



Marine Arctic Geological Expedition

RV "Geolog Dmitriy Nalivkin"

### General Information

Flag	Russian Federation
Owner	JSC "MAGE"
Year of Building	1985
Place of Building	Turku, Finland
Reequipped	1992, 1998, 2001, 2009
Register Class	KM * UL 1[I] A2
Type	2D Seismic survey Vessel
Call Sign	UAMN
MMSI Code	273 45 47 00
IMO Number	8119039
Length / Beam / Draft	71.7 / 12.8 / 5.4 m
Deadweight	466 t
Register tonnage: gross weight / net weight	1935 / 580 t
Total Displacement	2142 t
Cruising Range	9500 miles
Speed eco / max	9 / 12 knots
Endurance cruising/seismic	40 / 25 days
Number of Crew Members / Expedition Specialists	27/27 persons
Fuel Capacity	329 m <sup>3</sup>
Capacity of Lubricating Oil	24 m <sup>3</sup>
Fresh Water Capacity	120 m <sup>3</sup>
Service Water Capacity	110 m <sup>3</sup>
Fuel Consumption	8 / 13 m <sup>3</sup> /day

### Main and Auxiliary Machines

Main Engines 2 x Type G-74  
2 x 1150 kW, Russia

Auxiliary Diesel – Generators 3 x DEUTZ BA8AM 816R  
3 x 385 kW

Generators for Air Compressors 1 x MITSUBISHI S12R-MPTA  
840 kW

Emergency Diesel – Generator 1 x DGA 50-9R  
50 kW

Shaft Generator 1 x SSE-455-4a  
340 kW

Thruster JASTRAM-WERKE BI 1545  
200 hp

Propulsion "KaMeWa"  
4 blades, CPP, type 86 x F/4

Steering Gear WARTSILA T6 10/65<sup>0</sup>E

Distiller DY-4, capacity of 7 t/day

Fuel Separator 2 x MAPX-204GT/41396  
Alfa Laval, Sweden

Lubricating Oil Separator 1 x MAPX-204GT/41396  
Alfa Laval, Sweden

Deck Erecting Cranes bow crane HYDROPLAN, SWL of 2 t  
stern crane HYDROPLAN, SWL of 3 t

### Marine Pollution Prevention Equipment

Bilge Water Separator	TURBULO, type: TE 1FS Germany
Incinerator	For incineration of solid wastes "ATLAS" ASWI 402-A, Denmark
Sewage Treatment Plant	NEPTUMATIC MOC-20 Produced by Salen & Wicander, Sweden
Bilge Water Tanks	1 x 11.7 m <sup>3</sup>
Cuttings Tanks	1 x 6.7 m <sup>3</sup>
Sewage Collecting Tanks	2 x 10 m <sup>3</sup>

### Video Monitoring

High Mast Camera	n/a
Air Gun Deck Camera	available
Seismic Winch Room Camera	available
Engine Room Camera	n/a

### Damage Control Equipment

Fire-Smothering System	CO <sub>2</sub>
Fixed Foam-Smothering System	2 systems for protection of the main and auxiliary seismic winches
Fire Pumps	2 pumps, capacity of 40 m <sup>3</sup> /h
Self-Contained Smoke Detectors	100 % quarters
Fire-Resistant Sets with self-contained breathing apparatus	3 sets with self-contained breathing apparatus DRÖGER, Germany
Fixed Drainage Pumps	2 x ALWELLER, type: NB65-250/246, Germany capacity of 60 m <sup>3</sup> /h

