



## METOCEAN SERVICES INTERNATIONAL (PTY) LTD

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# UNDERCURRENTS

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Issue 1, January 2004

Metocean Services International (Pty) Ltd (MSI) was launched on 1<sup>st</sup> September 2003 to provide meteorological and oceanographic (metocean) services globally. Although a new company, it brings together a management team with over 28 years of experience in the offshore oil and gas industry.

With access to the latest state of the art equipment, MSI provides professional, cost effective global solutions in response to our clients requirements for accurate metocean information. This not only makes us an alternative service provider, but it will establish MSI as a supplier of choice for the provision of metocean services globally.

Although our website ([www.metocean.co.za](http://www.metocean.co.za)) is regularly updated, "Undercurrents" is designed to bring you up to date with the latest developments at MSI in the convenient format of a regular newsletter.

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75 kHz ADCP being deployed from a rig (see page 2) -picture courtesy of RD Instruments.

*Metocean Services  
International really  
are International!*

In the 4 months since its launch, MSI has already earned the 'international' tag.

During this period, we have conducted projects for clients in the Middle East, India, Indonesia and the UK.

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### Next Issue

Reports on some of the projects already conducted by MSI as well as a focus on our data processing and reporting capability.

### Collaborations

MSI has identified and formed strategic alliances with various companies both locally and internationally, to strengthen our position in the international metocean market. Some of the collaborations are:-

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The agreement gives Seatronics "preferred supplier" status and in return, MSI has instant access to a large pool of state of the art oceanographic and meteorological equipment situated at key locations around the world and at preferential rates. Furthermore, Seatronics have undertaken that they will purchase equipment on behalf of MSI if required to supplement items already in their extensive equipment pool.

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This exclusive agreement allows MSI to provide accurate weather and marine forecasting and optimum voyage routing services to the offshore industry worldwide.

With offices in the US, UK, South Korea, China and Hong Kong, AMI has provided global weather information services to the marine industry since their incorporation in early 1991.

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MSI currently also has agreements in place to provide technical expertise to Lwandle Technologies for work in South Africa, with COMACOE for work in India and with Zietsman Lloyd and Hemsted (specialist engineering consultancy)

For more information on any of these agreements, visit:  
[www.metocean.co.za/collaborations.htm](http://www.metocean.co.za/collaborations.htm)

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## Focus on Rig Support Services

As drilling moves further offshore and into deeper waters, the impact of the oceanographic regime on operators becomes more significant. Recognising the need to support our clients in this regard, MSI offer a range of services specifically tailored for the offshore drilling industry.

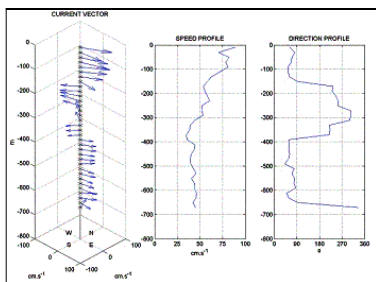


DP Semi Pride Carlos off Cape Town, South Africa  
Photo courtesy of Pride International

### Real-time Current Profiling

Real-time current data through the water column can be of great assistance for a safe and successful drilling programme.

MSI has written in-house software that is easy to set-up, producing graphical displays that are both easy to understand and to customise. This software interfaced into current profilers that are deployed in purpose-built frames over the side of the drilling platform gives the drilling operator instant, accurate and reliable information about the current regime.



Example of one of the screens available in the MSI real-time software package displaying current vector and speed and direction profiles.

### Real-time Wave and Weather Measurements

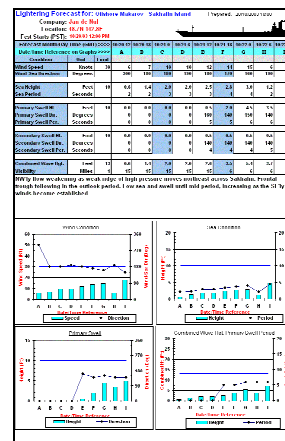
As with current measurements, real-time wave and weather measurements can provide invaluable information during drilling operations. For waves these are normally provided by installing a wave measurement buoy in the proximity of the platform and telemetering the data via radio to a receiving station installed on the rig where data displayed includes parameters such as significant wave

height, wave period & wave direction. For weather observations, an automatic weather station is installed on the rig with the parameters such as wind speed, wind direction, air temperature, air pressure, relative humidity, cloud height and visibility being displayed in real-time as well as being logged on hard drive for future processing.

