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November/December 2008

# The MARITIME EXECUTIVE

INTERNATIONAL CAPITAL FOR EXECUTIVES



Joseph S. **Compofelice**  
Chairman & CEO

**TRICO**  
MARINE

# The MARITIME EXECUTIVE

INTELLECTUAL CAPITAL FOR EXECUTIVES



Photo courtesy Trico Marine

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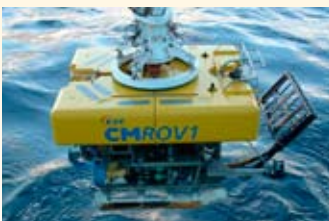
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# Offshore Security of a Different Kind

## WESCORP ENERGY ROLLS OUT THE SOLUTION TO LOCATING, TRACKING AND CATALOGUING OILFIELD EQUIPMENT

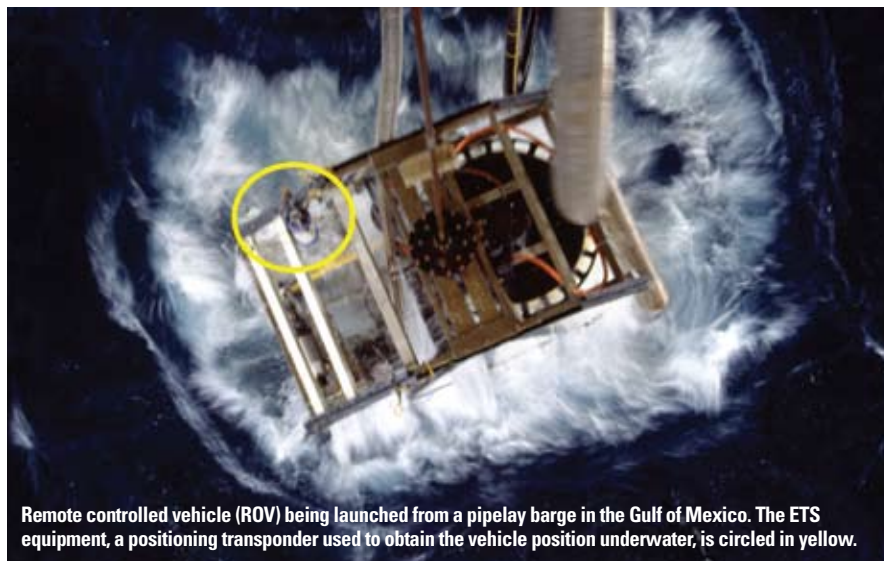
By Joseph Keefe

In November 2007, Wescorp Energy Inc. announced the launch of its Intelligent Field Resource Management (IFRM) tool, a radio-frequency identification (RFID)-driven solution for industrial and oilfield equipment. That's a mouthful. But what does it really mean? In response, Wescorp's COO Scott Shemwell sums up the new service by explaining, "IFRM answers the three most important questions those in oil and gas field operations and maintenance (O&M) have about their equipment: 'What do I have? When did I get it? Where is it?'" What's more, Wescorp's IFRM/RFID technology is something previously viewed by the maritime industry as primarily a tool for container handling. As it turns out, RFID is a lot more than that.

### Defining Wescorp's Supply Chain Solution

Wescorp Energy supports upstream oil and gas company field operations, especially in the areas of Environmental Remediation, Unconventional Oil and Gas, Field Intelligence, and Metering and Measurement. Wescorp is headquartered in Calgary, Alberta, with offices in Houston and Edmonton. Their current IFRM/RFID-driven effort was developed with the help of others, but Wescorp aims to take it to the next level, making it commercially viable. Originally formed as a Delaware corporation in 1998, the firm changed its name to Wescorp Energy Inc. in 2003 and adopted a new business plan to incorporate the business and technologies of Flowstar and Flowray.

In Wescorp's early GOM testing of the RFID equipment tags, it partnered with Equipment and Technical Services Inc. In the past, equipment was labeled and tracked with bar codes and painted ID markings. RFID technology uses passive readers with tagged equipment at the gate



Remote controlled vehicle (ROV) being launched from a pipelay barge in the Gulf of Mexico. The ETS equipment, a positioning transponder used to obtain the vehicle position underwater, is circled in yellow.

of the worksite. On an offshore platform, the positioning of the passive reader accomplishes two tasks: supply chain management and theft management. Both metrics are critical parts of any successful offshore oil and gas operation. Scot Shemwell insists, "The key is to manage the movement of equipment to and from the job. The unique RFID tags can be treated just like a VIN number or a serial number for equipment."

