



SECTION III

RECORDING AND AMPLIFICATION SYSTEM

The output of each live streamer group was amplified by a Texas Instruments Model 9000 Amplifier System, dual-recorded by an SIE PMR-20 frequency-modulated tape recorder and by a TI DFS, simultaneously, monitored by two SIE TRO-6A photo-oscillographs.

A direct playback was made of every tenth shot from the FM system, of every shot from the digital system. Tape modulation levels were compared with a direct playback of a 100 percent modulated tape. A standard 100 percent modulated tape was used for comparison with the FM system. For the digital system, a 100 mv signal amplified at 20-db gain with a 6-db attenuator card was used as 100 percent modulation level. PMR-20 modulation levels were staggered symmetrically about the shot. Instrument settings, established initially after consultation with the client, are given in Appendix D. Out-out filter recordings, amplifier parallel tests and other periodic quality-control instrument tests were performed to ensure proper instrument functioning. Ambient noise levels and straight gain recordings were taken daily to determine signal-to-noise ratios.

Variable Area cross-sections were made of every line using 8 traces from every other profile or, in the case of off-end shooting, 4 near-shot traces from every profile. Digitally-recorded profiles were played back to a variable-area cross-section recorder to place profiles sequentially on photographic film. These playbacks were amplified and filtered for SP's 1 - 3219. The remainder were direct playbacks.