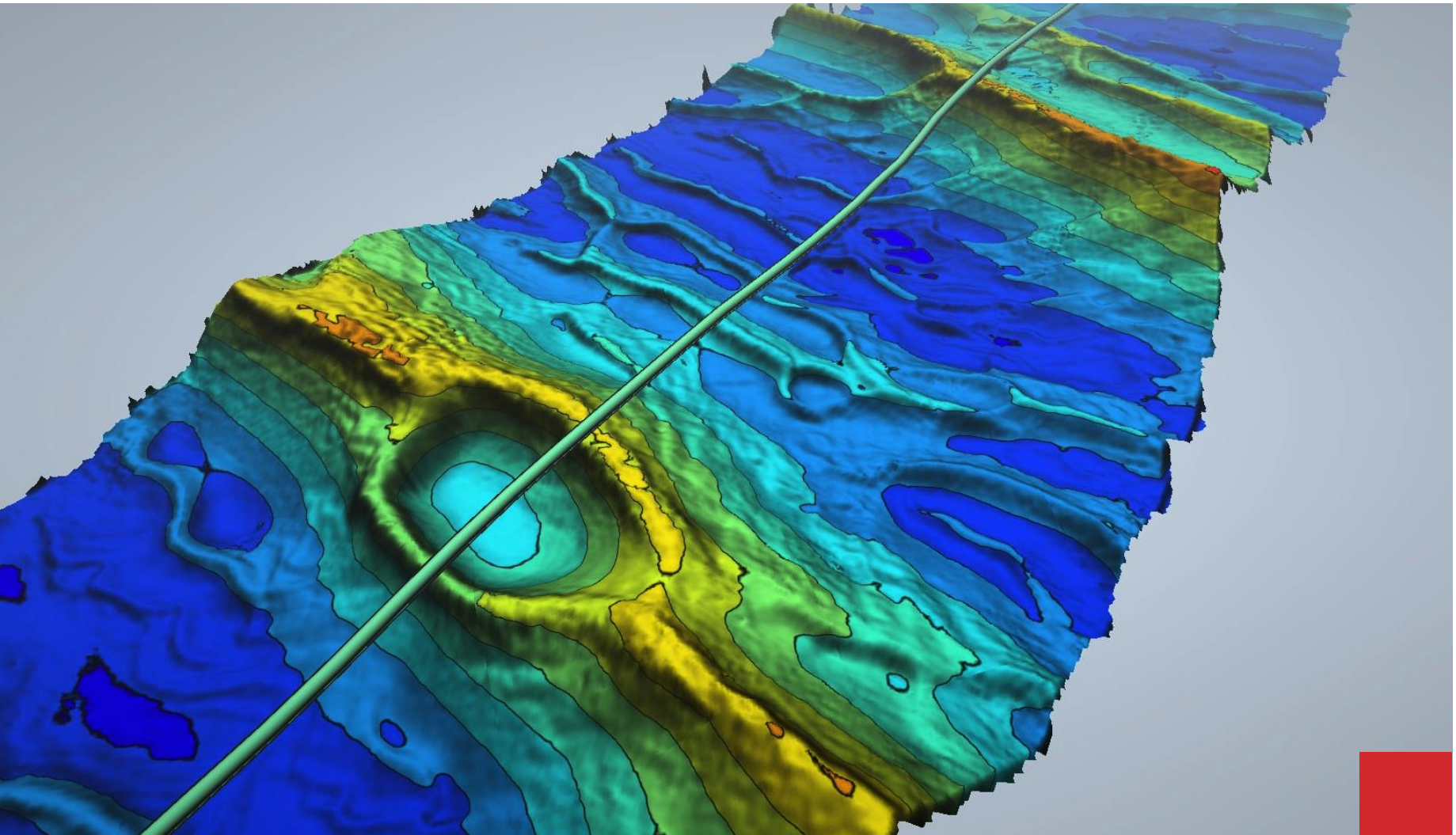
TRIDENT GROUP

OFFSHORE ENGINEERING & GEOLOGICAL SURVEYS



LIFE SPAN

Exploration & Assessment

- Surveys and reconnaissance of the location for Rig positioning
- Navigational support during Rig positioning
- Navigational support during seismic surveys

