

OFFICE MEMORANDUM

Date: November 20, 1970

From: C. V. Babcock

Subject: Significance of probable age of basement rock in the Mobil, No. 1 FSL 224-A well, Offshore Franklin County

*7/24  
Babcock file  
Mobil 224-A*

Discussion: The subject rock is dark in color and fine grained. The color indicates the rock to fall within the <sup>9</sup>myfic category; and the fine-grained aspect indicates that it is ~~extensive~~<sup>intrusive</sup> or shallow intrusive. These characteristics (and possibly the crystal structure) indicate that the rock is a diabase. This implication is strengthened by the association of the rock with red shale; about 90 percent of the time such an association occurs in connection with Triassic diabases.

If the rock is a diabase, and a shallow intrusive, the intrusion could have occurred during Tertiary time, rather than during the Triassic; Tertiary intrusions occur in the Virginias. However, about 99 percent of the time such intrusions are of Triassic age.

Assuming the rock to be of Triassic age, and if it was either extrusive or shallow intrusive, it was not in contact with sediments which were of Jurassic age or later. Therefore, any Jurassic which might be present in the immediate area of the well does not lie deeper than the total depth of the well. In other words, any Jurassic section which might be present in this area was tested by the well, which presumably was drilled on a structural high as indicated by geophysics.

It is understood that a relatively thin section of limestone was drilled by this test; possibly this rock was 100 to 200 feet in thickness. This limestone may belong to the Jurassic section. However, whether the limestone was of Jurassic age, or more recent, the immediate area of the well appears to be condemned by the test. And the most logical probability is that the Smackover--Norphlet sequence will be better developed downgradient from the Mobil well. Therefore, in the regional area of Apalachicola point, offshore prospects are favored at the expense of mainland prospects as a result of the Mobil well. Of course, the Apalachicola embayment of Gulf and Franklin counties, as mapped at the Tertiary level, may be reflected at depth; and if so, these areas remain to be of definite promise. It is known that Humble and other operators have acquired considerable acreage in these counties since the Mobil well was plugged and abandoned.