has been marked as Exhibit No. 2 and ask you to identify that exhibit.

A. This exhibit depicts the cumulative and current production rates of the Gallup and Dakota offsetting wells.

Q. In what way is the data depicted on this exhibit relevant to the application for downhole commingling?

A. What this shows is the offsetting wells are mature wells with fairly low producing rates. The well in Section 16 operated by Hallwood produced about 80 Mcf a day. And the other Dakota wells are shut in or have been converted to P.C. wells.

Q. Would you briefly describe the drilling and completion history of the Con Hale #2E well.

A. Yes. The Con Hale 2E was drilled in 1984, completed in the Dakota in July of that year, with an

I.P. of approximately 1.7 million cubic feet of gas, 0 water.

They came back a year later in October of '85 and completed the Gallup, making it a dual completion. The Gallup came in for 190 Mcf, 13-1/2 barrels of oil, and the well was completed with a packer set at 6430 and dual strings of 1-1/2 tubing.

Q. What is the current status of the well?

A. The current status is the Dakota is nonproductive due to liquid loadup, and the Gallup is producing approximately 150 mcf a day.

Q. Now turn to what's been marked as Exhibit No. 3 and identify that exhibit.

A. This is the current wellbore schematic and well history of the Con Hale 2E.

Q. Would you again briefly describe the physical characteristics of the wellbore and the manner in which it has been completed to effect separate production from the Gallup and Dakota zones?

A. Yeah. There was a packer set in between the Gallup and Dakota zone, the Dakota producing from underneath the packer, and the Gallup producing into the 1-1/2 above the packer.

Q. And how do you propose to effect the downhole commingling of production from the Gallup

and Dakota zones in this wellbore?

A. Both strings of 1-1/2 tubing will be pulled, the packer will be pulled, a single string of 1-1/2 will be run into the Dakota, and the well will be placed on plunger lift.

Q. Assuming that downhole commingling is authorized, are there any fluid-sensitive sands that -- will the fluid-sensitive sands be adequately protected from contact with water or other liquid produced from other zones in the well?

A. Yes.

Q. Now, turn to what's been marked as Exhibit No. 4 and identify that exhibit.

A. Exhibit No. 4 is the gas and water analysis on the Dakota and Gallup zone in the Con Hale 2E.

Q. Who took the samples?

A. The gas analysis and water analysis were taken by Gas Analysis Service in Farmington, and the water was taken by the sister company, Water Analysis Testing.

Q. Who analyzed the samples?

A. The same.

Q. The same entities?

A. The same.

Q. When were these samples taken?
A. December 16, 1993.
Q. And when were they analyzed?
A. December 20, 1993.
Q. When did you receive the results of the analysis?
A. December 20, 1993.
EXAMINER STOGNER: I'm sorry, what?
THE WITNESS: December 20, 1993.
Q. (BY MR. ROBERTS) With respect to the gas analysis for each zone, what components or factors were analyzed?
A. The gas nitrogen, CO_2, and all the hydrocarbon constituents were analyzed for the gas.
Q. With respect to the water analysis for each zone, what parameters were tested?
A. Sodium, potassium, calcium, magnesium, iron, sulfides, TDS, chlorides, sulfates, bicarb.
Q. Would you briefly summarize the results of the gas analysis and the water analysis?
A. Yeah. From Exhibit 4, the gas analysis for each zone are very similar. They both contain small amounts of nitrogen and CO_2. The hydrocarbon constituents from methane to hexane plusses are similar. The Btu content for each zone -- for the

Dakota is 1246, for the Gallup is 1256; so they're very similar.

Q. Based on this analysis and your review of the analyses, are the fluids from each zone compatible?

A. Yes.

Q. In your opinion, will combining fluids result in the formation of precipitants which might damage either zone?

A. No.

Q. In your opinion, will the combination of gaseous and liquid hydrocarbons in the wellbore restrict the producing capabilities of either zone or create operational problems?

A. No.

Q. Let's have you turn now to what's been marked as the Applicant's Exhibit No. 5, and please identify that exhibit.

A. Exhibit No. 5 are the downhole pressure tests run by Tefteller for both the Dakota and Gallup zones.

Q. What was the date of the test on each zone?

A. January 20, 1994.

Q. Would you briefly describe the test

procedure?

A. We run downhole pressure bombs on water line, taking gradients as we go in the hole to determine the bottomhole pressure of each zone.