Field Infrastructure Development

- Surveys and inspection of locations for Offshore Facilities Installations
- Surveys and inspections along pipeline and cable routes
- As-built survey upon completion of construction
- Navigational support on installation and lay operations
- Navigational support during Rig positioning

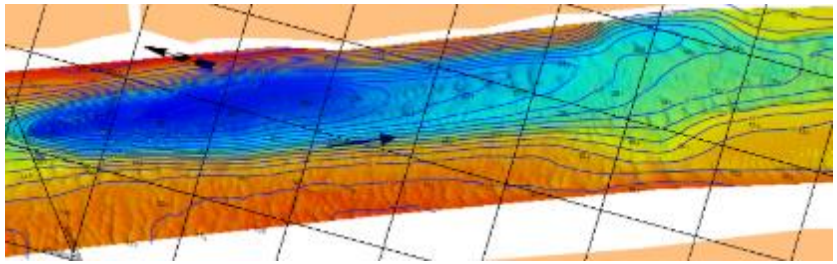
Production

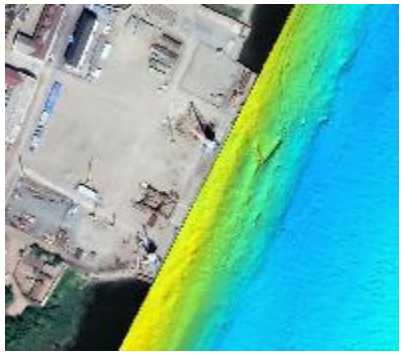
- Routine surveys of pipelines, platforms and subsea infrastructure elements
- Integrated surveys prior to repairs, overhauls and upgrades
- Repairs operations support

Decommissioning

- Integrated surveys prior to decommissioning and lifting operations
- Decommissioning operations support
- Final surveys upon completion of operations

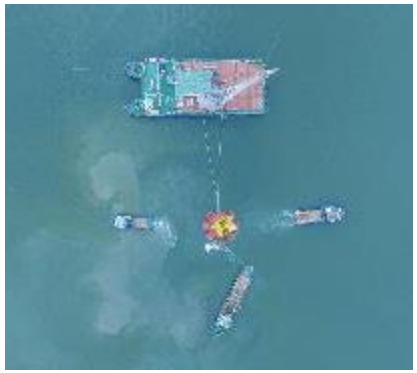
SCOPE OF SERVICES

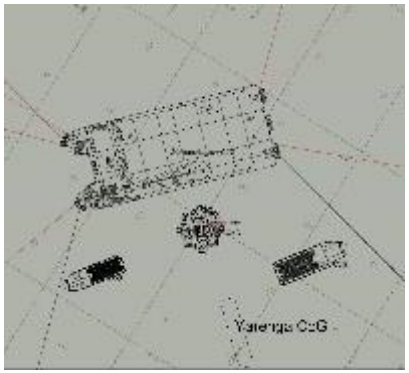




- Integrated engineering and geological surveys
- Pre-lay survey of the routes of installation of subsea pipelines / cable lines, post-lay survey of the such and monitoring during construction and operation thereof
- Sites survey prior to transportation /positioning of offshore floating drilling and fixed platforms
- Navigational support of subsea operations with acoustig positioning systems (USBL)
- Navigational support of positioning of offshore floating drilling rigs on drilling sites

