

Specialty Applications

NAM F3 Oil Platform, North Sea

1992

Density: 50 pcf

Volume: 3,000cy

The concrete substructure of the platform consists of 63 cells, of which 32 cells are closed and used for oil storage; the other 31 are used for ballast. To be positioned at a depth of 85' below the North Sea, the roof of the caisson required an impact layer to prevent objects falling off the platform (like drilling pipe, drill collars or mud pumps) from causing structural damage or penetration of the roof slab.

PROVOTON foam concrete was utilized for this impact layer due to its energy absorbing properties. When an impact occurs the air voids in the foam concrete begin to crush, as more voids are compacted as a result of the force the resistance increases of the foam concrete until the force is at rest.



Large numbers were set in the finished PROVOTON foam concrete above the individual cells so divers or ROV's can future identify the cells underwater.



Rebar set into the roof structure keep the PROVOTON foam concrete impact layer connected to the platform.



The oil platform is towed out to the North Sea to be submerged into position.