

Companies with an interest in deep seabed mining, May 2017

Source: International Seabed Authority, <https://www.isa.org.jm/>

Company	Activity	Country
2H Offshore	Riser technology	UK
Bauer Maschinen GmbH	Drilling equipment for offshore foundations and subsea exploration, sea bed drill rigs	Germany
Blue Planet Marine	Marine environment consultants to oil, gas and mining industries	
Bluewater Metals (subsidiary of Neptune Metals)	Exploring in PNG, Solomon Islands, Vanuatu, and Tonga	Australia
Boscalis	Marine services company	Netherlands
Bosch Rexroth AG	Mechanical and plant engineering, cutting-edge technology	Germany
Bureau Veritas	Lab testing, inspections and certification services	France
Chatham Rock Phosphate Ltd.	Wanting to extract phosphate from Chatham Rise	New Zealand
Coffeys	International geological consultancy. Provided Nautilus Minerals with an EIA for Solwara 1, 2008 and Neptune Minerals with an environmental audit in 2011.	
Continental AG	Flexible fluid hoses	Hungary & UK
Continental / ContiTech / Oil and Marine Eddelbüttel + Schneider GmbH	Special rubber riser systems for offshore mining	Germany
Daewoo Shipbuilding and Marine Engineering (DSME)	A global leader in building ships and offshore structure	Korea
DCNS	Offshore Technologies Solutions	France
De Beers Marine	Offshore diamond mining	South Africa
De Regt Marine Cables	Marine Cables	Netherlands
Deep Green Resources	Vessel for production of polymetallic nodules. Secured investment for Glencore and Glencore Xstrata contracted to purchase Ni and Cu	
Deep Reach Technology (DRT)	Waiting for patent on technology. Cook Islands exploration	US?
Deltares	Independent institute for applied research	Netherlands
DFKI - German Research Center for Artificial Intelligence	Development and realisation of artificial intelligence methods in underwater systems and robotics	Germany
Diamond Fields International	Diamond mining in Namibia. Gold mining in Red Sea (Atlantis II)	Canada
DNV GL	Classification and Certification	
Dredging International /DEME Group	Dredging International	Belgium

Ecotone AS	Involved in several programs driving the development of technology for automatic mineral identification.	Norway
Eda Kopa (Solwara) Ltd.	Wholly owned subsidiary of Petromin PNG Holdings Limited. State nominee for Solwara 1 operation	PNG
Endeavour Financial	Investor in Cook Islands	Canada
EvoLogics GmbH	Underwater communications, navigation, positioning etc.	Germany
ERAMET	Positioning itself as a DSM operator, exploration in French Polynesia	France
FAYAT Travaux Sous Marin (FTSM)	Non-standard underwater machines – developing a seabed mining vehicle SMV	France
Fortescue Metal Group	Has tenements off the west coast of Australia but has not indicated that it plans to mine in the future	Australia
Fraunhofer	Maritime systems, underwater robotics	Germany
Fugro	“Creates value by acquiring and interpreting earth and engineering data to assist you with the design, construction, installation, repair and maintenance of your infrastructure.”	Netherlands
Fujian Mawei Shipbuilding	Shipbuilding	China
Gardline CGG	Multidisciplinary marine site survey and 2D exploration seismic survey. Currently supplying Nautilus Minerals with exploration services	
G E Hydril (G E Oil and Gas)	Subsea slurry and lift pump for Nautilus	
Geomar – Helmholtz-Zentrum für Ozeanforschung Kiel	Institute investigates the chemical, physical, biological and geological processes of the seafloor	Germany
Global Sea Mineral Resources (GSR)	Subsidiary of DEME/Dredging International. Nodule contract	Belgium
GMC	Designed riser tooling for Nautilus	US
Golder Associates	Geological consultancy. Provided Nautilus Minerals with the ‘Mineral Resource Estimate, Solwara 1 Project’, 2008	
Green Flash Trading	Appears to have pulled out of phosphate mining in Western Cape	South Africa
Hanwa Corp	Engineering company that now has MineRo robot	Korea
Harren and Partner Ship Management	Ship management	Germany
HC Marine and Mineral Projects (IHC)	Robots & subsea technology	South Africa
Hydro-Lek	Hydraulic fittings to fully integrated telemetry-controlled robotic manipulator systems for	

	integration onto ROVs and remote access platforms	
HYDROMOD Service GmbH	Management, consulting in deepsea mining	Germany
IHC IMS Ingenieurgesellschaft mbH (Royal ICH)	Royal IHC – IHC Mining B.V. Mining technology	Netherlands
IMS Ingenieurgesellschaft mbH	Offshore technology, engineering and installation,	Germany
India Rare Earths Ltd		India
Interoceanmetal Joint Organization (IOM)	Geophysical surveying in the Clarion-Clipperton zone	Bulgaria, Cuba, Czech Republic, Poland, Russian Federation, and Slovakia
Japan Oil, Gas and Metals National Corp (JOGMEC)	Surveying since 1975, the company looked for polymetallic sulphides in the East Pacific Rise, the Okinawa Trough and the Izu-Bonin back-arc basin and discovered large deposits rich in rare earth elements. Developing robots etc. for Japanese Government.	Japan
JS Capital Power	Offshore Investment Specialist	
Keppel Offshore & Marine Technology Centre (Kromtech)	R&D and product development for offshore and deep-sea technologies	
KGHM		Poland
KIOST (Korea Institute of Ocean Science)	Fiji	Korea
Kongsberg Maritime	EIAs, monitoring, cameras	
KORDI Minerals Ltd.	Commercial arm of Korea Ocean Research and Development Institute (KORDI). Exploring in Tonga and Fiji	Korea
Leonhard Nisen and Sonner	Big engineering projects	Norway
Lloyds Register	Classification	
LS-Nikko Copper	Copper smelting	
MacGregor	Cargo flow solutions for maritime transportation and offshore industries. Nautilus Minerals with cranes for processing ship.	
Manafa International Ltd.	Atlantis II	Saudi Arabia
Marine Assets Corporation (MAC)	Vessel charter company	Dubai
Marine Metals Ltd.	Company hoping to recover tin off coast of Cornwall	UK

