



RV Odyssey Explorer

A versatile multi-purpose vessel providing integrated survey and WROV services worldwide

RV *Odyssey Explorer* Ship Specifications



RV *Odyssey Explorer* is a Dynamic Positioning Class II ROV Support Vessel, originally built as a factory trawler, but with substantial rebuild in 1994, providing significant resources and facilities for the support of modern marine science.

The ship is fully equipped to maintain and support extended deep-sea voyages. Handling equipment is installed for the operation of ROVs, deep and shallow water Search Systems, and the deployment of sub sea packages.

Principal Features		Machinery and Control	Special Features
Classification	Lloyds +100A1 DTp Class VII	Main Engine Mirrlees Major KMR 6 cyl, 4-stroke diesel, 2782 BHP @ 525 rpm. Single shaft driven through reverse-reduction gear box	Laboratories Online & Offline survey laboratories, ROV control room
Port of Registry	Nassau	Main Propulsion Liaaen type G80/0 4-bladed stainless steel C.P. Propeller	Data logging, storage, reports, graphics, AIS database
Length Overall	76.6 m	Auxiliary Propulsion No 1 Forward retractable azimuth aquamaster UL632, 102 kN No 2 Forward tunnel Kamewa 1300, 60 kN No 3 Aft tunnel Kamewa 1100, 45 kN No 4 Aft retractable azimuth aquamaster 601, 84 kN	Handling Facilities Cranes 3 x 1.5-ton SWL Knuckle Boom @ 6 meters 1 x 9T SWL Knuckle Boom. L/R for ROV 1 x 5-ton SWL (designed to 20-ton SWL) "A" frame at stern Moonpool 5.3m x 3.5m complete with hanger
Length BP	65 m	Control System Alstom DP Duplex control console for bridge operations	Navigation Outfit 1 x Radar Furuno 2835S ARPA 1 x Radar Furuno FR2115 + ARP 2 x Sperry Gyros Sr220, Decca 550 Auto Pilot, Cetrek 930-747 Auto Pilot, Furuno GP50 GPS, DESO 30 Echo sounder Speed log, Furuno Weatherfax, Marconi Navtex
Breadth	12.65 m	Generators 2 x 220 kW, 2 x 475 kW alternators 1 x shaft driven 300 kW DC generator 1 x independent 220 kW DC generator 2 x 187 kW alternator	Communications GMDSS to area 3 2 x Sat C Navico VHF RT 6500S, 2 x Skanti VHF DSC Transceiver TRP 3024, Skanti MF/HF DSC Controller DCU 9006, Skanti MF/HF DSC Transceiver DCU 9006 Skanti HF SSB TRP 8000. 3 x Handheld VHF Icom ICM 12, Electronav EN2182R watch alarm SERPE-IESM Rescuer, EPIRB Jotron Tron40s, Skanti Inmarsat B. fleet 77
Depth	5.74 m	Power Supplies Main power generation @ 440v, 3 phase, 50 Hz Domestic power 220v, 1 phase, 50 Hz Scientific power supplies available at various voltages. ROV power 440v, 60 Hz	Reson 7160 44khz Hull-mounted Multibeam System
Draft	6.7 m	Auxiliaries 5 tonne/day reverse osmosis F.W plant Air conditioning plant	
Speed	Max 12 knots Service 10 knots		
Range	16000 nm		
Duration	60 days		
Gross Tonnage	1431		
Net Tonnage	504		
Displacement	2220 tonnes		
Fuel Capacity	283 tonnes		
F.W Capacity	100 tonnes		
Accommodation	42 persons		
Crew	12/15		
Signal Letters	C60S4		
Official Number	342737		
Year Built	1972 (Rebuilt 1994)		
Builder	Clellands		
"All details are about" and given without guarantee			
Additional Information Sonardyne HPR Designated ROV Area			

Deep-Ocean Exploration Equipment on *Odyssey Explorer*

- **Navigation and Positioning Technology**

- Applanix POS/MV Inertial Motion Reference Unit
- Hemisphere DGPS System
- Trimble DGPS System
- Winfrog Navigation Software
- Fledermaus 3D for Visualization
- Sonardyne RangerPro Wideband USBL
- Integrated USBL Thru-Hull Deployable Pole Mount
- 200Khz, 38Khz & 12Khz Echo Sounder Heads

- **Ship Mounted Multibeam**

- SeaBat 7160 44khz Deep-Water Multibeam Sonar
- Reson SVP 70 Sound Velocity Probe
- Valeport Sound Velocity Probe
- Reson PDS 2000 Acquisition Software