### Weather Forecasting

Accurate site-specific weather forecasts are essential in support of offshore operations. MSI, through our association with Aerospace & Marine International, provides custom forecasts accessible 24 hours / day via a secure web server, e-mail, and / or fax, in text and graphical formats for easy dissemination and application, featuring:

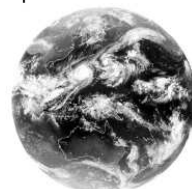
- Wind speed and direction
- Sea height and period
- Primary and secondary swell height, direction, and period
- Combined wave heights
- Visibility



MSI can also provide an optimum voyage routing service in support of rig tows, etc.. This service includes:-

- An Initial Route Recommendation
- Daily Voyage Monitoring and diversion recommendations.
- A detailed Voyage Summary Report
- Weather Monitoring System (accessible 24-hours a day via the Internet)

To support the issued forecasts, additional images such as satellite images or satellite derived plots can be provided as required.



Satellite Image courtesy of JMA

## Other Services

MSI can also provide the following services to a range of clients:

### Project Management

Full project management of all aspects of metocean projects internationally. This can include initial scoping, technical design, supervision of measurement programmes, data processing and reporting.

### Meteorological and Oceanographic Data Collection

Collection of oceanographic (currents, waves and tides) and meteorological (wind speed, wind direction, air temperature, air pressure, relative humidity, rainfall and visibility) data for operational and design purposes. This includes in situ and real-time measurement systems, where data transmission is via radio, GSM or satellite. Equipment used is industry standard from manufacturers such as Aanderaa, Nortek, RDI, Datawell, Seabird, Sonardyne & Vaisala.

### Data Processing & Analysis

Data quality control, processing, analysis and reporting using Matlab-based suite of software, presenting results in any client determined format. Typical products include:

- Time series
- Exceedance curves
- Extreme value analysis
- Joint distribution tables
- Harmonic analysis
- Progressive vector diagrams
- Rose plots
- Animations

### Software and Database Development and Hosting

Our Matlab-based software suite (including both acquisition and processing components) is continually being developed in order to meet the changing needs of our clients. Using the Matlab® webserver, MSI can develop and host metocean databases. Clients then have access to their data via the Internet or MSI can generate products on demand.

### Desktop Studies

Review of existing data in the form of a desktop study can provide a cost effective alternative or precursor to a physical measurement programme. Data sources for input to desktop studies include global ocean and atmospheric models and research data (both proprietary and in the public domain).

### Baseline Studies

Baseline studies are conducted to determine the physical and biological status of the environment at a specific location both prior to, during and after operations. Sediment & water samples are collected and analysed at accredited laboratories for parameters such as heavy & trace metals, hydrocarbons, nutrients, fauna and physical parameter. The time series of analytical results helps understand the impact the activity has on the environment.

### EIA / EMPR

Preparation of Environmental Impact Assessments and Environmental Management Programs in support of proposed operations / developments. EIAs are studies of the biological, physical, social and economic impacts of planned activities on their surrounding environment and EMPR are plans that are compiled to maximise the potential benefits and minimise the potential harmful effects of activities on the environment.

## MSI Website

The MSI website was launched on the 2<sup>nd</sup> September 2003. Since then, according to records kept by our website host, there have been nearly 500 different visitors logged in, accessing over 2000 pages.

Month	Individual Visits	Pages Viewed
September	71	365
October	84	399
November	154	687
December	163	634

Although we still believe in the importance of personal contact with our clients, we recognise the convenience to our clients of accessing information via the Net. We therefore strive to keep our website regularly updated so that you can watch our company grow.

Visit us at [www.metocean.co.za](http://www.metocean.co.za)

## MSI Key Contact Details

Address	2 Loerie Close, Constantia, Cape 7806, South Africa
Phone	+27-21-7940313
Fax	+27-21-7940815
Email	Sidney@metocean.co.za
	Bruce@metocean.co.za
	Stefan@metocean.co.za
Website	<a href="http://www.metocean.co.za">www.metocean.co.za</a>