

# SEAFLOOR MINING RISERS

Reliable Connected Technology Solutions!

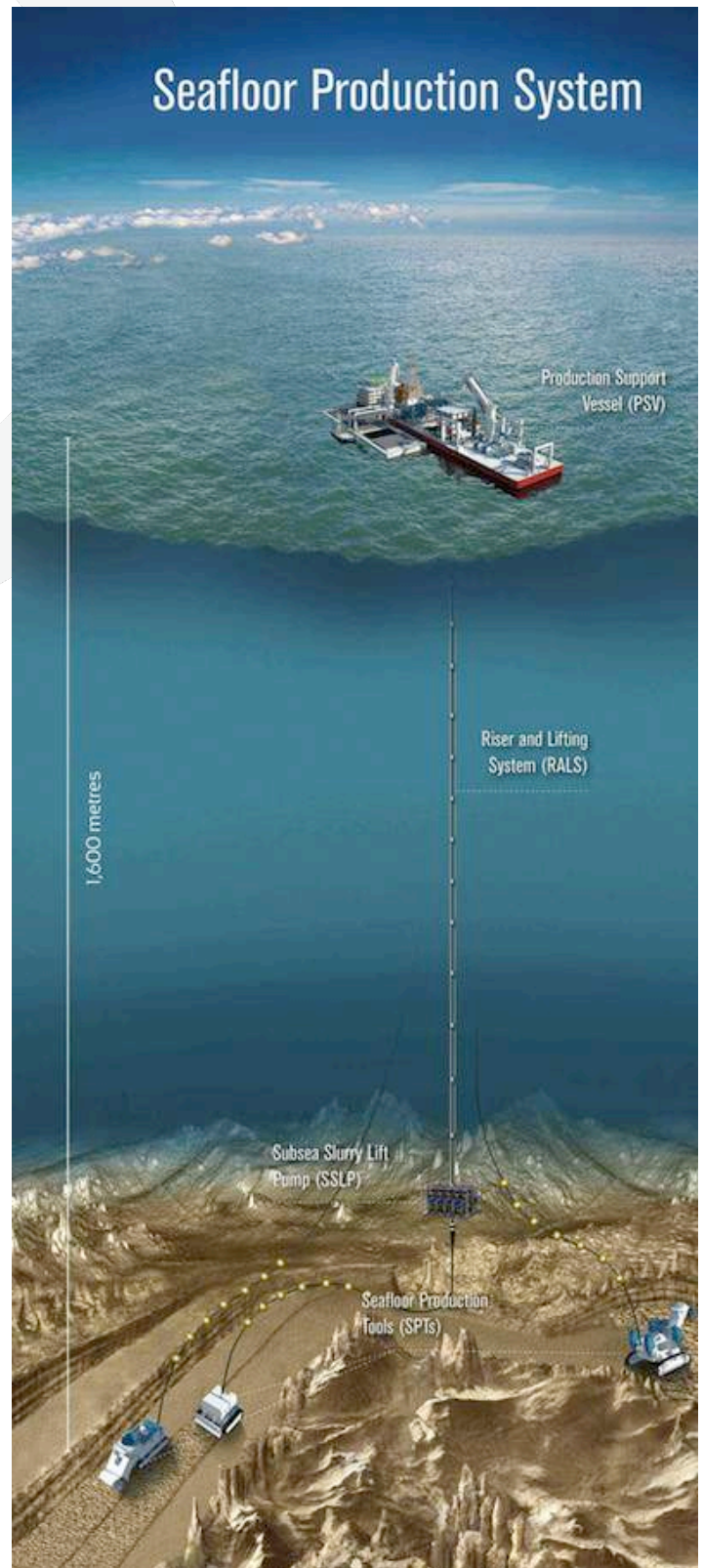
## Riser and Lifting System

The Riser and Lifting System (RALS) is designed to lift the mineralised material to the Production Support Vessel (PSV) using a Subsea Slurry Lift Pump (SSLP) and a vertical riser system. The mineral cuttings are delivered into the SSLP at the base of the riser, and pumped to the surface via a gravity tensioned riser suspended from the PSV.

It comprises a large positive displacement pump and rigid riser pipe hanging from a vessel which delivers the slurry to the surface. The SSLP hangs from a solid vertical (riser) pipe suspended beneath the support vessel. The pipe is deployed to the seabed by a derrick and draw works system on board the vessel.

GMC light weight mining risers are utilized for the recovery of mineral mining ore from the seabed to surface, GMC's snaplay connection enables the riser to be rapidly deployed and connected to the subsea excavation equipment, for recovery of the minerals.

The connected riser can be stored on the vessel and installed without the need for any additional vessels or top drive equipment, simply using the vessel crane and GMC's installation tooling, taking up minimal deck space.



Experience & Innovation in Tubular  
Connection Technology from Surface to Seabed

## SPECIFICATION

- Available 8" – 60"
- Riser materials X65 (others available on request)
- Joint length – typically 12m – 24m
- Water depth – 4,000m

## ADVANTAGES

- No Torque, Re-usable system
- Controllable deployment
- Suitable for harsh deep water environments
- Proven high fatigue connector technology, used for high tensile applications
- Fast make / break connection system (less than 2 minutes for final make up)
- Reduced weight
- Non-rotational connection system

GMC provides the complete turnkey riser package, including connected riser joints, buoyancy modules, handling and installation equipment.

In addition, GMC can provide the complete derrick facility to handle riser joints with flexible connections from the surface vessel to the seabed machines.



For more information, visit [www.gmcdeepwater.com](http://www.gmcdeepwater.com), or contact [info@gmcdeepwater.com](mailto:info@gmcdeepwater.com)