Q. Briefly describe the results of the test.

A. The Dakota zone showed at mid-perf, which was 6863, a bottomhole pressure of 718 pounds, and the Gallup at mid-perf at 6841 showed a pressure of 591 pounds.

Q. Given the results of the pressure testing, in your opinion, will cross-flow occur between the zones to be commingled?

A. No.

Q. Briefly summarize the production history for each zone completed in this well.

A. The Dakota came in at about 1.7 million and has had a basic decline rate of 8 percent per year. And the cum of the Dakota up until this point is 102 million and is nonproductive at this time.

The Gallup has a cumulative of 194 million and is currently producing 100 Mcf a day.

Q. Let's have you refer to what you have marked as Applicant's Exhibit No. 6 and ask you to identify that exhibit.

A. These are the decline curves for the last

four years on. The first one there is the Dakota, showing reduced production mid-'91. And the second is the decline curve for the Con Hale-Gallup zone.

Q. What is the third page attached to Exhibit No. 6?

A. It's a tabular form on each zone showing the monthly production since January of 1990.

Q. I believe you testified as to the annual rate of decline for the Dakota zone. What is the annual rate of decline for the Gallup zone?

A. 9 percent.

Q. Now take a turn to what's been marked as Applicant's Exhibit No. 7. Would you please identify that exhibit.

A. No. 7 is the C-116 Gas-Oil Ratio Test for the Wildcat Gallup zone on the Con Hale 2E.

Q. Who conducted that test?

A. Snyder field personnel.

Q. When was it taken?

A. This test was taken at 4-11-93.

Q. Do you have a similar test for the Dakota formation?

A. No, I do not.

Q. And why not?

A. Because it's nonproductive.

Q. Why is there not a more current test for the Gallup zone?

A. This is the last one that Snyder provided to me in the C-116 form. They have taken subsequent tests to show that this production is the same.

Q. Would you briefly describe the test procedure?

A. Basically, they take -- it's a scheduled test, yearly test, where they just read the chart.

Q. What were the results of the test?

A. They had 80 Mcf a day of gas, 1.2 barrels of water, and 1.5 barrels of oil.

Q. I'd have you refer to Applicant's Exhibit No. 8 and ask you to identify that exhibit.

A. These were several economic scenarios that I ran on the commingled Gallup and Dakota zones and one for uncommingled Gallup.

Q. What was the purpose of this analysis?

A. It was to show that additional reserves would be added if commingling took place, and to show that the economic value of it was enhanced by commingling.

Q. What factors did you consider in performing this economic analysis?

A. We used the production history, decline-

curve analysis and projected future production. We held gas pricing at $2 constant through the life of the project and escalated operating cost at 10 percent per year.

Q. Describe the results of that analysis.

A. The analysis showed that the Dakota has a remaining 285 million cubic feet of gas, and if it were to be commingled, and the Gallup has an additional 390 million, the uncommingled Gallup would have an additional 286 million.

Q. In your opinion, can the Dakota zone be economically produced separately and independently of the Gallup zone?

A. No.

Q. Do production histories of these zones and results of your economic analysis support your opinion?

A. Yes.

Q. In your opinion, will the value of the commingled production be at least equal to the sum of values of production from the individual zones?

A. Yes.

Q. Is the ownership of these two zones common with respect to working interest, royalty interest, and overriding royalty interests?

A. No.

Q. Let me have you refer to what you've marked as Applicant's Exhibit No. 9 and ask you to identify that exhibit.

A. Okay. Exhibit No. 9 is the formula for determination of allocation percentages.

Q. What percentage of the confined gaseous hydrocarbon production do you propose be allocated to each zone?

A. Okay. For the liquid hydrocarbons, the Gallup zone would receive 72 percent, and the Dakota would receive 28 percent. For the gaseous hydrocarbons, the Gallup would receive 58 percent and the Dakota 42 percent.

Q. What factors or data did you consider or analyze which support this proposed allocation formula?

A. This is strictly a production method of allocation, taking into account future reserves.

Q. Can you describe that process in more detail?

A. Yeah. You just, from decline curve analysis, forecasting reserves, you get future reserves from both oil and gas for the Dakota and Gallup zones, and with -- you add the two together to

get total reserves, and divide each zone's reserves by the total to get the percentages.

Q. In your opinion, does the proposed allocation formula adequately and equitably protect all the owners of production from each of these zones?

