CONCLUSIONS AND RECOMMENDATIONS

36" HOLE SECTION

The 36" hole was successfully drilled using seawater and high funnel viscosity Bentonite sweeps. No mud related hole problems were encountered and the 30" casing was run and cemented at the programmed depth of 127.4m without problems. The viscosity in this section was low due to the poor quality of the initial drillwater which contained 8000 mg/l chlorides. IDF SM(X) would have been ideal in this situation and was indeed programmed for the section but did not reach the rig until the end of the $17^1/_2$" hole.

$17^1/_2$" HOLE SECTION

This section was drilled without hole problems again using a seawater and high viscosity Bentonite sweeps. As the drillwater improved so did the yield from the Bentonite. The SM(X) arrived at the end of this interval together with the testing equipment but too late to use. SM(X) can be mixed in seawater, requires no hydration time and has excellent hole cleaning properties. It is recommended for use on future wells.

$12^1/_4$" HOLE SECTION

The delay in receiving initial mud supplies prevented good mud properties being obtained for much of the interval. However, with the exception of one "packoff", the interval was drilled quickly with no hole problems. A SEAWATER/GEL/POLYMER system, with controlled drilling rates, is recommended as the most cost effective, for this interval on future wells.

$8^1/_2$" HOLE SECTION

The FRESHWATER/IDBOND (PHPA) mud system provided a stable, gauge hole, with only minor washouts of some coal seams. Hydrophillic clays caused high drag and tight hole on trips, particularly on the first trip through new hole. The TOP DRIVE equipment, in use on the OCEAN EPOCH, enabled efficient back reaming and prevented excessive time delays. Extensive electic logging over three days was enhanced by the stable hole, no fill and the freshwater mud system.

On future wells the tight hole could be prevented by the use of SEAWATER/KCl to save reaming time losses, if required, or if top drive equipment is not available.