

VELOCITY SURVEY

ESSO EXPLORATION BASS-1

On September 8, 1965 a velocity survey was conducted in Esso Bass-1. Western Geophysical Company of America was the contractor for the survey. A pressure sensitive 6CI101 well geophone and SIE P-11 amplifier were used. Mr. W.C. Presley of Esso supervised the survey.

Three buoys were placed to position the shot locations for the survey. One buoy was placed 1000 feet north, the second 500 feet south, and the third 1000 feet south of the well. The buoys were placed in a line perpendicular to the axis of the Glomar III and through the well location.

A total of ten records were required for the survey. All explosives were programmed to be detonated 10 feet below sea level, however shots for records No. 1 and No. 5 sank to an estimated 25 feet. The shot for record No. 10 was lost due to a recording malfunction. Three recordings were made with the shots to the north as the down-hole geophone was lowered into the hole. The balance of the records were shot to the south while withdrawing the geophone, the three original shots being repeated.

Tap tests confirmed the upward deflection of the reference trace and the downward deflection of the recording trace for primary energy striking the geophone. The geophone was placed at selected geologic markers. Record quality was generally good. Travel time through the casing was recorded from the four shallowest depths, however the formation travel time could also be picked and the resulting velocity data is considered reliable.

The first arrival time for record No. 5, at 6427 feet, was unaccountably slow. This may represent an error in the depth of the geophone. The data from this shot was not used on the graphical presentation of the results although calculations are shown on the data sheet.

It is believed the results as presented represent a reliable measure of velocity at the well.