The reader unit can capture RFID, bar code and digital images. Handheld readers "search and find" with a "Geiger-counter" type of hot and cold sensor. The RFID tags are bolted to equipment in a permanent fashion and constitute the same sort of technology found on clothing and merchandise in the retail trades. The tags meet the EPC Gen 2 standards (Electronic Product Code Class-1 Generation-2 UHF RFID Protocol), and information is linked to Wescorp's proprietary NAVIGATOR Process Management Services, which holds "structured and unstructured" data (blueprints/drawings).

### Boring, Maybe; Unimportant, No...

It is, no doubt, difficult to get overly excited about a supply chain tracking device in the middle of sagging financial markets and the spiraling drop in the price of crude oil. On the other hand, Wescorp's new RFID tracking system is so much more than an inventory tool. And the best reason to consider the new service has nothing to do with inventory and everything to do with the chronic shortage of offshore oil service personnel. Today's very real manpower shortage translates into fewer employees performing more tasks and not necessarily being able to accomplish all of them. This application of RFID equipment, therefore, takes on new importance. Here's why.

Scott Shemwell perhaps puts it best when he says, "When you are busy for a very long time, your equipment begins to wear out." Being able to identify that equipment before it does is another thing altogether. And let's say that your firm is especially efficient at making sure that equipment is always maintained according to



**LOAD**

Load handheld scanner with PC data related to items or materials you want to verify ship, count, or otherwise identify.

**SCAN**

Scan the RFID tag to verify materials, modify data, count inventory and ship or receive.

**LOCATE**

Locate assets without having to rely on illegible, damaged, or missing markings such as stamped numbers, color codes, etc.

functioning at any precise moment, if it needs to go back for a rebuild, etc. Beyond this, a considerable amount of what the IFRM solution will tag is not specifically designed for a single job site. Equipment is often transferred to different departments or divisions within a company. That ROV unit that got loaned out for a job in the Gulf of Mexico very well could wind up in Newfoundland. How

did it get there? The Wescorp solution enables companies to track its history."

regulatory and manufacturer's specifications. Now the trick is to find that equipment in a deep sea, industrial environment. That's where Wescorp comes in. Shemwell calls it "managing by exception." Roughly translated, it simply means that the equipment, if it cannot be found or accounted for using the RFID system, is either lost, stolen or malfunctioning. It also means that it is time to go and find it.

**More Than Inventory Control or Supply Chain Management**

Engineers in the field need to know more about their equipment than what its depreciation schedule is. Scott Shemwell adds, "Our solution will tell them such things as exactly where that piece of equipment is, what kind of shape it's in, whether it's even

**Tying In: Closing the Loop**

The RFID solution is bigger than a robust Mylar substrate encapsulated epoxy tag. Wescorp's proprietary NAVIGATOR Process Management Services – combining deep oil and gas industry knowledge and expertise with engineering and

**Multi-Vessel Construction Capabilities to Meet Our Clients' Needs**



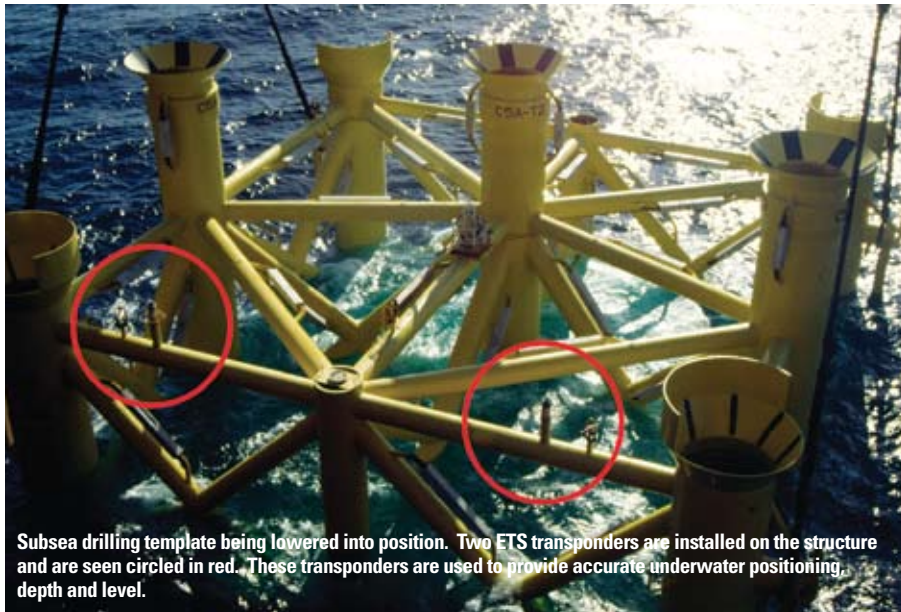
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Subsea drilling template being lowered into position. Two ETS transponders are installed on the structure and are seen circled in red. These transponders are used to provide accurate underwater positioning, depth and level.

