OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

M E M O R A N D U M

On January 7, 1955, at 10 o'clock a.m., a meeting will be held in the Oil Conservation Commission offices at Hobbs, New Mexico. The purpose of the meeting is to discuss the area surrounding the old Falby-Yates Pool (generally located in Township 24 South, Ranges 36 and 37 East), particularly with reference to the presence of two oil-producing zones within the defined limits of the Jalmat Gas Pool.

Your attendance at the meeting will be sincerely appreciated.

W. B. Macey
Secretary - Director

December 28, 1954
Santa Fe, N. M.

(Please Note Attached Distribution List)

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

Gulf Oil Corporation
Box 2167
Hobbs, New Mexico

Continental Oil Company
Box 427
Hobbs, New Mexico

The Texas Company
Box 1270
Midland, Texas

Cities Service Oil Company
Box 97
Hobbs, New Mexico

Western Natural Gas Company
823 Tower Building
Midland, Texas

Amerada Petroleum Corporation
Box 312
Midland, Texas

John M. Kelly
Box 5671
Roswell, New Mexico

Carper Drilling Company
Carper Building
Artesia, New Mexico

W. B. Paddock
410 N. Texas Street
Odessa, Texas

Cactus Drilling Company
Box 348
San Angelo, Texas

R. Olsen Oil Company
~~Drawer 12~~
Jal, New Mexico

Humble Oil & Refining Company
Box 2347
Hobbs, New Mexico

Southern California Petroleum Co.
Box 1071
Midland, Texas

Stanolind Oil & Gas Co.
~~Box 68~~
~~Hobbs~~, New Mexico

Anderson-Prichard Oil Corp.
Box 2197
Hobbs, New Mexico

Haynes & V. T. Drilling Co.
1725 North Grant Street
Odessa, Texas

Magnolia Petroleum Corp.
Box 633
Midland, Texas

COPY

Case 841

Files

SOUTHERN CALIFORNIA PETROLEUM CORPORATION

SUITE 905 PETROLEUM LIFE BUILDING . . . MIDLAND, TEXAS

PHONE 4-8044

February 24, 1955

Mr. W. B. Macey, Secretary
Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Re: Case No. 841
Falby-Yates

Dear Mr. Macey:

The Southern California Petroleum Corporation would like to submit further testimony in Case No. 841, expanding their statement of February 17, 1955, on this case.

The Southern California Petroleum Corporation agrees with the Commission Staff that the Falby-Yates Field should be delineated from the Jalmat and set up as a separate field encompassing just the Yates formation. We believe that unless this separation is allowed inefficient and reduced recoveries will result, thereby causing waste of the oil and gas resources.

Coring by the Southern California Petroleum Corporation within the area of the Falby-Yates Field has emphasized the desirability of separating the Yates and the Seven Rivers formations. In coring the Seven Rivers in our Thomas No. 5, the upper Seven Rivers showed an average porosity of 2½% and effective permeability of less than 0.01 md, as compared with the middle Seven Rivers pay section of 17% and an average permeability of 18.6 md. In coring the Yates at our Thomas No. 6, we had an average porosity of 21.1% and an average permeability of 37 md. This same ratio has been borne out at our Dunn and Harrison leases.

A significant difference in the gravity of the oil is noted in the two reservoirs; Yates 34-36 API; middle Seven Rivers 36-38 API.

One of the most significant differences in the two reservoirs lies in the difference in bottom hole pressure. The Southern California Petroleum Corporation, Thomas No. 5 drilled in February, 1954, with an initial bottom hole pressure in the middle Seven Rivers of 978 p.s.i. compared to 1260 p.s.i. taken in the Yates in the same bore hole. Thomas No. 5 was the first of four middle Seven Rivers wells completed on our Thomas lease in Section 24, Township 24 South, Range 36 East, Lea County, New Mexico. This lease has four old Yates producers completed in 1949 and 1950. The high Yates pressure in the Thomas No. 5 is interesting, as the pressure existing five months previously in the four year old Yates wells, 825' and 990' away, were only 338 p.s.i. and 476 p.s.i. respectively. This indicates that the Yates wells

are draining a very limited area.

