

**BROOKSHIRE (SAN FELIPE) FIELD
WALLER COUNTY, TEXAS**

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INTRODUCTION

The Brookshire field is located in southern Waller and Austin Counties, Texas, 30 miles west of Houston. Seismic work carried on by the Gulf Oil Corporation in 1927, resulted in discovery of this shallow salt dome. Drilling began almost immediately, several wells located on the dome being drilled to salt. Oil shows were encountered in these early wells, but no commercial production was obtained. The discovery well for this field was Seaport Oil Company's No. 1 Vaughn, which was drilled by DeArman and completed in October 1934. This well was completed in the Frio formation at a depth of 2,978 feet.

From 1934 to 1950, drilling was sporadic, approximately a dozen dry holes being drilled on top and on the flanks of the dome. In June, 1950, flank production was initiated with completion of Magnolia's No. 1 Vitek. This well, which is located on the west flank of the dome, was completed in a Crockett sand of Eocene age after drilling through a 3,400 foot salt overhang. Production declined rapidly, and the well was abandoned after producing 1,517 barrels of 30.7 gravity oil. Flank production on the east side of the dome was discovered by Humble Oil and Refining Company's No. 1 Donigan in October, 1952. Production on this flank is from shallow Cockfield sands. No other sands on the flanks have proven productive as yet, although several deep tests have been drilled.

GEOLOGY

The strata exposed at the surface are the Pleistocene Beaumont and Lissie formations. The subsurface equivalents of the Willis, Lagarto, Oakville, and Frio formations occur above the cap. With the exception of the Frio of Oligocene age, these formations have not been differentiated. On the flanks of the dome the Vicksburg formation, the Jackson group, and the Cockfield and Crockett formations have been penetrated.

Structurally, Brookshire is a shallow salt dome. It is a large dome, being approximately 4 miles long and 3.5 miles wide. Caprock of varying thickness is present above the salt, the shallowest depth it has been encountered being 3,157 feet. Faulting has been found on both the east and west flanks of the dome as shown on the accompanying cross section. These faults were originally normal faults dipping away from the dome. They were rotated into their present positions by upward movement of the salt. To date, accumulations do not appear to be affected by these faults. However, the limited well control makes it impossible to determine the extent and complexity of faulting on the flanks of this dome and what effect they may have on reservoir accumulations.