APPENDIX D

BORDER CREEK AND OAKES CREEK SURVEYS

REPROCESSING REPORT

BC9 and BC10. This represents about 60% of the whole survey. The other data is missing and were probably destroyed.

A copy of all available tapes was made by G.S.I. in their Sydney office, and sent to Digicon in Singapore together with the observer's logs.

1.4.2 Test Processing

Line BC6 was selected as a test line for evaluating the degree of improvement which could result from reprocessing.

A version of BC6 was produced using Digicon's standard processing sequence plus a Digistack final step in order to provide a comparison with the previous data. This definitely brought improvement, especially for the shallow horizons (0-2 sec.) However, broad zones remained with almost non-existent results. After displaying the demultiplexed records along the whole line, it became obvious this was partly due to a strong low frequency noise, similar to a ground roll, which is visible on the corresponding individual records. Its parameters can be estimated as follows:

SP	Apparent Velocity	Frequency	k = b/v
275	1425	14 Hz	0.010
		16 Hz	0.011
279	1290	13½ Hz	0.010
326	1680	12 Hz	0.007

	BC1	BC4	BC5	BC6	BC9	BC10
Final Stack	√	√	√	reduced scale only	√	√
Digistack	√	√	√	√	√	√
Migrated final Stack	√	√		√		
Migrated Digistack	√	√		√		

2. OAKES CREEK SURVEY

2.1. Location: This survey ties to the Border Creek survey, and covers the northern part of the Pincombe High axis.

2.2. Field acquisition parameters (see Fig. D2).

- Shot in 1967 by Compagnie Générale de Géophysique for Australian Aquitaine Petroleum.
- 126 km.
- Source: dynamite, 3 holes at 20m average depth.
- Trace interval 60m, SP interval: 120m, 600% fold coverage.
- Off-end shots, spread configurations 0-270-1650m, 24 traces.
- Analog recording.

2.3. Original Processing

Lines were first processed by G.S.I. in 1967 in their Sydney office. Very little information is available, except that the analog data was used as an input and a deconvolution version of all lines was produced.

2.4. Reprocessing

2.4.1. Digicon 1972

All lines were reprocessed by Digicon in 1972 in an attempt to produce a coherent set with the Border Creek Survey lines.

A filtered stack and a migrated stack (using the velocity function) were produced for each section; Digistack was not included in the processing sequence.