There is a significant difference in the gas-oil ratio between the two reservoirs; the Yates being two to three times as great originally as the middle Seven Rivers reservoirs. The Southern California Petroleum Corporation feels that in order to conserve reservoir pressure, a gas-oil ratio of no greater than 20,000-1 should be retained in the Falby-Yates reservoir and we do not object to a 10,000-1 gas-oil ratio limit. Observation of our Yates wells in this area indicate that by the time a gas-oil ratio reaches 15,000 to 20,000-1, its oil production will have declined to a point where the well is incapable of making a full allowable. For example: Dunn No. 1, SW¼ of the NE¼ of Section 24, Township 24 South, Range 36 East, 96.5 barrels, 24 hours, GOR 4100-1; Van Zandt No. 2, NE¼ of the NE¼ of Section 25, Township 24 South, Range 36 East, 37 barrels, 24 hours, GOR 19,921-1.

The Southern California Petroleum Corporation has used three large fracture treatments in the Falby-Yates area which treatments have considerably lowered the gas-oil ratio by greatly increasing the oil produced. For example: Van Zandt No. 1, NW¼ of the NE¼ of Section 25, Township 24 South, Range 36 East, 78 barrels, 24 hours, 12,500-1 GOR; Thomas No. 4, NE¼ of the SW¼ of Section 24, Township 24 South, Range 36 East, 46 barrels, GOR 6400-1; Dunn No. 1, SW¼ of the NE¼ of Section 24, Township 24 South, Range 36 East, 96.5 barrels, GOR 4100-1.

Thus it appears that our Yates wells can have considerably lower gas-oil ratios than are now recorded by working the wells over with larger fracture treatments. These three large fracture treatments have fairly well proven to us that there is no vertical separation in the Yates formation, as we have found better than 200' of fill up after these treatments which fill up has left just the top Yates sand stringer open to the well bore and the wells have still produced mainly oil exhibiting no gas cap.

The Southern California Petroleum Corporation would like to suggest or recommend that a study be undertaken regarding the feasibility of injecting gas in the high gas-oil ratio wells to put the Falby-Yates wells on a net gas-oil ratio basis in the interest of conservation of reservoir pressure and the prevention of waste. We feel there is need of immediate action on this matter in light of very rapid drops in bottom hole pressures in both the Yates and Seven Rivers wells in this area. These drops will be noted on the attached list of twenty-one wells on which bottom hole pressures were run February 14, 1955.

Respectfully submitted,

SOUTHERN CALIFORNIA PETROLEUM CORP.

W. S. Caldwell
Division Geologist

WSC:dcf

enc.

SOUTHERN CALIFORNIA PETROLEUM CORPORATION
Midland, Texas

BOTTOM HOLE PRESSURES @ -300 DATUM

WELL	PAY FORMATION	LAST TEST DATE	PRESSURE	TEST PRESSURE 2-14-55	CHANGE
Dunn No. 1	Yates	10-11-54	479	411	-68
Dunn No. 3	"	10-8-53	692	492	-200
Dunn No. 4	Seven Rivers	5-19-54	726	362	-364
Dunn No. 6	" "	6-28-54	398	301	-97
Harrison No. 4	Yates	6-28-54	508	477	-31
Harrison No. 8	"	8-10-54	597	546	-51
Harrison No. 6	Seven Rivers	8-10-54	828	1129	-301
Hunter No. 1	Yates	6-9-54	792	684	-108
Hunter No. 3	Seven Rivers	10-11-54	336	No run due to paraffin	
Hunter No. 5	" "	10-1-53	858	695	-163
Phillips No. 2	Yates	10-8-53	650	520	-130
Phillips No. 4	Seven Rivers	5-19-54	850	403	-447
Thomas No. 1	Yates	7-24-54	282	No run due to paraffin	
Thomas No. 3	"	10-8-53	476	275	-201
Thomas No. 4	"	10-11-54	320	250	-70
Thomas No. 7	Seven Rivers	5-19-54	723	376	-347
Thomas No. 8	" "	8-23-54	963	431	-532
Van Zandt No. 1	Yates	10-11-54	677	No run due to paraffin	
Van Zandt No. 3	"	10-8-53	702	582	-120
Van Zandt No. 5	Seven Rivers	6-3-54	1015	655	-360
Van Zandt No. 7	" "	6-28-54	794	592	-202