SCOPE OF SERVICES

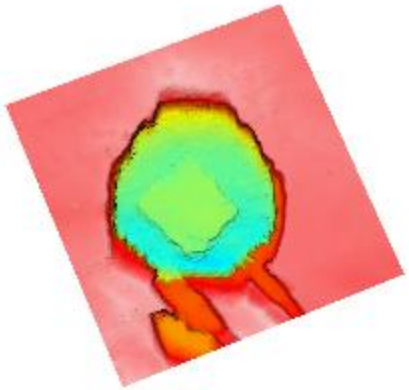


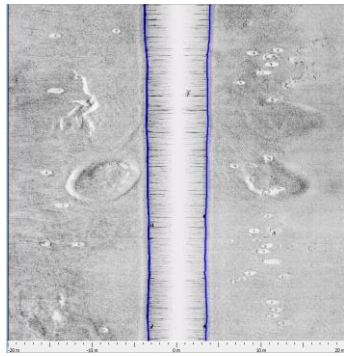


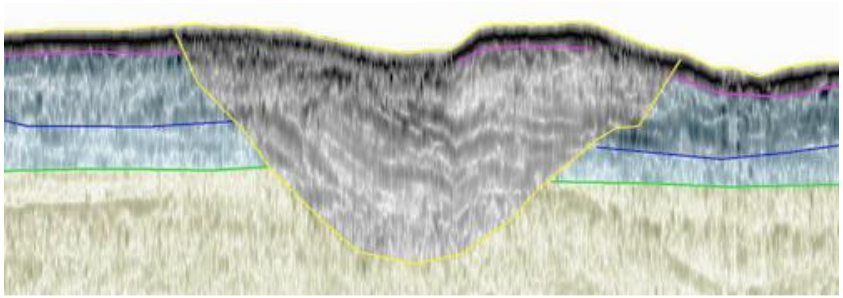
- Navigational support during tow and positioning of offshore structures;
- Navigational and hydrographic support of pipelay and cablelay barges, subea pipe and cable trenchers
- Navigational and hydrographic support and monitoring of dredging operations;
- Various types of post construction surveys (as-built surveys) including burial, depth surveys for pipeline, cable lines and other facilities.

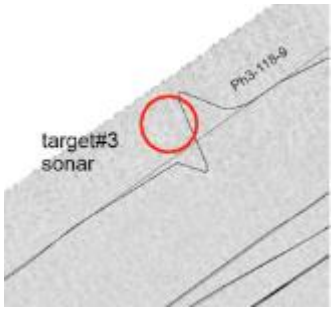
TYPES OF SURVEYS

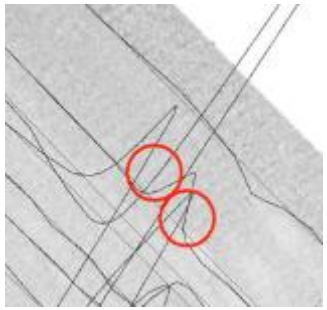
- Bathymetric surveys using multi-beam or single-beam echo sounder
- Side scan sonar surveys of the sea bottom
- Magnetometer surveys
- Seismoacoustic profiling
- Taking samples of different designations
- Drilling operations using submersible units without well casing
- Cone penetration testing
- Field and lab analysis
- Office processing of engineering survey data.











LIST OF EQUIPMENT

The Company operates own fleet of high tech hydrographic and geophysical equipment:

Multibeam Eqhosounder R2Sonic 2022 & Valeport sound velocity and sea level meters

Motion Sensors SMC IMU-108-30 & Teledyne TSS DMS-05

Side Scan Sonar SeaKing Titech 325/675 kHz

Magnetometer Geometrix G-882-SX

Sub-bottom profiler EdgeTech 3100

Hydroacoustic position reference system SONARDYNE Mini-Ranger 2

GPS-receivers C-NAV 3050 GNSS & Trimble SPS 461

EQUIPMENT FOR ENGINEERING SURVEYS

Coring and drilling of engineering well depending on requirements of each specific project can be performed using electric vibrocorer SVC500E or hydraulic submersible drilling rig UMB-130 or UMB-130M.