## Navigation and Communication

Radar	FURUNO 2115, JRC JMA 5322-7/6HS Maximum range – 72 miles
Echo Sounder	NEL M30 Depth measurement range – 0,5-500 m
Autopilot	DECCA-Pilot 550
Gyro-Compass	SPERRY "NAVIGAT X MK 10"
Log	IEL-2M
GPS	SUMYUNG SPR - 1400
GMDSS	A1, A2, A3
Weather Facsimile Receiver	NAVTEX FURUNO NX 700A
INMARSAT C	SKANTI COMBRIDGE "Thrane and Thrane", TT-3020 C
Marine Alarm Reporting System, Long Range Identification System	"Thrane and Thrane", TT-3000SSA CAPSAT
Intercom	RYABINA
VHF	3 x Skanti VHF 3000 2 x Skanti VHF 1000 1 x Sailor RT-2048 1 x Navico Axis 250 2 x Jotron, Tron 2 x Jotron, Tron 1 x IC-M71
Radio Telephony, Telex (HF/MF)	Skanti TRP9501SD6T Combridge, Skanti TRP9251SDT Combridge
Phone	+810 4751407560
Phone (Iridium)	+881677701381
Phone (Iridium)	+881677701382
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E-mail:	<a href="mailto:NISNALIVKIN@rambler.ru">NISNALIVKIN@rambler.ru</a> , <a href="mailto:Nalivkincap@mage.ru">Nalivkincap@mage.ru</a>

### Life Saving Equipment

Lifeboats	n/a
Fast Rescue Boats (FRB)	WEEDO 700 FRB Produced by Maritime Partners, Aalusund, Norway capacity of 12 persons
Life Rafts	6 x VIKING DK 20 1 x VIKING DK 10
Immersion Suits	64 pieces
Life Vests	69 pieces
Ring Life Buoys	12 pieces Perry Buoy, Scanmarine

### Process Equipment

Electrically Driven High-Pressure Air Compressors	3 compressors EK-30A-1; pressure 2000 psi FAD of 600 m <sup>3</sup> /h (357 cfm) 2 compressors HAMWORTHY 4 <sup>th</sup> 190; pressure 2000 psi; FAD 320 m <sup>3</sup> /h (190 cfm) 1 compressor HAMWORTHY 4 <sup>th</sup> 565; pressure 2000 psi; FAD 725 m <sup>3</sup> /h (444 cfm)
High-Pressure Air Diesel – Compressors	1 compressor NORWALK C600 (1286 cfm) pressure 2000 psi
Total HP air output	3181 cfm
Main Seismic Winch	ODIM ULSTEINVIK NORWAY Type: 3000 Gear 4000 x 1800 x 3000
Auxiliary Seismic Winch	KARMOY WINCH
Pull Winches	4 winches BRINE MEKKANIK VERKSTED Type: HO7V3D, pulling power of 4500 kg
Host Winches	2 winches BREVINI WINCH
Hydraulic Pumps	2 pumps PVN 098C-RF-1S-100-C25V-31 capacity of 120 l/min

## Geophysical Equipment and Instruments

<b>Energy Source:</b>	
Type	BOLT 1500 LL, 1900 LLX
No. of Arrays	4
No. of Air Guns	40
Maximum Volume	6000 cu inches
Pressure	2000 psi
Gun Control System	Real Time Systems BigShot
<b>Seismic Streamer:</b>	
Type	Sercel SEAL Sentinel Solid, 24bit
Length of Streamer	8100 m
No. of Channels	648
No. of Groups per Streamer Section	12
Available Group Interval	12,5 m
Length of Group	12,95 m
No. of Hydrophones per Group	8
Type of Hydrophones	Sercel Flexible
Depth Controller	Digicourse 5010/5011E
Tail Buoy	Tail Buoy 800 Mini, Partner Plast AS
Tail Buoy Positioning System	Seatrack 220
<b>Seismic Recording System:</b>	
Type	SEAL v.5.2
Recording Format	SEG-D 8058
Recording Media	IBM 3590 (10 Gb), IBM 3592 (60 Gb, 300 Gb)
Plotter	iSys V12
<b>Geophysical Recording System:</b>	
Gravimeter	"Chekan"
<b>Navigation Hydrographic equipment:</b>	
Integrated Navigation System	Spectra 2D Concept Systems Ltd
Processing	Sprint 2D Concept System Ltd
Satellite Receiver	C-Nav, Model 2050 R
Echo Sounder	SIMRAD EA500
	Depth measurement range - up to 10000 m
<b>Seismic Data Processing:</b>	
Processing System	ProMAX 2D, version 2003.12.1
Plotter	Thermal plotter OYO 636-2