



The line and shot control module allows for extensions at either end of a line, line deflections (doglegs), and circling. In all these cases, continuity of shotpoint spacing along the great-circle path is preserved automatically. Subsurface coverage at the beginning and end of a line is guaranteed by taking into account possible position shifts due to satellite fix corrections and by computing the appropriate lead-in and lead-out. The track-plotters output a special lead-in display for each line and annotates line parameters, shotpoints, and satellite fixes.

All shotpoint positions, line parameters, position fixes, and other relevant navigation data are recorded on magnetic tape. Hardcopy redundancy of this recorded data is provided by teletype printout and track-plotter annotation.

C. POST MISSION PROCESSING

The navigation accuracy obtainable in real time is improved in post mission processing by infinite time smoothing of the recorded navigation data. Shotpoint and satellite fix positions are weighted against "past" and "future" position information using statistical filtering parameters based on satellite variance estimates and velocity and heading calibration factors output at each satellite fix.

Post mission processing also computes the position shift from satellite receiver antenna position to any desired offset position (seismic source, common depth points, etc.), and the position shift due to conversion from the APL* satellite system reference ellipsoid to a given local datum.

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