- **6000m Seach and Inspection Capability (Optional)**

- Reson 2-Part Deep Tow Sonar System featuring Dual 7125 MB Sonars, Digiquartz Depth Sensor, 300khz Doppler, Sonardyne Wideband USBL Beacon and Ixsea Octans MRU
- Side-Scan Sonar (Fiber) with Deep Tow Body
- Geometrics G882 Cesium Magnetometer
- Dynacon Traction Winch with 10km 0.68 Inch Fiber Optic Cable
- Inspection Class ROV with LARS and Control Shack

- **Side-Scan/Magnetometer Technology**

- EdgeTech 4200 Dual Frequency 75/400KHz Side-Scan Sonar
- Geometrics G882 Cesium Magnetometer
- Kolstrand Winch with 5km 0.45 Inch Co-Axial Cable

- **ZEUS ROV Technology for Inspection, Sampling and Excavation**

- ZEUS I, 150hp SMD ROV System
- Dual Schilling Conan Manipulators with XYZ Position Feedback Integrated into Navigation Package
- Simrad MS1000 Scanning Sonar
- Sonardyne RovNav LBL
- Geocoded Video and Electronic Stills Photography
- Broadcast Quality HD Camera System
- 3D Camera System
- Reson 400KHz 7125 Multibeam Sonar
- ROV Winch with 2.3km 1.658 inch Cable (Fiber)
- SONARDYNE INS (ROV) with Integrated RDI Doppler Speed Log
- Digiquartz Precision Depth
- Autotrack System
- Hydraulically Operated Collection Drawer
- SERF System (SEdiment Recovery Filtration)
- FADE System (Ferrous Anomaly DETection)
- TSS System (Conductive Material Detection)

- **Additional Subsea Intervention Capabilities**

- Hotstab Hydraulic Tooling Which Includes Chainsaws, Circular Saws and Clamshell Grab
- 4inch Dredge System
- Limpet Suction System
- Subsea Collection/Recovery Baskets of Various Sizes

- **Critical Support Equipment**

- Wired and Wireless Communications Throughout Ship
- 4 terrabytes of Networked Server Storage with Backup System
- Full Charting Capabilities, Plotters and Printers
- Multiple Networked Processing Workstations with ArcGIS, 20/20 and ISIS Sonar Processing Software and Visualization Packages and Full Databasing Capabilities
- Everetz GPS-Based Time Standard Synching All Systems
- Large Screen Programmable Displays in Both Online and Offline Spaces
- Large Capacity UPS and Frequency/Voltage Control throughout Online and Offline Spaces



ZEUS ROV

Deep-Ocean Exploration Equipment on *Odyssey Explorer*



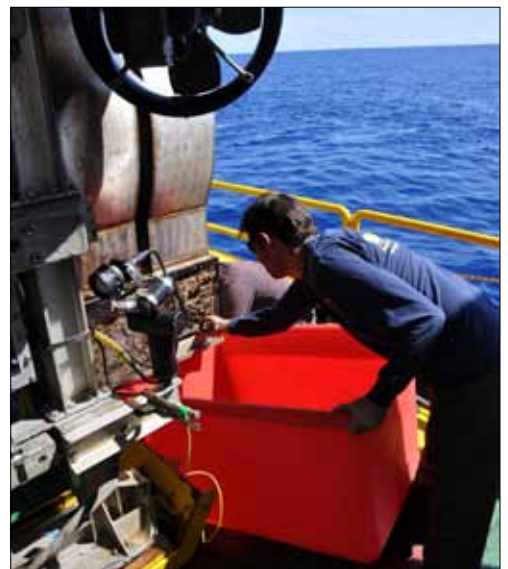
Dual Still Camera Sled for Large Scale Photomosaics



Edgetech 4200 Side-Scan System with G882 Magnetometer



Fade Gradiometers



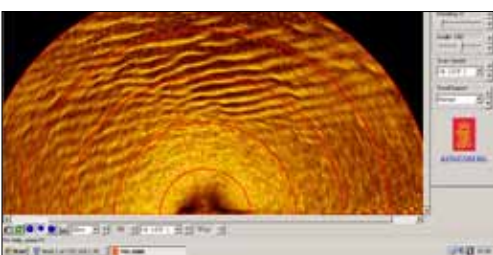
Sediment Recovery and Filtration System (SeRF)