A. Yes.

Q. Mr. Wilbanks, in your opinion, will the granting of this application be in the best interest of conservation and result in the prevention of waste and the protection of correlative rights?

A. Yes.

Q. Were Exhibits Nos. 1 through 9 either prepared by you or at your direction or under your supervision?

A. Yes.

MR. ROBERTS: Mr. Examiner, I move the admission of Applicant's Exhibit Nos. 1 through 9.

EXAMINER STOGNER: Exhibits 1 through 9 will be admitted into evidence.

MR. ROBERTS: I have no other questions for this witness, but as a final matter, I would like to place into the record what has been marked as Applicant's Exhibit No. 10, which is an affidavit which I have prepared regarding notification of all

interested parties. It recites the facts of the notification of offset operators and owners of offset leases, as well as the Bureau of Land Management, and I would move its admission.

EXAMINER STOGNER: Exhibit 10 will be admitted into evidence at this time.

MR. ROBERTS: That's all we have on Direct.

EXAMINATION

BY EXAMINER STOGNER:

Q. Mr. Wilbanks, you said that the ownership was different. Could you go into a little more detail on how that is separated?

A. Yes, sir. Okay. For the Dakota, the working interest owners are Snyder. Do you want percentages?

Q. Are they presented? Maybe I missed them.

A. No, they aren't presented.

EXAMINER STOGNER: Why don't you present that in the form of an exhibit, Mr. Roberts?

MR. ROBERTS: Okay.

MR. STOVALL: Let's get on the record, though, just your description, briefly. Is it a difference in who they are, or is it just a difference in the percentages they own in different

zones?

THE WITNESS: It is both.

MR. STOVALL: Both?

THE WITNESS: Snyder has an interest in the Dakota and does not have an interest in the Gallup. And the other -- well, I can just run through it, if you want.

MR. STOVALL: Why don't you run through it real quickly so the exhibit is supported by your testimony.

THE WITNESS: Okay. On the Dakota, Snyder --

MR. STOVALL: I'd just say read it off like a list. Read it slow enough so she can get it.

THE WITNESS: Okay. Snyder has 7.68 working interest. SoCo LTP Limited Partnership, which is a Snyder affiliate, has 30.72 percent. Consolidated Oil & Gas owns 14.4. Samson holds 43.2. And Siegel Oil & Gas holds 4 percent.

MR. STOVALL: That was Dakota?

THE WITNESS: That was Dakota. And the Gallup, Consolidated holds 24 percent, Samson holds 72 percent, and Siegel holds 4 percent.

MR. STOVALL: Royalty and overrides are the same?

THE WITNESS: Yes.

Q. (BY MR. ROBERTS) Mr. Wilbanks, were these owners notified of this hearing?

A. Yes.

Q. Did you have any response from them?

A. No negative response.

MR. ROBERTS: Thank you. I will have an exhibit prepared and submit it as an exhibit.

EXAMINER STOGNER: Thank you, Mr. Roberts.

Q. In referring to your production, I show that the Dakota hasn't produced since, it looks like February or January of '93. Was that shut in, or did it just not have the ability to produce?

A. No. It just died.

Q. It just died?

A. Because of liquid. They tried to swab it in several times without success.

Q. Has at any time during the producing life of the Dakota, has it been on any kind of lift?

A. No.

Q. So your allocation formulas and percentages are based more on reserves as opposed to actual production figures, or did you utilize any kind of history of any other commingled wells within

the area?

A. In the immediate area, there are no other commingled wells in the Gallup and Dakota. I based my formulas strictly on future value of each zone.

Q. I'm sorry, future value?

A. Well, future reserves, yeah.

Q. With no scientific reasoning as far as the ability to produce?

A. Well, yeah. You're using the decline -- I mean, you look at the Dakota and look at what it was producing before it had liquid buildup and died, and you just forecast those reserves from that point.

Q. But you have no evidence out there that, or any past experience out there that that will indicate actual production rates once plunger lift and commingling occurs?

A. The actual field experience in the immediate area?

Q. Yes.

A. No.

Q. Is the Gallup zone a marginal producer, or has it been shut in for high gas-oil ratio or high gas production, casinghead gas allowable?

A. It is characterized as a gas zone.

Q. But you show 40-acre -- am I to understand

it has 40 acres dedicated to it?