UMB-130M

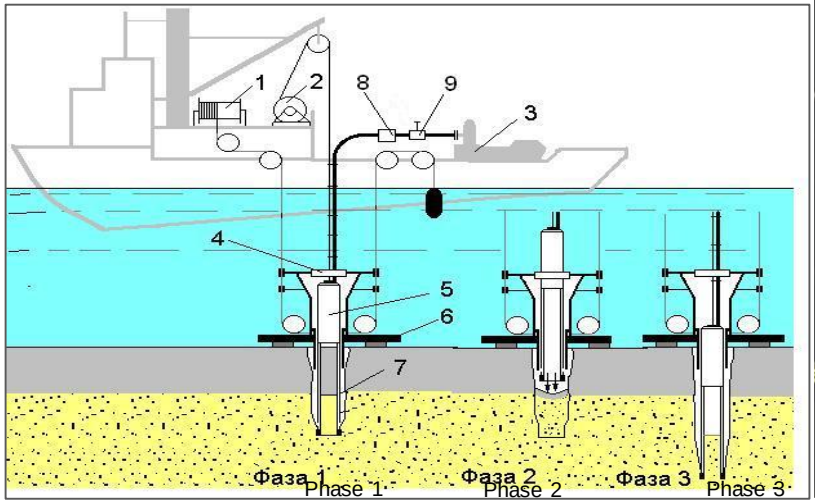
Max. water depth: 60 m

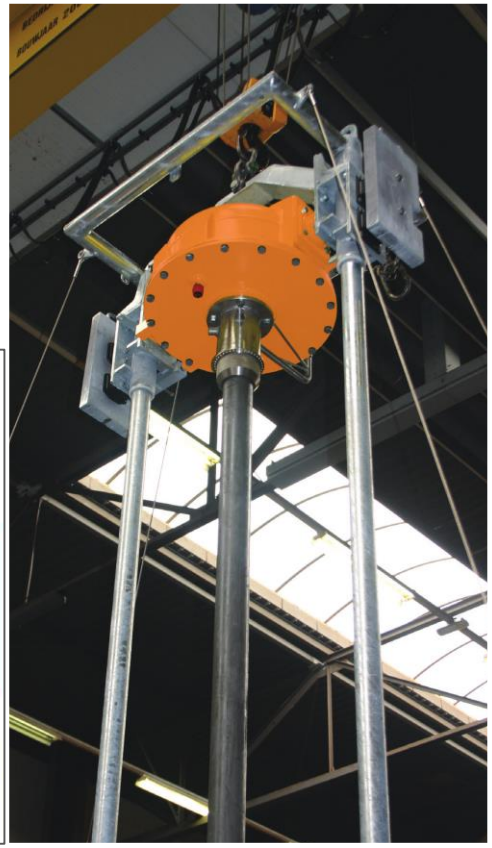
Coring depth per run: up to 6 m

Multi run drilling depth: up to 50 m

Core diameter: 94 & 130 mm

Operations can be performed from an unspecialized vessel





SVC 500E

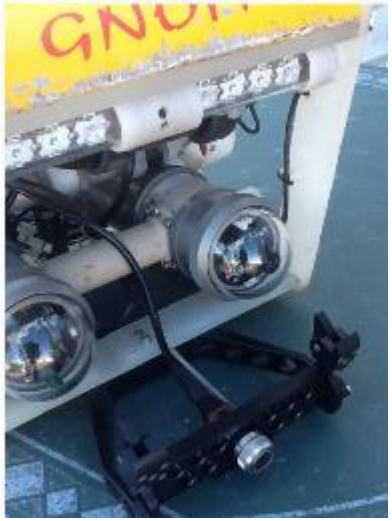
Max. water depth: 50 m.

Coring depth per run: up to 5 m.

Core diameter: 70 & 108 mm

Operations can be performed from an unspecialized vessel

SUBSEA SURVEYS

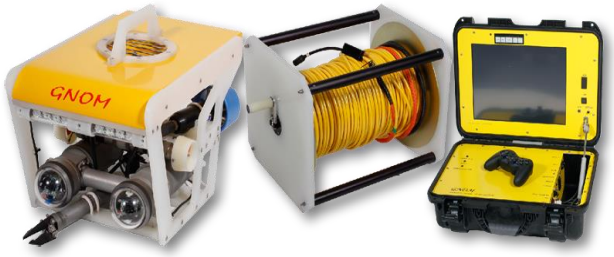


- Sites survey for positioning of offshore floating drilling and fixed platforms
- Survey of wellheads of abandoned offshore wells
- Surveys of subsea parts of offshore structures (visual survey and wall thickness gauging);
- Surveys of subsea pipelines;
- Surveys of cathodic protection of subsea pipeline and offshore structures.

