

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
April 19, 1961

EXAMINER HEARING

IN THE MATTER OF:

Application of J. R. Cone for an
exception to Rule 303(a). Appli-
cant, in the above-styled cause,
seeks permission to commingle, with-
out separate measurement, the pro-
duction from the Drinkard Pool, the
Blaine Gas Pool and the Tubb Gas
Pool from all wells presently com-
pleted on the Anderson Lease, com-
prising the NE/4 SE/4 of Section 21,
Township 21 South, Range 37 East,
Lea County, New Mexico.

Case 2257

Application of Markham, Cone and Redfern
for an exception to Rule 303(a). Ap-
plicant, in the above-styled cause,
seeks permission to commingle, without
separate measurement, the production
from the Drinkard Pool, the Blaine
Gas Pool and the Tubb Gas Pool from all
wells presently completed on the Eu-
banks Lease, comprising the SW/4 of Sec-
tion 14, Township 21 South, Range 37
East, Lea County, New Mexico.

Case 2258

CONSOLIDATED

BEFORE: Mr. A. L. "Pete" Porter,
Secretary-Director, Alternate Examiner

TRANSCRIPT OF HEARING

MR. PORTER: Call the next case, 2257. Application of
J. R. Cone for an exception to Rule 303(a).

MR. WHITE: Charles White, Gilbert, White and Gilbert,
appearing on behalf of Applicant, I might mention that the appli-
cant in this case, 2257, is a general partner and one of the

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applicants in Case 2258, and we might save some time if we were to consolidate the cases.

MR. NUTTER: Is case 2258 for an exception to Rule 303(a)?

MR. PORTER: Yes. Without objection the cases will be consolidated for the purpose of taking testimony.

MR. WHITE: We have one witness that will appear in both cases. (Witness sworn.)

L. O. STROM

called as a witness, having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. WHITE:

Q Will you state your full name for the record, please?

A L. O. Strom.

Q By whom are you employed and in what position?

A J. R. Cone as petroleum engineer.

Q Are you acquainted with the situation that exists in case 2257?

A I am.

Q Are you also acquainted with the facts pertaining to case 2258?

A I am.

Q Mr. J. R. Cone is the operator as to both leases?

A He is operating partner in both cases, both leases.

Q Will you refer to Exhibit No. 1 in case 2257 and state



the lease location, show the location of each of the wells, producing zones and then trace the movement of the oil from each well under the proposed installation for commingling.

A The lease in question is known as the J. R. Cone-Anderson lease comprising 40 acres, more or less, being the northeast quarter of the southeast quarter of Section 21, Township 21 South, Range 37 East in Lea County, New Mexico.

Well No. 1 is a dual completion gas over oil comprising the Tubb Gas zone and the Drinkard oil. Well No. 2 is a twin now producing from the Blinebry oil zone. This well in years past was originally completed in the Hare Pool; that zone depleted. Two years ago it was recompleted and that zone was depleted and abandoned. In February of this year the well was recompleted in the Blinebry oil zone. All of these are recognized and defined by the Oil Conservation Commission.

In the case of the Drinkard oil it is traced in green on the exhibit. It flows from the well through a pressure-type heater treater which serves as a separating vessel and heating facility when needed. From there the well oil currently is going into the 500-barrel tanks shown at the top of the sketch. The Blinebry oil zone produces from Well No. 2 through the individual separators, thence through an atmospheric heater treater; thence through 300-barrel tanks as shown on the sketch.

The Tubb gas zone currently is not being produced. It has been used as a supply for gas lifting and is now abandoned.



Prior to that, delivery of the gas had been made under high pressure to El Paso Natural Gas Company and with the recompletion of No. 2 as a flowing Blinebry oil well, there is no need to double the gas lift and we ceased production of the Tubb zone pending this hearing. If this application is approved, we anticipate moving the high pressure Tubb gas through a high pressure separator currently on the lease from whence the condensate will be separated. This will pass through a low-stage separator already on the lease facility -- correction on that -- this will pass under the commingling arrangement under the Drinkard pressure type heater separator where they'll be treated with the Drinkard oil and pass into the 300-barrel tanks.

