Case 579

OIL CONSERVATION COMMISSION

HOBBS, NEW MEXICO

PROPOSED FALBY-YATES POOL

The area outlined in Red in Exhibit One is the proposed Falby-Yates Pool designation which incorporates a part of the Cooper Jal and Langlie Mattix Pool boundaries.

EXHIBIT ONE is a structural map on the productive top of the Yates section. This information was obtained from Commission files and correlation of electric log data throughout the area in question. From this data a structural low has been observed, the center of which is in Section 24 with a continued secondary low center in the W/2 of Section 19. In my opinion this structural low in the Yates Section has reversed the trend of regional gas accumulation which is typical of this formation in the area and instead has resulted in a favorable oil accumulation.

EXHIBIT TWO is a gas-oil ratio contour showing the relatively low gas-oil ratios encountered within the designated low structural area with rapidly rising ratios upstructure which increase to infinity or relatively high values in the direction of the gas wells completed up the structure.

The low productive rates encountered in the N/2 of Section 18, T24S, R37E, is typical of the low productive rates of the Queen section. It is becoming a practice of the operators to recomplete the wells in this area to the Yates-gas-production zone whenever the Queen zone becomes uneconomical. Typical of this type of operation is the R. Olsen, Blankenship #1. Unit J-Section 18, T24S, R37E. The original T. D. was 3601, Csg. set @ 3425 completed August 5, 1946, from the Queens Zone. The well produced 11,394 bbls of oil declining to 5 bbls of oil per day in December of 1950. The well was plugged back to 3425 ft. and 5½" csg. perforated from 3152 to 3205 and hydrafraced with 1500 gals. At present the well is producing gas at the rate

of 1,171,000 cu. ft. per day @ 533 lbs. pack pressure.

EXHIBIT THREE shows the monthly oil production throughout the area on 40 acre units.

Green: indicates 1000 bbls per month or over

Blue: 500, 1000 bbls per month

Uncolored area: is production from either the Queens or non-oil production from the dry gas wells located up the structure.

From my actual field experience and information available to me at the present time it is my opinion that the Yates Section and the lower Seven-Rivers-Queen Sections are two separate reservoirs. For further proof, however, it is recommended that a B. H. P. survey be conducted in this area with special emphasis placed on surveying adjoining Queen completed wells so that a direct comparison of pressures be made of the two zones in question. In the event a marked difference in pressure is noted it is recommended:

1. That the area of the Falby-Yates Pool be delineated as advertised in Case 579.

2. That the Yates Zone be considered as one reservoir and the Seven-Rivers-Queen Zones be considered a seperate reservoir and the combining of the two zones for production of oil and gas through one well bore not be permitted.

3. That the gas-Oil ratio limit remain unlimited.

4. That since the regional Yates section is principally a gas producing zone, the present practice of producing the gas wells up structure remain on a dry gas productive status and not be penalized on the basis of volumetric withdrawals due to their proximity to a small oil trap in the Falby-Yates Pool.

MEMORANDUM: TO THE OIL CONSERVATION COMMISSION

FROM: W.B.MACEY

SUBJECT:: CASE 579:: Creation of the Falby-Yates Pool, Lea County, N.M. and deletion of the same area from 2 Oil pools, the Cooper-Jal and Langlie-Mattix Pools.

The proposed creation of the Falby-Yates Pool is closely tied to the Gas Pool orders to be written in Cases 582 and 583, the Jalco and Langmat Pools. The reason for thisis that the areal extent of the Jalco pool overlies the Falby-Yates, both in part being productive from the same horizon. Essentially the entire Yates productive zone in this area is a common reservoir with miscellaneous oil pools being encountered on the flanks of the structure and in geological or structural "Lows". The Falby pool occupies a structural low and the pool is predominantly composed of high gas-oil ratio oil wells which in some cases are offset by dry gas well producing from the same zone.

Although it is apparent that no harm can be done by adopting this pool, it should be pointed out that the formation of this pool will start a chain reaction and cause a lot of operators to request similar pools so that they can twin wells and thereby get two allowables. The twin wells will be completed in such a manner that one well is an oil or gas well in the Yates while on the same forty acre tract there will be a queen oil well. While it is obvious that better drainage of the entire reservoir will be affected there are some wells presently completed that have both formations exposed to the well bore and thus the separate reservoir theory is not in existance.

RECOMMENDATION:

It is recommended that the Falby-Yates pool be created as advertised and that the area as advertised to be deleted from the Cooper-Jal and Langlie Mattix Pools also be put into effect. This order should further state that all wells which are productive in the pool shall have an unlimited Gas-Oil Ratio provided that the gas is marketed. If the Gas is not marketed, then a Gas-Oil ratio of 6000 to 1 should be placed into effect. The Order should require each operator to submit Form C-110 showing the disposition of the casinghead gas produced with the oil from the Falby-Yates pool and could be made effective Jan. 1,1954 so that the proper allowables could be assigned based on GOR tests. The majority of Operators do not oppose the pool formation, provided that the total withdrawals from Gas properties does not exceed the total withdrawals from oil properties and vice-versa. Because of this a study is to be made of the entire Cooper-Jal Pool to see if the pool is a common reservoir and to see that withdrawals are equitable and in the event that w thdrawals are not equitable then the allowables, both oil and gas , will have to be adjusted to accomplish equity.

The order should contain a further provision to the effect that in the event the present study of the productive zones and the extent of them in the Calco and Langmat Pools requires a revision in any of the provisions of this order then they may be changed after due notice and hearing.

The order should also contain a provision that each well hearinafter drilled or recompleted in the Falby-Yates area shall be completed in such a manner that the Yates zone is completely separated from any other formation so that the Yates and any other formation are not exposed to the same well bore.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

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RRS

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