A. Yeah, that's correct.

Q. And it's a gas? That's an oil well, isn't it?

A. Yeah, that's an oil well.

Q. Now I'm more confused.

A. I do not believe it has been shut in, in the past, due to high gas-oil ratios, but I don't know for sure.

Q. Is it on plunger lift, the Gallup production?

A. No. Neither one is on any type of artificial lift at this time.

Q. Have you been in contact with our Aztec district office about the proposed commingling?

A. Yes.

Q. What was your response from them?

A. They had no problem with it.

Q. Did you discuss the allocation formula with them?

A. I don't believe the allocation formula was discussed.

Q. This is an infill well in the Basin Dakota Pool; isn't it?

A. That's correct.

Q. Is the original well still producing?
A. No. It has been converted to PC, the one in the northern part of the section.
Q. Do you plan to put this on a plunger lift if this application is approved?
A. Yes, sir.
Q. Immediately?
A. Yes, sir.
Q. Is the lower zone, in this case being the Dakota, do you know if it's fluid-sensitive as far as water?
A. It is not.
EXAMINER STOGNER: Do you have any other questions of this witness, Mr. Stovall?
MR. STOVALL: I don't.
EXAMINER STOGNER: I don't have enough information in front of me to ask any more questions, Mr. Roberts; so at this time I'll take this case under advisement.
MR. ROBERTS: If you have other areas specifically where you need more information, we can either supplement the record or --
EXAMINER STOGNER: I'll have to look at our own records and make my determination after reviewing those and with the information that's

provided today.

MR. ROBERTS: Okay.

EXAMINER STOGNER: With that, Case No. 10908 will be taken under advisement.

(A discussion was held off the record.)

MR. STOVALL: Mr. Roberts, in reviewing a little bit with Mr. Stogner, the questions, and he wants to do some checking as to some concerns he's got, if we find that there's a problem or something that the Division records will reveal, we'll notify you and, if necessary, give you the opportunity to reopen and address specific concerns.

MR. ROBERTS: I appreciate that.

MR. STOVALL: At the moment, we're not quite sure what the concerns are; so we can't give you specifics to deal with.

MR. ROBERTS: That's what I was concerned about is having an opportunity to address those concerns when they're identified. Appreciate it.

MR. STOVALL: We will do that, if necessary.

CERTIFICATE OF REPORTER

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

I, Deborah O'Bine, Certified Shorthand Reporter and Notary Public, HEREBY CERTIFY that I caused my notes to be transcribed under my personal supervision, and that the foregoing transcript is a true and accurate record of the proceedings of said hearing.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL, February 20, 1994.

OFFICIAL SEAL
Deborah O'Bine
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: Sept. 19, 1994

Deborah O'Bine
DEBORAH O'BINE
CCR No. 63

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 10908, heard by me on [illegible] 1994.

[illegible], Examiner
Oil Conservation Division

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date FEBRUARY 17, 1994 Time: 8:15 A.M.

NAME	REPRESENTING	LOCATION
W. Perry Pearce	Kellahin & Kellahin	Santa Fe
Rex Howell	Collins & Work	Houston
Curt Anderson	" "	Midland
Maurice Trujillo	Byram Co	SF
Joe A Wilson	Snyder Oil Corp	Farmington
Tommy Roberts	Tansey Law Firm	Farmington
Bill Ballew	Gallegos Law Firm	SF
Mark Perry	E³C	Albq
Craig W. Van Kirk	Hartman	Denver
Jerry Hoover	Conoco	Midland
Mark McClelland	Conoco	Midland
Reed Meek	Conoco	midland, TX
Billy Goodwin	Conoco	MIDLAND
Dorothy Brelih	Texaco	Hobbs, N.M.
Denise Wann	Amerada Hess	Monument, N.M.
Russell S Pool	Texaco E&P	Hobbs N.M.
William F. Carr	Campbell, Carr, Berge & Sheridan	Santa Fe

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date FEBRUARY 17, 1994 Time: 8:15 A.M.

NAME	REPRESENTING	LOCATION
VIC LYON	GAS Co / NM	Santa Fe
Bill Hawkins	Amoco	Denver
Alan W. Bohling	Chevron	Midland
Robert Green	Chevron	Midland
Reed Gilmore	Chevron	Midland
SCOTT B. DAVES	MERIDIAN OIL	FARMINGTON
by C. Clerk	Meridian Oil Inc	Farmington, NM