

M/V Geo Surveyor



The survey vessel, M/V Geo Surveyor, is operated by Fugro Survey Private Limited of Loyang Offshore Supply Base, Singapore. Specifically designed as a multi purpose survey vessel, the Geo Surveyor is permanently mobilised and can be rapidly deployed to survey locations worldwide.

Instrumentation provided onboard the vessel consists of, high frequency digital seismic, sub-bottom profilers, multi beam and single beam echo sounders, side-scan sonars, HPR, G800 series magnetometer, vibro and gravity coring systems, MPT (minicone system) and off-line processing, draughting and reporting systems. In addition the vessel is fitted with a Simrad SDP600 allowing her to operate with a survey/inspection class ROV. The Fugro STARFIX Global Positioning System provides state-of-the-art differential GPS positioning of the survey vessel. The on-line navigation station and instrument room, are networked to the various off-line processing stations for integration of all survey activities from data collection through to final onboard reporting.

Clients within the oil and gas industry, the cable sector and government agencies utilise the Geo Surveyor to obtain high resolution data for permitting, planning, design activities and cable engineering within the offshore industry.

Fugro Survey operates in accordance with a Health, Safety and Environmental Management System which is integrated with its Quality Management System. Together these systems conform to all national and international legislation as well as industry guidelines, and provide mechanisms for integration with the company's management system. Fugro Survey is a member of the multi-national Fugro Group of companies with 200 offices in over 45 countries. Clients can benefit from individual and collective experience of hundreds of survey professionals at Fugro Companies worldwide.

Vessel Capabilities

- Hazard Surveys
- High Resolution Site Surveys
- Mineral Surveys
- Tow Route Surveys
- Cable Route Surveys
- Pipeline Route Surveys
- Pipeline Inspection Surveys
- Swathe Bathymetry Surveys (1000m)
- ROV Inspection Surveys
- CPT and Vibro Coring Surveys
- Shipwreck and Air Accident Searches

M/V Geo Surveyor



Vessel Details

Owner	Fugro
Ship Managers	Wijsmuller Intl., Singapore
Type	Site and Hydrographic Survey Vessel
Port of Registration	Panama
Classification	BV + 1A1 ICE C EO
Call Sign	HO-2061
Built	1965
Re-Built	1981
Material/Type	Steel/Monohull
Tonnage	951 GRT
Length Overall	58.0m (190.3ft)
Extreme Breadth	10.5m (34.5ft)
Draught, Loaded	4.0m
Cruising Speed	11.0 knots
Main Engine	1 x 1200 BHP MAK
Propulsion	Variable pitch propeller Becker rudder
DP System	Simrad SDP 600 Unclassed
Bow Thruster	Electric 335kW, 450bhp
Stern Thruster	Yes
Fuel Capacity	104m ³
Fuel Consumption	4000 litres per 24 hours
Water Capacity	114m ³ fresh water
Water Making	Reverse Osmosis
Electrical Power	4 generators, 380/220 VAC, 50Hz: DG1 212 KVA DG2 212 KVA DG3 400 KVA DG4 28 KVA (auxiliary)

Navigation Aids

Furuno GP 80
Robertson RGC 11 Gyro
Robertson AP 9 Auto Pilot
Furuno FR 2010 Radar
Kelvin Hughes nucleus 5000A Radar
Simrad NL Doppler Log
Furuno NX500 Navtex

Communication Aids

2 x Furuno FM 8500
Furuno SSB FS1562-25
Furuno Felcom 12 Sat C
Furuno MH/HF - NBDP
Nera Saturn B sat Phone/Fax/e-mail
Kelvin Hughes Sat C

Deck Machinery

1 x 3 ton Fassi Crane
1 x 4 ton Crane
1 x 0.5 ton towing davit
1 x 3 ton hydraulic A frame

Accommodation

17 persons, in addition to marine crew

Air Conditioned

For tropical operations

Working Area

About 160m² shelter deck
About 150m² on main deck
1 x 17m² instrument room
1 x 37 m² instrument room
1 x 35m² store room
1 x 14m² instrument room