I show it as the 300-barrel tanks for this reason: The current capacity of the Drinkard zone in well No. 1 is 12 barrels per day; that was always the daily average of that zone during 1960.

The Blinebry oil zone is testing with a ratio in excess of 21,000 as indicated in our statement; therefore, it will undergo a penalty which will reduce the allowable to 12 barrels or less than the present proration formula. Inasmuch as the Anderson lease is a 40-acre tract, the high pressure gas allowable is one-quarter of the normal 160 Tubb gas. During 1960 that allowable was approximately two and a half million cubic feet per month.

MR. NUTTER: That's the 40-acre allowable?

THE WITNESS: Yes, for the 40-acre allowable.



A Inasmuch as we are not separating the liquids during the gas lift operation, I don't know exactly what the liquid recovery will be from the Tubb zone when we resume production. On the basis of the Eubanks lease, I estimate the recovery will be 10 barrels per million which would average 25 barrels a month less than in the commingling of the liquids. We would anticipate an end product that would total perhaps 25 barrels a day. In our statement we indicate the gravities of the liquids as they are now going through the pipeline in the Drinkard and Blinebry wells, as well as the current prices paid by Sinclair for whose account the oil is run on that lease.

The Tubb condensate if separately saved and run would bring a price of \$2.79 per barrel because it will average in gravity something above 65 degrees API. All liquids purchased for Sinclair's account above 55 degrees sell for \$2.79 on crude oil schedule.

The Drinkard oil in the last eight months has been averaging 36 degrees, API, to the pipeline. The Blinebry oil currently is running between 40 and 41 degrees, API. It is our feeling that the mixing of the three liquids will develop an end crude or blended crude that will average approximately 40 degrees API which would bring the top price of \$3.01 per barrel. Each liquid saved and run separately would bring an income something like \$35 a month less than the commingled product would bring. It would not require any additional facilities to handle



this commingling. For test purposes, we would either shut in the other zones if necessary in order to get a test of the zone in production. We think the production pattern of well No. 1 which has handled its own storage for nearly twelve years will make approximately 12 barrels and that plus the condensate recovery from the Tubb zone plus the liquid recovery from the Blinebry zone, I thknk we can check our Blinebry zone, I know we're within the penalized allowable.

Q You don't intend to separately meter these crudes, do you?

A Our request is for commingling without separate measurement because of the marginal nature of the production.

Q Are all wells producing their top capacity?

A They are.

Q Are any of the wells producing top allowable?

A None are capable of top allowable.

Q Do you anticipate that this production will remain approximately the same in the future?

A The same, and it will no doubt decline as is typical of oil wells.

Q That would be the same in all zones?

A I expect it will gradually decline. The liquid recovery ratio from the Tubb will decline; the Drinkard should decline and also the Blinebry oil.

Q Are all royalty interest common throughout the lease in



case 2257?

A Common in all zones and all wells.

Q Will you refer to Exhibit 1 in case 2258 and state the location of that lease and the location of oil-producing zones?

A This lease depicted is known as the Markham, Cone and Redfern lease and it occupies 160 acres, more or less, being in the southwest quarter of Section 14, Township 21 South, Range 37 East, Lea County.

Development of the lease includes four wells, three of which are dual completions. In each of the wells, the Drinkard oil zone is developed. In No. 2, the Tubb gas zone is developed. In addition, in well No. 1, the Blinebry gas zone is developed. Well No. 4 is a parallel string dual completion in the Blinebry oil zone and the Drinkard oil zone, and as a consequence of that completion the 40 acres surrounding that well were removed from the 160 acres dedicated to the Blinebry zone. The current dedication is 120 acres in the Blinebry gas zone in wells 1 and 4.

The current allowable on the four Drinkard wells totals approximately 80 barrels. As the Commission is aware, this is the annual gas-oil ratio test period for the Drinkard pay. Our present tests indicate that we will undergo some reduction due to ratio penalty in the allowable. We anticipate our total Drinkard allowable from the four wells will be something in the vicinity of 70-75 barrels, not in excess of that.

