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## UNDERCURRENTS

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Issue 6, January 2007

Welcome to the 6<sup>th</sup> issue of our newsletter. Last year saw MSI's 3<sup>rd</sup> anniversary of metocean measurements in Sakhalin and you can read more about this on page 3. In the last issue we reported that we were in the process of establishing an office in Australia - we are pleased to announce that this has been finalised and you can find details on page 2. In this issue we also report on ongoing projects in the Mediterranean, Angola and UAE. In order to reflect our global expansion our email domain addresses and our website URL have changed to [www.metoceanservices.com](http://www.metoceanservices.com) (please check for regular updates).

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### *MSI back in Abu Dhabi*

MSI is pleased to announce that we have recently mobilised a current / tide measurement programme for Horizon Survey (contracted to ADMA OPCO) off Abu Dhabi. Measurements are being made at three locations using RD Instruments 600 / 1200kHz ADCPs and a selection of Valeport CTDs / tide gauges (see picture below).



Deployment was conducted on 5 November from the dive support vessel NMS402. At each location divers conducted a seabed survey at the intended deployment location to ensure that the seabed was flat and free of any obstacles.

The gimballed deployment frames, with equipment installed, were then lowered to the seabed. The divers released all the lifting strops from the frames and ensured that they were level and that the ADCPs vertical.



The equipment was recovered, serviced and redeployed at three new locations during the first week of December.

This project is slightly unusual for MSI as it is not often that we have photographic and video records of our equipment after it has been deployed. In this regard MSI would like to thank the captain and crew of the vessel for all their assistance.

*MSI installs weather stations in Angola for BENEFIT*



BENEFIT is a regional partnership between Namibia, Angola and South Africa focused on fisheries and the marine resources of the Benguela Current ecosystem off southwest Africa. BENEFIT was originally conceived in 1995, adopted by the Southern Africa Development Community (SADC) as a project in June 1996, and formally inaugurated in April 1997

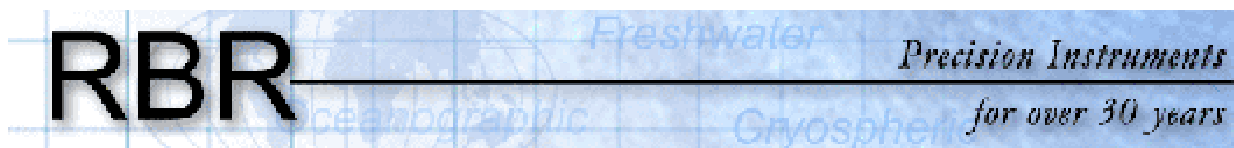


Designed to be a 10 year programme, it is currently in the second (three year) phase of operation and is funded from a variety of local, regional and international research and development sources.

As part of the programme and on behalf of the Angolan Ministry of Fisheries, MSI installed Mike Cotton weather stations in Luanda, Lubito and Namibe in Angola, and training the ministry personnel in their operation and maintenance.

For more information on this programme visit the BENEFIT website at <http://www.benefit.org.na>

*MSI Australia appointed agents for RBR Ltd*



Coinciding with the launch of MSI's Australian office in Tasmania, the company has been appointed Australian agents for RBR Ltd ([www.rbr-global.com](http://www.rbr-global.com)). Formed in 1976 and based in Ottawa, Canada, RBR Ltd. is a global leader in the oceanographic instrumentation industry, providing competitively priced and innovative products to scientists, government agencies, military, universities, and individuals.



The product range available from RBR Ltd. includes single, dual and multi-channel data loggers, salinometers, tide gauges and water level recorders. RBR Ltd also has extensive experience of successfully integrating their instruments with other international manufacturers sensors and has also recently launched the RBR Ltd Data Buoy. This buoy is based on a 1.75m polyethylene, foam-filled hull and is highly configurable in order to meet the clients' exact requirements.



As well as a complete team of oceanographers and engineers available to calibrate instruments to WOCE standards and to support clients queries and requirements, RBR Ltd also have a range of accessories available to support oceanographic programs, no matter how large.



Speaking on behalf of Metocean Services International, Stefan Stimson commented, "We look forward to growing RBR's share of the Australian market and developing our existing relationship with them. To date we have already worked with RBR Ltd. on numerous occasions and not only do we represent RBR Ltd products in South Africa through our sister company (Lwandle Technologies) but we also use the products extensively in the field to support our projects around the world."

