

## SCIENTIFIC NOTES

### Abstract:

### Interior Salt Domes of Texas, Louisiana, and Mississippi, G. C. Clark\*

Texas, Louisiana, and Mississippi have a total of 90 interior domes which have been classified as piercement domes in which salt or identifiable cap rock has been encountered by the bit at depths above 5,000 feet and in which the salt has penetrated younger beds. These piercement domes are distributed as follows: 17 in the Tyler basin of East - Texas; 28 in the salt basin of Louisiana and 43 in the salt basin of Mississippi. One is located across the line in Alabama. These domes occur in a rather narrow basin 30 miles in width and 120 miles in length in East Texas and 30 to 60 miles in width and extending across the entire width of southern Mississippi and northern Louisiana.

In East Texas there are 10 deep-seated domes interspersed throughout the basin among the piercement domes. This holds true for the distribution of some 9 deep-seated domes in Louisiana and 17 deep-seated domes in Mississippi. These deep-seated features differ from the piercement domes inasmuch as the salt has not penetrated the beds younger than lower Cretaceous and has uplifted the overburden in a domal structure giving all the unpenetrated reservoir beds adequate structural relief to make ideal traps for the accumulation of oil and gas. With a possible exception of one or two domes, these deep-seated domes are all now producing.

The locations of the piercement domes have been known for 30 years and it is only within the past few months that the producing possibilities have been realized. Two of the piercement domes in East Texas have been producing for 30 years and since July 1956, 4 additional domes in East Texas and 1 in Louisiana have been found to be productive.

The subsequent drilling has changed our conception as to the age

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and origin of the domes. It now appears that, instead of growing from the center and deepest part of local synclines, these piercement domes are so tremendous in size and have grown for such a long period of time that their growth has created the local basin as a large rim syncline.

Every known type of geological trap should be present at some depth in close proximity to each and every dome.