

the area, however more accurate velocity control was desired, so that the analysis used a depth point spacing of 33.33 metres or 44.44 metres.

The data with a 3:1 vertical stack showed a marked noise problem (the 2:1 vertical stack data to a lesser degree) which is referred to on page 19 of Appendix 2. It was found that this could be overcome with a small (15%) two-way mix of adjacent traces.

Filter analyses were done over the entire area and upon analysis of them it was found that the quality of the sections could be improved by re-displaying them using a number of different filters.

Migration was done on several dip lines and on a few of the cross lines to assist in interpretation of the data in areas of complex structure. Primarily for economy, the traces were summed to give a 66.67 metre depth point spacing before migration.

A major change from previous processing methods is that no time variant scaling or trace normalisation was used, so as to approximately preserve true amplitude.

(2) Refraction

The refraction records were processed to enhance high velocity refractors and simplify interpretation by producing delay time displays with a 3:1 trace sum. Velocity used was 15,000 ft/sec.

(c) Interpretation

(1) Reflection

Two horizons were mapped, the Blue horizon, corresponding to the Top of Sherbrook Group - Base of Wangerrip Group unconformity, and the Red horizon, which is close to the Top of Otway Group - Base of Sherbrook unconformity. Only the new lines and the lines from the Portland-King Island Survey were interpreted.

In using velocity data for a depth interpretation there is the problem that the reflection times are much more accurate than velocity data, so that it is desirable to smooth the velocity data, or average it over a number of shotpoints.