Party 921 made variable-area cross-sections (VAX sections) of every line, using 24 traces of every singlefold profile or the four near-shot traces of every sixfold profile. Profiles were played back through Texas Instruments Model 8000 Amplifier System in a straight-gain mode to a variable-area cross-section recorder and recorded sequentially on photographic film. Party 904 started the prospect making VAX sections, but discontinued the practice after the first few days due to equipment malfunction.

For selected portions of work, output of each live streamer group was amplified by a TA Series 9000 Amplifier System, dual recording by an SIE PMR-20 frequency-modulated tape recorder and a Texas Instrument Digital Field System (DFS), and monitored on photo-oscillographs, simultaneously.

A direct playback was made of every fifth shot on sixfold coverage and every shot for singlefold coverage for the FM system. A direct playback was made of every shot for the digital system. Rigorous instrument tests were given both recording systems. An Instrument Engineer was aboard during all work of this kind. Party 921 made VAX sections of every line in the same manner generally as from the FM-recorded profiles. Profiles were played back through the Series 9000 Amplifier System in a straight-gain mode and recorded sequentially on a photographic film.

Non-filter recordings, amplifier parallel tests, dynamic range tests, and other periodic, quality-control instrument tests were performed prior to production work. Ambient noise levels and straight-gain recordings were taken daily to determine signal-to-noise ratios. Dynamic range determination tests of the DFS, PGC calibration check, instrument noise tests, and GAGC oscillator test were performed.

Instrument settings for production work were established initially after consultation with the client representative.

Direct-path, shot-to-detector energy provided data for locating the shot relative to the streamer. First-arrival signal was taken from selected streamer groups and fed to waterbreak amplifiers which respond to the frequency of waterborne acoustic energy. Waterbreaks appeared on traces 26 and 27 on monitors. No waterbreaks were recorded on tape by the PMR-20 recorder. Waterbreaks were recorded in the appropriate tape channels by the DFS.

Surveying - ONI was subcontracted to GSI to provide positioning from February 14 through March 15, 1966. Shoran, a direct distance measuring device, was the system used.

On May 25, Shoran operations were resumed at Esso's request in the Gippsland Basin. The Shoran was operated by the ONI crew then under contract to Esso. The GSI Raydist equipment and personnel stood by awaiting resumption of operations in other parts of Bass and Gippsland.

Raydist navigational equipment was operated in the two-range mode by GSI personnel. Initial calibration was made by crossing the baseline and baseline extension. This calibration was set into the instrument and carried to strategically located buoys and islands, which were then used for future calibrations. In addition, a surveyed calibration point was obtained on Middle Jetty, Stanley, Tasmania.

Navigation was accomplished by comparison of Raydist dial readings to pre-determined coordinates.

Setback distance from the antenna to the shotpoint was normally about 3500 ft. for split-spread shooting and about 800 ft. for off-end shooting. Off-end shooting was approximately two group intervals from first group. Variations in setback distance were noted with the postplot coordinates.

After GSI Party 921 replaced GSI Party 904, the former encountered a positioning mistie. A check of the situation by GSI established that the Raydist calibration of the Stanley Jetty was in error. Apparently Party 904 had dropped a buoy as a calibration check point, and returning to the buoy after a storm, picked up the calibration and used this as reference for the Stanley Jetty calibration. A re-calibration of the Stanley Jetty showed that the buoy had probably been moved by the storm. The coordinates of lines affected by this error were subsequently re-calculated.