Recreational Areas

Mess Room
Lounge
Film/Video
Gymnasium equipment
Sauna

Vessel Safety Equipment

Lifeboat

1 x 35 persons

Rescue/MOB Boat

Jon Buoy /Man overboard FRC

Life Rafts

3 x 20 persons

1 x 16 person

Survival Suits

200%

Life Jackets

200%

Smoke Hoods

100%

Work Vest

Yes

Emergency Radios

Two Jotron

Emergency Beacons

One EPIRB

One SART

Fire Pump

1, El. Driven
1 petrol portable

Halon System

Covering room for kerosene

Foam System

Portable system for streamer winches
and reels

Survey Equipment

Satellite Positioning

Multi-reference Starfix-MN8 and Starfix-
Spot DGPS systems

GPS Receivers/Demodulators

3 x Trimble/Ashtec VBS

On-Line Navigation System

Fugro Starfix.Seis real time positioning
with QC for quality control. Pentium PC
hardware.

Off-Line Processing System

Fugro Starfix.Proc Software for
positioning processing (single beam
and swathe), digital terrain modelling
and sonar mosaics production.
Pentium PC's and Hewlett Packard
Design jet plotters.

Heave, Pitch and Roll Sensor

Seatex MRU-5

Acoustic Positioning

Simrad HPR 410T (Tracking transducer
21-29 kHz)

Real Time Clock

GPS

Single Beam Echosounder

Simrad EA 501P: Simrad 38 kHz dual
beam 8 x 8 deg. or Simrad 200 kHz 6
deg.

Multi Beam Echosounder

Simrad EM 1002. 111 beams. 1000m
depth capability

Sound Velocity Probe

2 x AML SVP-16 (1000m option)
interfaced to PC

Side Scan Sonar

EG&G 260TH recorder
2 x EG&G 272T or TD tow fish
GeoAcoustics deep water 136 system

Sub-bottom Profiling

Huntec DTB (optional)
Hullmounted 4x4 transducer array
GeoAcoustics Surface tow boomer

Mini Sleeve Gun

10 cu.in. sleeve air gun with wave shape
kit



M/V Geo Surveyor

Hydrophone Streamer

Benthos model MESH 50/24P
Benthos model MESH 15/10P

Graphic Recorders

1 x Waverley 3640 thermal recorder
2 x Alden 9315 CTP Plotters

Data Logging and Digital Processing

GLOG/GPLOT
Compaq storage unit

Swell Filter

GPLOT

TVG Amplifier

FEAM/GPLOT

Bandpass Filter/TVF Filter

FEAM/GPLOT

Magnetometer

Geometrics G880 (optional)

Record Annotator

GPLOT

Seabed Sampling

Free fall 450kg gravity corer: 2 and 3m barrel. Core diameter 83mm. Max 750m cable length.
Grab sampler.

Seismic Recording System

Type TTS2+

No. of Channels 120

Sample Rate 0.25-2.00 milsec.

Filters

High Cut 411.9Hz
(programmable)

Low Cut 8.7Hz

Tape Format Seg D

Recording

Medium 3490/cartridge tape

Streamer

Fjord 120 channel programmable
6.25/12.5m group length, 2 x Digicourse
387 communications coil per 100m active

QC System

Processing Micromax, ProMax
Online Display GS 612 Plotter

Streamer Testing Unit

Patch panel
TTS 2 AVO Meter

Firing Control

Hydra Systems Hydra Pulse 100x Gun
Supervisor

Channels Display

Oscilloscope
TTS 2

Far Field

Recorded on tape as well as displayed on camera. Pulse monitor via TTS 2

Depth Controllers

Digicourse model 5010 digibird

Source

Up to 160 cu.in. Sleeve Gun
4 x 20cu.in array or
2 x 40 and 2 x 20 cu.in. array or
4 x 40 cu.in array

Compressor

3 x Hamworthy 4TH190W70
Delivery each compressor 166 SCFM
Pressure 138 bar

Camera

OYO. GS-612 plotter

Near Trace Analogue Rec

Waverley 3640 thermal recorder

Draughting

Microstation SE on Pentium PC
Digitising tablet
Hewlett Packard Design Jet plotter

Network

10/100 mbs 3 COM local computer network