EQUIPMENT FOR ENGINEERING SURVEYS

Visual surveys, thickness measurement and cathodic protection potentials metering are performed using remotely operated subsea vehicles (ROV) of inspection class operation at depths up to 300 m.

Remotely Operated Vehicle SeaBotix vLBV300

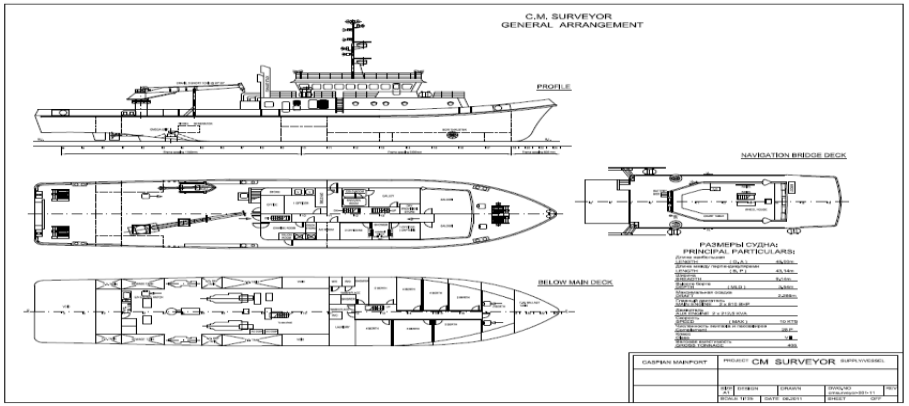


Remotely Operated Vehicle (ROV)
SuperGnom Pro

Remotely Operated Vehicle (ROV) SuperGnom PRO
with ultrasonic thickness meter Cygnus onboard

SURVEY VESSEL “SURVEYOR”

If necessary, operations could be performed from either Client vessel, or from specialized vessel “Surveyor” operated by Trident.



SPECIFICATIONS:

Class: Russian Maritime Shipping Register

Flag: Russian Federation

Length: 44,80 m

Breadth: 9,10 m

Max. Draught: 2,30 m

Power Plant: GM Detroit 12V 149

Total Power:1208 kWt

Endurance: 21 days

Thrusters:

Bow– 112 kWt, Stern – 274 kWt

Positioning System: 4-point anchor positioning system Bow and Stern winches with bollard pull of 4 tons, 30 m/min

Main deck area:145 sq.mtrs

Deck Equipment: Deck Crane SWL 5 t;

COMPLETED PROJECTS

Project	Client	Year
Navigational support of transportation and positioning on a drilling site of a support structure of a well head platform at V.Filanovskiy field in the Caspian Sea.	Lukoil NVN	2018
Survey of the tow route and area of installation of the support structure of the well head platform at the V.Filanovskiy Field in the Caspian Sea.	Lukoil NVN	2018
Subsea surveys, navigational and hydrographic support of cable lay operations at V. Filanovsky field in the Caspian Sea	Lukoil NVN	2017
Navigational and Geodesic support during installation of the LAM-E platform support structure in the Caspian Sea.	Dragon Oil	2016
Post-lay surveys of inter-field pipelines at Lam and Zhdanov 18'' LAM-B – BLOCK-1, 20'' BLOCK-1 – BLOCK – 2, 14'' LAM-C – LAM-B, 10'' ZHD-A – BLOCK-4, 12'' BLOCK-4 – TP-30'', 6'' ZHD-25 – TP-30''	Dragon Oil	2016
Survey of location assigned for installation of LAM-E support structure in the Caspian Sea.	Dragon Oil	2015