TSS Pulse Induction System



Sonardyne LBL Compatts



Kongsberg Mesotech Sonar

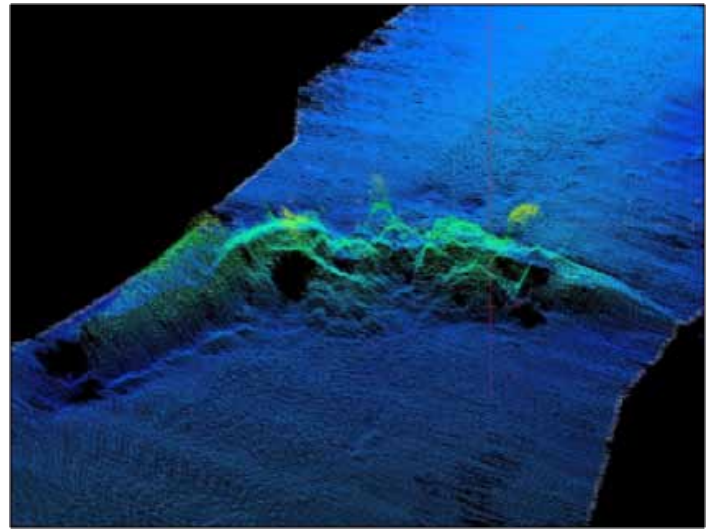


High-Definition and 3D Video Recording

ROV and Hull Mounted Multibeam Systems



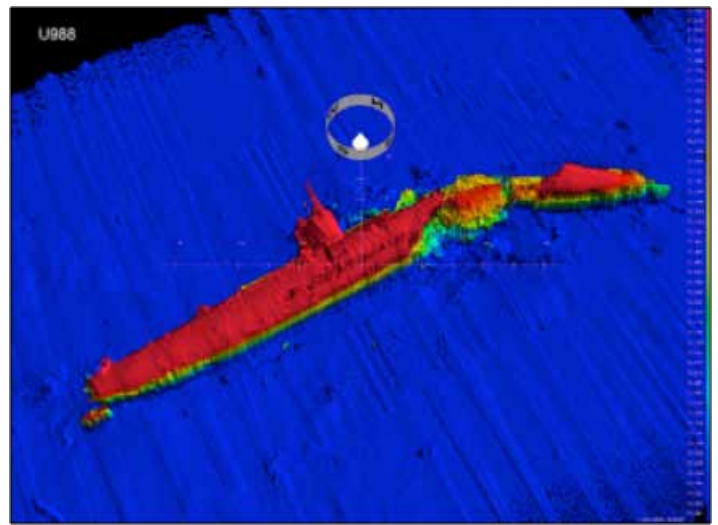
Hull-Mounted 7160MB



7160MB Point Cloud Data



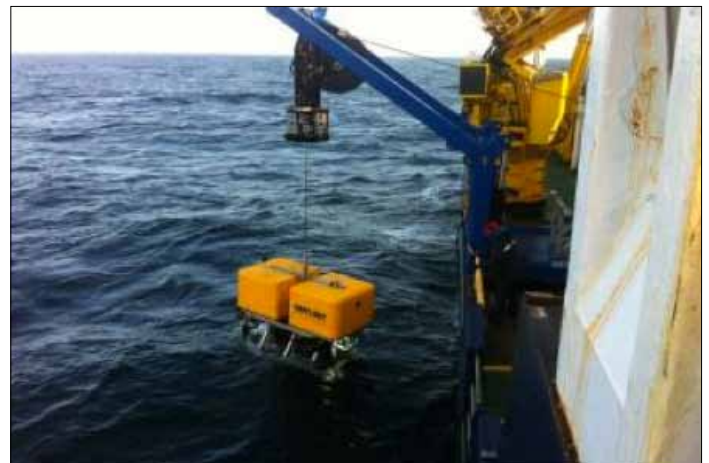
ROV-Mounted 7125MB



7125MB Point Cloud Data

SeaBat Technical Specifications	7160	7125
Sonar Operating Frequency	44KHz	400KHz or 200KHz
Transmit and Receive Beam (<i>Nominal and dependent on environmental conditions</i>)	1.5°, 3.0°, 4.5° or 6.0° / 2.0°	1° at 400KHz, 2.2° at 200KHz 0.5° at 400KHz, 1.1° at 200KHz
Number of Receive Beams	150EA or 512ED	Up to 512
Coverage Sector	Up to 150°	Up to 165°
Depth	3 – 2750m	3 – 2750m
Ping Rate	Range Dependent. Up to 50pings/sec	Range Dependent. Up to 50pings/sec
Pulse length	160us to 10ms (CW) 160us to 20ms (FM)	33us to 300us (CW) 300us to 20ms (FM)
Power Requirements	110/220V AC 50/60Hz 500 W (Processor)	48 VDC (Subsea)