Marine Space	Environmental Consultants. Experience in sea dredging	
MARIN	Linking hydrodynamic research to the maritime industry	Netherlands
Marum	Sea floor drilling rigs	
Mawarid Offshore Mining	Investor (10%) in Nautilus	Oman
MBT GmbH	Sales and service for oceanographic, geophysical and hydrographic equipment	Germany
MC Marketing Consulting	Management and technology consulting for deep-sea mining	Germany
MESL Marine Ecological Surveys	Scientific advice on the impacts of major industrial and construction developments in the marine environment.	
Mercator Ocean	Ocean Forecasters	France
Metalloinvest Holding	Investor in Nautilus	
MHWirth	Drilling technology	Germany
Mitsubishi Heavy Industries		Japan
Mitsui Mining & Smelting		Japan
Modec	Mobile Drilling	
MTI	Independent R&D – (see IHC above)	Netherlands
Namibian Marine Phosphate Ltd.	Namibian Marine Phosphate Ltd is a joint venture between three companies: Australian mining firm UCL Resources Limited, Oman based Mawarid Mining LLC, and Namibian company Havana Investments (PTY) Ltd.	
Nautilus	Mining explorer and developer	Canada
Neptun Ship Design GmbH	CFD – Ship theory and ship hull optimization	Germany
Neptune Minerals	Neptune Minerals, Inc. focuses its exploration on seafloor massive sulphide deposits at non-active vent sites. The company has tenements totalling 175,000 km ² in Japan, Papua New Guinea, Solomon Islands, Vanuatu, Fiji, Tonga and New Zealand.	US but has subsidiaries in UK and Hong Kong
NIOZ	NIOZ Royal Netherlands Institute for Sea Research, applied research	Netherlands
NORA	Positioning for licenses in Norwegian EEZ and international waters. 85% by Nordic Mining ASA 15% by Ocean Miners AS	Norway
Northern Manganese Ltd.	Blue Mud Bay project	Australia
OceanFLORE	Integrated contact mining solutions for mine owners	
Ocean Minerals	Cook Islands	US

Ocean Mineral Singapore Pte Ltd.	Exploration license in CCFZ. Keppel Corporation is majority shareholder with UK Seabed Resources and Lion City Capital Partners as minority shareholders.	Singapore
Odyssey Marine Exploration	Deep-ocean survey and resource assessment for the exploration and development of seabed mineral deposits. Holds a majority ownership stake in Oceanica Resources, and minority ownership stakes in Neptune Minerals and Chatham Rock Phosphate, Ltd. Don Diego project in Mexico	US
Ramboll-IMS	Offshore technology and hydraulics	Germany
RCS Global	International geological consultancy. Research & advice to DSM industry	
Rexroth Bausch	Drive and control solutions for offshore industry	
Rolls Royce	Engines for Nautilus support vessel	UK
RWTH Aachen	University analysing nodules	Germany
Samsung	World's No. 1 shipbuilder that builds value-added vessels including drill ships etc.	Korea
Santoku	Rare Earth Drilling	Japan
SEA Europe	Service Supplier "The voice of the European Maritime technology industry"	Belgium
Seascope Consultants Ltd	Offshore consultancy in policy development	UK
SeaTech Solutions International	Ship Design	Singapore
Siemens	Vessel electrics - Supplied Nautilus with the entire electrical installation for the production support vessel	
Siem Offshore Contractors GmbH	Offshore contractor	Germany
SK Networks	General trading company – petroleum products and resource development	
SMD	world-leading subsea vehicle design and manufacture	UK
SRK Consulting	International geological consultancy. Provided Nautilus Minerals with an 'Offshore Production System Definition and Cost Study' in 2010	
SRSL	Specialising in Renewable Energy, Aquaculture and Mineral Mining	
Statoil	Offshore technology	Norway
Store Norske Spitsbergen Kullkompani (SNSK)	The company that mines coal on Svalbard	Norway
Sumitomo Metal Corp		Japan
Technip	Project management. Designing riser technology	Germany

Tianjin Rock Check Steel Group	Has 6.6% share in TransTasman Resources, TTR.	China
Toyota Tsusho Corporation	TTC has a monazite sand rare-earth production base in India. Toyotsu Rare Earths India Private	Japan
TNO	Applied scientific research	Netherlands
Tonga Offshore Minerals Ltd.		
Tongling Nonferrous Metals Group Co. Ltd	Customer for Solwara 1 ore	China
Trans Tasman Resources, TTR.	Taranaki (NZ) iron sands	New Zealand
Uniresearch	Project management	Netherlands
Yuzhmorgeologiya (YMG)	State company of Russian Federation comprises of 9 divisions and laboratories, 3 subsidiaries, design facilities and construction workshops.	Russian Federation