The production from the Blinebry zone is passed through a



high pressure separator from thence the dry gas goes to El Paso. The liquids are passed through a low stage separator at the battery. The same applies to the Tubb gas zone. The liquids from the high pressure separator of that zone being passed through the same low stage separator where the two condensates are commingled under prior authority from the Commission.

Under our present operation, the liquid from the low pressure separators are passed through to the 90-barrel tanks, which are depicted on the left of the sketch. The Drinkard oil passes directly from the well to a separator, thence through a heater, thence to a 750-barrel settling tank, thence to two 500-barrel stock tanks.

The Blinebry oil zone, production is passed through its own separator which is shown as a small square and not marked -- I now notice on the exhibit -- and thence to three 210-barrel tanks shown on the sketch. It is our proposal to commingle the liquids from the four Drinkard zones, the Blinebry gas zone, and the Tubb gas zone into common storage being the 500-barrel tanks shown on the sketch. The Drinkard oil zone is a top allowable producer and we do not request commingling of that crude under any conditions at this time. It will be saved and run separately. The liquids in the other zones we would request permission to commingle without individual measurement.

Once again, we anticipate an increase in gravity in the crude to the extent that we calculate an increased revenue in the



vicinity of \$180 a month.

Q That's what the crude will command?

A In each case it will command a top crude price. I would point out that all liquids saved from the Eubanks lease are run by Shell Pipe Line Corporation for the account of Shell Oil Company.

Q In your opinion, will the tank facilities on this lease be adequate?

A Yes, sir, they will be.

Q With reference to case 2258, should the Commission see fit to grant the application, would you want to include any additional wells that may be drilled on the lease in the future?

A Yes, I would like to point out to the Commission that the lease has two unmet offset obligations to the west; one to the east. In the Blinebry oil zone the operators of that lease are faced with meeting that obligation in terms of twin drilling over the hole of the present wells.

Q That's the reason you'd like to have --

A It is possible that we would choose to drill twin locations, and such a hole, if it was drilled, would be drilled enough to open the other established pays for long range recompletion possibilities.

MR. PORTER: That would be in the Blinebry zone?

THE WITNESS: We may be forced to drill an individual hole to meet the Blinebry obligation, and, of course, for each one

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we would lose 40 acres of the gas allowable.

MR. PORTER: I see.

Q (By Mr. White): Are the royalty interests common throughout the various zones?

A Royalty interests are common.

Q Do you have anything else you'd like to state before the Commission?

A I would like the Commission to be aware that during the year 1960, the recovery of the Blinebry and Tubb liquids on the Eubanks lease averaged 7.8 barrels per million cubic feet high pressure produced in the two pays. Our tests indicate that our recovery rate should be running at least 10 barrels per million. We are well aware that in the separate receiving of the condensates there will be different gravities. They will run approximately 72 degrees API by the time they have passed through their own storage until the tank is full, and as we have been running it, the gravities of those combined liquids have been running from 61 to 66 degrees in the past year. We know we are losing on evaporation and by mixing that with oil we can reduce that evaporation loss with a net increase in total liquid recovery from the lease.

Q Is that also true in case 2257?

A We anticipate the same improvement in both cases.

Q As I understand it, in case 2257 you're not separating the liquids now?

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A We did not. Our gas lift was passed directly from the Tubb zone into No. 2

MR. PORTER: If you're only producing 12 barrels a month you probably wouldn't recover anything any way because it would evaporate before you got a full tank.

THE WITNESS: There's no question about it because under the present storage set-up from the Tubb zone to Anderson, it would take roughly 280 days to fill a tank. They don't like to run piecemeal.

Q (By Mr. White): Were the exhibits in both cases prepared by you?

A They were prepared by me.

MR. WHITE: We offer the exhibits in evidence.

MR. PORTER: Without objection, they will be admitted.

