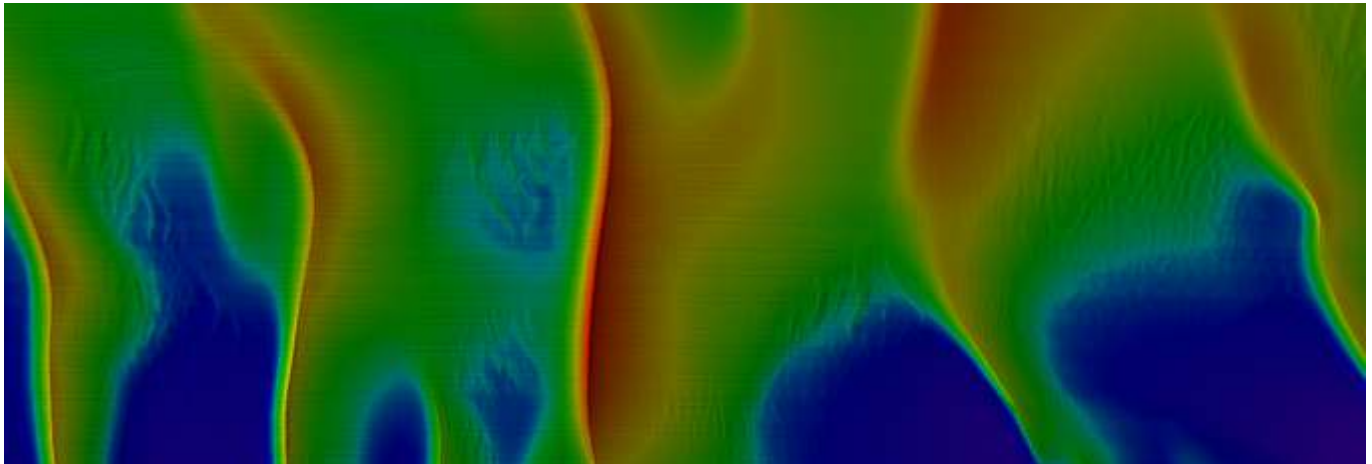


Marine Aggregate Monitoring

Hydrographic, Geophysical and Oceanographic Surveys



Swathe Bathymetry Image: Sandwave field moving over planation surface

Titan Environmental Surveys offer marine aggregate industry clients a multi-disciplined tailored product produced by our experienced scientists operating state of the art instrumentation from our dedicated survey vessels.

Regular monitoring of aggregate and marine mining areas is an essential process in assessing changing seabed conditions and determining resource reserves and viability. Titan's teams have decades of experience in carrying out these surveys, producing high quality data leading to very high confidence levels in the reporting of results.



Sonar Image: Megaripples on gravelly sand seabed

Application of Services

Titan Environmental acquire high precision hydrographic, oceanographic and geophysical data. This is subsequently post processed in-house, often being integrated with client supplied archive material.

Reporting services include

- Targeting of potential aggregate/marine mineral extraction sites.
- Sediment transport studies.
- Site assessment including integration with sampling and determination of individual resource bodies, volumes and constituents.
- Identification/assessment of contaminants (fines/organic material), anthropogenic hazards (wrecks, debris, active and out of service cables, unexploded ordnance).
- Assessment and monitoring of conservation features (historic wrecks /materials, bioherms).
- End of life/extraction licence reporting, environmental assessment.

Instrumentation

Our nearshore instrumentation includes

- High resolution swathe bathymetry systems (Reson and Kongsberg)
- Multi frequency Side Scan Sonar systems up to 900kHz (Edgetech)
- Ultra-high resolution seismic systems (Boomer, Pinger, Chirp) (Applied Acoustics)
- High accuracy GNSS positioning systems
- Ultra short baseline towbody positioning
- Sediment traps, turbidity sensors and grab samplers



Interpreted Vertical Section