

APPENDIX A

FIELD OPERATIONS AND PROCEDURES

The program shot in both basins is shown on Figs. 1 and 2. Lines were shot sixfold common depth point (CDP) coverage or singlefold coverage. Shotpoints were numbered consecutively in two sets, each beginning with SP 1001, one set starting in Gippsland and the other in Bass.

The survey was located in areas of relatively flat seabed. Average water depth was 30 fathoms. Recorded water depths ranged from approximately 20 to 40 fathoms. No rapid changes were observed in the seabed from water-depth recordings. Strong currents, due to tidal variations through the Bass Strait, were prevalent.

Weather conditions varied significantly. Adverse weather and sea conditions were the major factor in preventing production work, especially from May through October.

Streamer - The neutrally buoyant streamer employed throughout the prospect has 24 equally spaced, 100-ft-long sections. Each live section has 20 crystal detectors spaced at $4\frac{3}{4}$ -ft intervals, the outputs of which yield one trace. Adjacent live sections, including groups 12 and 13, were separated by 114-ft dead sections. Up to four dead sections preceded the first live section. One (two after July 7) preceding dead section contained nylon stress members to attenuate noise generated by the towing vessel. One dead section followed the last live section. A tail buoy was attached to the end of the streamer by a nylon rope.

The streamer was ballasted to ride horizontally below wave action. A variable length of non-buoyant lead-in cable connected the streamer to the towing vessel. Streamlined weights were attached to the end of the lead-in cable. Under continuous tow, the streamer became hydrodynamically stable at a depth which is a function of its speed through the water, the length of the lead-in cable and the relative buoyancy along the streamer's length.

Four pressure-sensitive depth transducers, spaced along the streamer's length, displayed streamer depth readings in the range of 0 to 50 feet. Readings were taken from meters in the instrument room. An undetected malfunction in the end transducer allowed the tail-end of the streamer to ride too deep on part of the work done by Party 904. As a result 480 miles had to be re-shot at no charge by Party 921. After June 15, a graphic presentation of streamer depth at the latter three transducers was recorded simultaneously by three penwriters.

Analog recording was done with group 1 at the head-end of the streamer. For dual recording the first head-end live section was designated as group 24, the last tail-end live section as group 1.

Infrequently, traces reversed in polarity were discovered at the beginning of a day's shooting. This occurred after streamer sections were changed. Polarity reversals were corrected immediately and noted in the Quality Control Daily report.

Recording

- 1) Party 921 - The output of each live streamer group was amplified by a Texas Instruments Model 8000 Amplifier System, recorded by an SIE PMR-20 frequency-modulated tape recorder and monitored by an SIE TRO-6A photo-oscillograph, simultaneously.
- 2) Party 904 - At the client representative's request, the output was amplified by TI Series 9000 amplifiers before recording on the SIE PMR-20.

A direct playback was made of every fifth shot on sixfold coverage and every shot on singlefold coverage from recorder heads directly to camera galvanometers. Tape modulation levels were visually monitored by a meter on the PMR-20 recorder and checked against a direct playback standard 100 percent modulated tape.