## MSI enters 3<sup>rd</sup> year of operations in Sakhalin

MSI is proud to announce that it has commenced its 3<sup>rd</sup> consecutive year of work in Sakhalin, again working with Romona Inc for Elvary Neftegas (ENG). Elvary Neftegas is a joint venture company formed between Rosneft and BP for the Sak IV and V development. In the summers of 2004 and 2005, real-time current measurements were provided to support drilling campaigns in the north of the Island in the Kaigansky-Vasuykansky area. This is further north, further offshore (49km) and in deeper water (114m) than any previous well drilled off Sakhalin by any company.



In 2005, MSI were also contracted to deploy various current and wave moorings to measure the oceanographic conditions

during the short summer period. This scope was subsequently extended and involved MSI deploying both current and ice profiling instrumentation under the ice for the duration of the winter.



In July 2006, all 4 winter moorings deployed during the (extended) winter period were recovered and a 100% data return was attained. During the same period, a real-time current profiling package, consisting of an RDI ADCP, Linkquest acoustic modems and MSI proprietary software, and a 0.9m directional waverider (pictured left) were installed in close proximity to the drilling rig "Transocean Legend" to provide real-time wave measurements and current speed and direction profile to assist the drilling operation.

Following on from the successful real-time installation and winter period recoveries, the MSI engineers mobilised in June from both of the MSI South Africa and Australia offices to deploy a further 3 seabed moorings comprising current and ice profilers (see picture below), an additional 0.9m waverider and conduct CTD profiles.



These moorings were recovered, serviced and redeployed in October from the vessel JV3 (pictured on left) and will be collecting data throughout the ice season. This metocean program is designed to provide engineering data for the design of ENG's offshore facilities.

## Technical Awareness Seminar for 2007

The 3<sup>rd</sup> biennial Technical Awareness Seminar (TAS) is scheduled for 19-21 June 2007 and will be held at the Department of Maritime Studies at the V&A Waterfront, Cape Town. For more information on the seminar please visit [www.hydrusa.co.za](http://www.hydrusa.co.za) or e-mail [hydrusa@pertec.co.za](mailto:hydrusa@pertec.co.za)



*Peace Water Pipeline project metocean data collection programme*



MSI have been contracted by Geological Assistance and Services (GAS) in Italy to provide oceanographic services in connection with the Peace Water Project. This project will involve the construction of a pipeline to carry water from Turkey to North Cyprus. The pipeline will be located at the narrowest section of the strait formed by Turkey and the island and will provide water at a rate of 75 million m<sup>3</sup> per year (2.38 m<sup>3</sup>/s).

The pipeline will be a submerged floating structure and the subsea section of the pipeline will consist of 1.6 m diameter HDPE pipe approximately 78 km long. In the shore approaching sections of the route, the pipeline will be either resting on the seabed or be trenched and backfilled below seabed level. Between the 250 m depth contours on both the Turkish and Cyprus sides, the pipeline will be suspended at a water depth of minimum 250 m. The pipeline will be spanning from vertical tethers anchored to the sea bed in spans of approximately 400 - 500 meters length each.



The oceanographic work scope involves the collection of currents at two deepwater stations and of currents and waves at two shallow water stations. Collection of current transect and CTD data is included at offshore visits. In addition, test pieces of the HDPE pipe have been moored to determine biofouling rates.



Each of the deep moorings (above right) is fitted with an RD Instruments 75kHz ADCP, Nortek Aquadopp current meter, RBR Ltd XR-420 CT logger and Argos satellite locator beacon. The shallow moorings are fitted with RD Instruments 600kHz ADCPs in bottom-mounted frames. Deployment and recovery of these frames is achieved with the use of Sonardyne lightweight acoustic release transponders.

The project was mobilised out of Sicily at the beginning of September during which the vessel *Odin Finder* was used for the deployment of the deep water moorings, as well as the deployment of the biofouling moorings (pictured left). The vessel *Gizemli* was used for deployment of the shallow moorings. The 1st service visit was conducted in December, during which the equipment was recovered, data downloaded, batteries changed and all moorings redeployed. The data collected will be used as input to modeling studies being conducted by Artiproje and DHI.

