

INSTRUMENTATION:

The GEMDAS Level X System consists of the following equipment packages:

- a) One Hewlett Packard 21MX, 128K memory computer system with associated line tape drives, disk drives, operator consols, printer-plotter outputs and remote video display units.
- b) Drill Monitor System (DMS) which monitors the drilling variable, hook load, weight on bit, rotary RPM, total bit revolution, depth, kelly height rig heave, drill rate, torque, standpipe and casing pressures. The system monitors, displays and records these variables and feeds them to the online computer system for analysis and final tape storage.
- c) Drill Monitor System for recording total and individual pit volumes, mud weights in and out, mud temperatures in and out, and mud flow in and out. These variables are also interfaced with the online computer.
- d) Gas detection system for the analysis of mud stream and blender gases which includes the standard hot wire detectors for total gas and petrol vapours; standard catalytic chromatograph for hydrocarbons  $C_1$  through  $C_5$ ; flame ionisation detectors (FID) for total gas and  $C_1-C_5$  for high percentage of these gases which would saturate a normal system, and an  $H_2S$  detection system.