6000m CLIO ROV – Optional



CLIO Technical Specifications	
Depth	Operating depth 6000m, Parascientific Digiquartz 6000m depth Sensor
Power	All electric with hydraulic power pack for manipulators
Manipulators	Two Hydrolek 5 function hydrolic manipulators
Payload	Payload 75Kg, > 200Kg using recovery basket underneath vehicle
Image Capture	Supports HD video and electronic stills camera with LED lighting
Versatility	Available electrical and telemetry for supporting additional sensors and equipment

6000m Deep Tow Multibeam Search System – Optional



Deep Tow LARS



Deep Tow Depressor



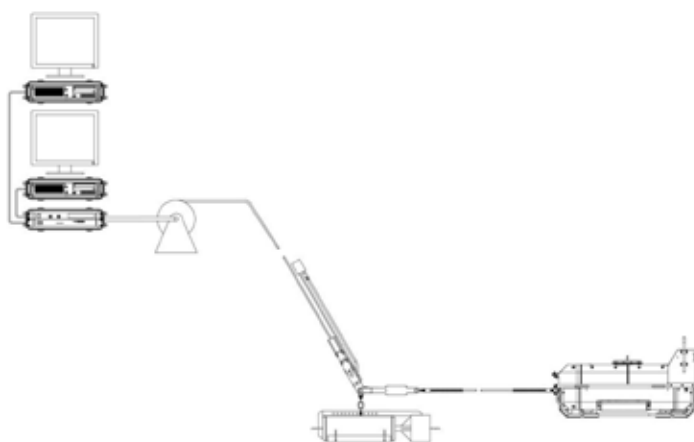
Multibeam Deep Tow System



Launching Deep Tow

Reson/Teledyne two-part Deep Tow Sonar System

Two-part Dual Head Deep Tow Search System (rated to 6000m), operated on an armoured Fiber Optic tow cable, handling and Deep Tow traction winch system consisting of:



- Reson/Teledyne Dual Head two-part Deep Tow Sonar system featuring Dual 7125 Multibeam Sonars (200/400kHz)
- Nexus IV Multiplexer,
- Reson SVP70 Sound Velocity Probe
- Paroscientific Digiquartz depth sensor
- RDI 300kHz Doppler
- Sonardyne wideband USBL beacon
- Ixsea Octans 6000 MRU
- Sonardyne Loadstar AAINS (acoustically aided INS)

The Right Tools, Team and Technology

Successful deep-ocean projects require not only the right equipment and platform, but also an experienced technical team to efficiently operate the tools and interpret the results.

Odyssey Marine Exploration can provide a wide range of options to fit any set of project objectives.

The *Odyssey Explorer* is a unique turnkey solution for worldwide deep-ocean exploration, sampling and excavation with a proven track record in the shipwreck business. Odyssey's equipment is available for charter fully configured onboard the RV *Odyssey Explorer* complete with expert technical and scientific teams.

In some instances, Odyssey equipment may be chartered as a stand alone system on a vessel of opportunity. A limited number of Odyssey's technical team is required as part of the charter package to ensure successful operation of the equipment.

While many organizations can offer equipment or ship leases, the Odyssey technical team adds a unique element not offered elsewhere. While each team member is fully qualified and extremely proficient in their respective roles, it's the experience of working together as a team for 10 years that adds an element hard to match. From operating, modifying, and maintaining each element of Odyssey's subsea equipment to analyzing results and developing new tools hundreds of miles offshore, this is truly a dedicated team and not a group of contractors pulled together for a month or two.

Odyssey also has an associated design and fabrication facility in the Tampa, FL area that specializes in electrical and mechanical custom design projects for the subsea industry.

The Odyssey Team Includes:

- Project Managers
- ROV Supervisors
- ROV Electrical Technicians
- ROV Mechanical Technicians
- Survey Supervisors
- Senior Surveyor/Navigator
- Datamanagers
- Dataloggers
- Archaeologists
- Geologists

Systems which can be mobilized on Vessels of Opportunity

- 6000m *CLIO* inspection-class ROV with dedicated LARS and control van
- 6000m Search system comprising of a Dynacon traction winch and two part Deeptow multibeam sonar system
- 2500m *ZEUS* Heavy work class ROV system
- 2000m Sidescan sonar search system



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