

### III.2 RECORDING EQUIPMENT

The LRS-16 Marine Telemetry System is a multi-channel seismic data acquisition system using closely spaced hydrophone groups for high resolution surveying (see figure 4.4). The system samples 240 channels of seismic data plus 20 waterbreak channels, 20 depth transducers and 4 general purpose auxiliary channels at 1 ms sample rate. The shipboard system processes and records the data in raw channel format and in demultiplexed array format with programmable array sets up to 120 channels. Both the raw and array formed data recordings are at 6250 bpi in SEG-D tape formats.

The system operates at a very high data rate. During a seismic record, 1000 streams of data are received by the shipboard electronics every second. Each 1 ms data stream includes a burst of data from each channel of each streamer module in the cable. An individual data burst contains 20 bits and represents one sample of one channel. This data is telemetered in high speed serial form over one coaxial cable data transmission line (table 4).

The shipboard system consists of the following units:-

- A. Cable Power Supply
- B. Cable Interface Electronics
- C. Data Process Electronics
- D. Array Former Electronics
- E. Data Recording Electronics
- F. System Control Electronics
- G. Cable Depth Monitor
- H. Data Buffer Memory
- I. Demultiplex Memory
- J. Error Display Unit
- K. Raw Tape Formatter and Array Tape Formatter
- L. Raw Tape Drives and Array Tape Drives
- M. Seismic Q.C. System

(For details see [ref. 17])