

3. Well Geophone Positioning

All depth measurements were made using the Schlumberger depth indicator. To minimize rig noise due to heavy swells, the marine riser was disconnected from the derrick floor and lowered to the casing top. Schlumberger cable was clamped with a T-Bar device which rested on the casing top at each geophone depth in an attempt to de-couple from the rig movement.

4. Instrumentation

The seismic instruments were set up in the mud room of the Glomar III near the Schlumberger Logging unit. This afforded protection from weather but resulted in communication difficulty with Schlumberger and the derrick floor.

Seven traces were utilized on the survey records. Traces 1 thru 4 recorded the well geophone break at 4 different recording levels. Traces 5 and 6 recorded the well reference geophone. The time break was recorded on trace 7. Wide band filtering (out-92) and a fixed-gain recording mode were used throughout the survey. Level settings proved extremely critical due to the input gain control being located at the 2nd stage of amplification in the recording amplifier. The SIE GA 11 amplifier is an AGC type seismic amplifier and was changed to a fixed-gain mode by removing the AGC tubes.

C. RESULTS

Thirteen shots were taken at seven levels. Repeat shots were made at 2,070 feet, 3,043 feet, 3,840 feet and 5,413 feet. Three shots were made at 4,490 feet because of noise on some of the traces. A single check shot was made at 3,290 feet and 3,620 feet.

The noise level on the records was not large. Little trouble was experienced in making picks on all traces. The most troublesome trace was that for the time-break. Record 7 clearly shows the kind of noise that could occur on this trace.

Noise with a frequency of approximately 100 cycles/second was caused by the mud pumps which had to be run throughout the survey.

D. CONCLUSIONS

The velocity survey was successful in tying the integrated Sonic Log into absolute time values.