MR. WHITE: That concludes our direct examination.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Strom, by gravity improvement, you do expect to increase the revenue on the Anderson lease by \$35 a month, is that correct?

A Gross total.

Q And by gravity improvement on the Eubanks lease, you expect to increase the revenue by \$180 per month?

A Yes, sir, more liquids are involved there.

Q You stated that you would not commingle one well; which



one?

A The Blinebry oil zone, well No. 4, since it is capable, we feel, of top allowable production.

Q You want this authority to include other wells that may be drilled to the Blinebry?

A I'd like to correct an impression. We don't want authority to commingle the Blinebry oil zone liquid. The Blinebry gas zone liquid, Tubb gas zone, Drinkard oil zone are the only things we are interested in commingling without measurement.

Q These three gas wells are all to the Blinebry oil pool?

A Yes, and we would hope we could shut in on it by twin drills or overhaul what we have. We have extra storage available, separate storage is available for the Blinebry pool.

Q It's not included in the application in 2258?

A No, sir.

Q Would you give the initial potential for the four Drinkard wells?

A Well, I'll have to approximate these. We are not concluded with our tests. It should be between 10 and 15 barrels per day. No. 2 will be approximately the same. Well No. 3 would be approximately the same, I would say. These three wells together will probably draw between 30 and 35 barrels for testing purposes. It's currently at 35 barrels per day plus a very small amount of water.

Q Now, what about in case 2257? You stated that the Bline-

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bry oil well No. 2 would have a penalized allowable of 12 barrels.

A That is my computation on the recompletion which was affected right at the first of February, so the 30 to 60-day ratio test required by the Commission was not taken until March the 3rd. On that date, the producing ratio was shown in my statement as 21,825 cubic feet per barrel, so using the April allowable for the Blinebry oil pool, I computed that our allowable would not exceed 12 barrels on the basis of that ratio.

Q How many barrels of liquid would that be capable of producing?

A It's not capable now, today, of the 40 barrels that it was. It has declined.

Q Are any of these Drinkard wells on the Eubanks lease capable of making top allowable?

A No, sir, none. The ratio penalty will be effective on well No. 3 and possibly well No. 1 and not on wells Nos. 2 and 4.

Q Eubanks, Tubb and Blinebry are two-stage separators?

A Yes.

Q And then the Tubb gas on the Anderson lease will also be a two-stage separator by combining with the Drinkard production?

A Yes, sir. In each case the line will be checked. We can install additional checks for the commingled lines. They're actually brought together to prevent any flow break in the well.

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



MR. PORTER: Mr. Morris, do you have any questions?

MR. MORRIS: We may have some problem on your notice here in the way it's been advertised. The commingling permission is sought for wells presently completed on the lease. I'm not sure it's broad enough to take in wells that may be drilled in the future.

MR. PORTER: I think the applicant is willing to withdraw any reference to future wells. They would be coincidental to exploring the Blinebry oil zone for completion purposes, for recompletion sometime in the future.

MR. STROM: If the wells are drilled, they'll be drilled probably into granite to expose all possible recompletion zones in the future. That has been our practice in the past. The established pays include the Tubb gas zone, the Blinebry oil zone, the Drinkard oil zone and the Los Abo pool. Those are the only established pays in the vicinity of that lease.

MR. MORRIS: That's all.

MR. PORTER: Are there any further questions? If not, the witness is excused.

(Witness excused.)

MR. PORTER: If there is nothing further to come before the Commission, the hearing is adjourned.

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STATE OF NEW MEXICO)
) ss
 COUNTY OF BERNALILLO)

I, THOMAS F. HORNE, Court Reporter, in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me in machine shorthand and reduced to typewritten transcript under my personal supervision, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand this, the 25th day of April 1961, in the City of Albuquerque, New Mexico, County of Bernalillo, State of New Mexico.

Thomas F. Horne
 Reporter

I do hereby certify that the foregoing is a complete record of the hearing in the Examiner No. 13, 1961, heard by me on April 13, 1961.
W. G. Parker, Examiner
 New Mexico Oil Conservation Commission

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