

Humble Co #1 Case 245

BLINEBRY GAS AND OIL PAYS

There are 12 oil wells in the Blinebry Field and 11 gas - distillate wells are completed to produce from the Blinebry pay. Data available for these wells are listed in the accompanying tables. The oil wells are all marginal with allowables in March 1951 ranging from 5 to 28 bbl/day and averaging 11 bbl/day. As shown on the accompanying map, the oil wells are in three areas over an interval of about 8 miles. Practically all these oil wells were originally drilled with some other pay such as Drinkard as an objective and were only completed in the Blinebry after failure to produce in other pays. The average cumulative production of the oil wells to January 1, 1951 is approximately 15,000 bbl/well. It should be noted that on the map only wells with production tests or drill stem tests of a Blinebry pay are shown although there are a number of other wells in the area producing from the Paddock, Drinkard and other pays. It will be noted from the map that the Blinebry has been found productive of gas over an area about 9 miles long with a maximum width of about 2 miles. Data available are insufficient to indicate whether gas production will be continuous over the entire length of the area involved. Initial tests of Blinebry gas wells show production of distillate varying in gravity from 50 to 64 degrees A.P.I. at gas-distillate ratios varying from 40,000 to 100,000 cubic feet per barrel.

If oil is found in a reservoir with a gas cap and the pressure in the gas cap is lowered faster than that in the oil pay, oil will migrate to the gas cap. The efficiency of oil recovery for the reservoir as a whole will be reduced since only a small percentage of the oil migrating to the gas cap will be produced. Pressure data for the Blinebry pay show that the pressures of the oil wells have dropped much faster than those of the gas wells, indicating that little if any oil migration to a gas cap has occurred or will occur. Pressures reported for oil wells include the following:

<u>Company</u>	<u>Well</u>	<u>Date</u>	<u>Pressure @ 2200' SS</u>
Olsen	Danglade 1	11-49	1635
Penrose	Hinton 3	7-50	839
Penrose	Hinton 4	7-50	1525
Rowan	Elliott B-13-1	6-50	903
Sinclair	Hill 1	11-48	1018
Texas	Lockhart 2	11-50	812

Back pressure tests indicate the gas wells had pressures of about 2300 pounds at the middle of 1950.

Cross-sections AA<sup>1</sup> and BB<sup>1</sup> were prepared primarily to determine whether oil and gas production were from the same zone. Section AA<sup>1</sup> shows oil production in Gulf-Pike 1 just above the top of the Blinebry while oil production in Sinclair-Hill 1 is from a point about 65 feet below the top of the Blinebry. These wells are about 7 miles apart. In the central area where most of the oil wells are located, Rowan-Elliott B-13-1, Section BB<sup>1</sup>, is shown by drill stem tests to have its best oil pay 65 feet below the top of the Blinebry. Data on Section AA<sup>1</sup> for such gas-distillate wells as Gulf-Vivian 5, Humble-Penrose 1, and Sinclair-Sarkeys 1 indicate that gas production is from just below the top of the Blinebry.

It is believed that these data indicate that it is unlikely that the Blinebry gas-distillate pay is a gas cap of the oil pay or pays. The gas-distillate pay occurs about 65 feet higher in the section than the oil pay and has a bottom hole pressure from 800 to 1500 pounds higher. In the event that it should be the gas cap of the oil pay, it is believed that negligible loss of ultimate oil produc-

tion would occur as a result of prorating and producing the gas pay as a separate gas pay.

A proposed areal boundary for the Blinebry gas-distillate pay is shown on the attached map. The area included inside this boundary is largely undeveloped. It is recommended that this boundary be revised as development extends or reduces the area inclosed in it. The area included is as follows: South half of Section 10, South half of Section 11, Sec. 14, 15, 22, 23, 26, 27, 34, 35 and 36, Township 21 South, Range 37 East; Sec. 1, 2, 3, 4, 10, 11, 12, 13, 14, 23, 24, and 25, Township 22 South, Range 37 East; West half of Sec. 7, West half of Sec. 18, Sec. 19, 30 and 31, Township 22 South, Range 38 East.