“  
*...because equipment is scanned into and off the work site, the firm always knows what is there, when it is due for renewal and how long it has been in service. On the other side of the ledger, supply boat crews can use the RFID solution to prove that deliveries were made – with platforms doing the same to ensure receipt – both employing “Date/Time” stamps.*  
 ”

economics – is a big part of the overall package. All data related to the tagged equipment is tied to NAVIGATOR and stored securely online where it is available for collaborative use. After finding a particular piece of machinery you’re looking for, you can at the same time get the manual on it, the service record on it—anything about the item you want to know. This secure, Web-enabled

information gathering and sharing system serves to optimize field operations.

**Minimizing Risk:  
 Increasing the Bottom Line**

In the industrial offshore world, safety is paramount. Out-of-compliance construction cranes and other equipment can expose your firm to

risk when they fail. It’s not enough to put the onus on offshore personnel who may already be overwhelmed in their primary job functions. And because equipment is scanned into and off the work site, the firm always knows what is there, when it is due for renewal and how long it has been in service. On the other side of the ledger, supply boat crews can use the RFID solution

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to prove that deliveries were made – with platforms doing the same to ensure receipt – both employing “Date/Time” stamps. Also integrated to maintenance systems, “computer-based prompts” tell personnel to stop using a particular piece of equipment before it fails and the lawsuits start.

**Tried and Tested:  
RFID Tags With Grit**

In the past, oilfield workers and their shoreside counterparts relied on bar codes or other inventory control methods for heavy industrial material, consumables and equipment. But these methods provided spotty information – if they worked at all. The IFRM solution, in contrast, has been proven reliable at the bottom of the Gulf of Mexico and in Arctic temperatures. Tested to 4,000 meters and 8,000 PSIG, the units are also corrosion-tested for up to four months under water. The Mylar substrate encapsulated epoxy tags are read by a Handheld Mobile Computer designed for rugged environments.

**Intelligent Field  
Resource Management**

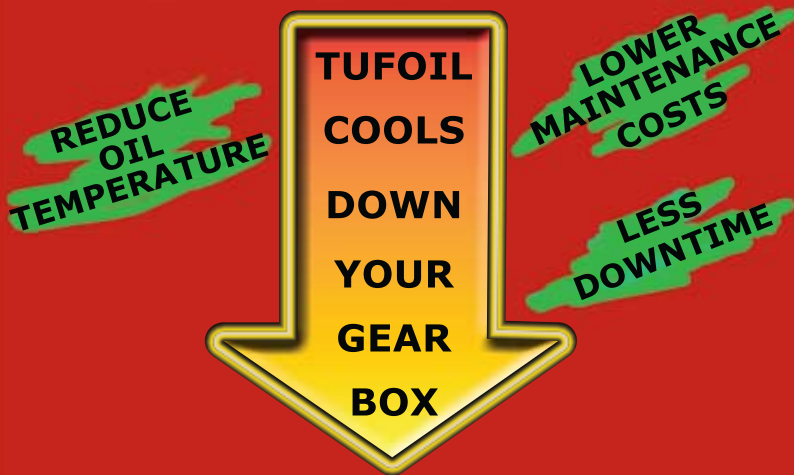
“We are focused solely on the oil and gas industry. This is not merely a division for us; it is the essence of who we are.” Scott Shemwell, COO of Wescorp Energy, sums up his philosophy nicely, but proving to industry that a radio-frequency identification (RFID)-driven solution for industrial and oilfield equipment will solve a myriad of problems for the oil and gas crowd is a tough sell. Just ask the U.S. Department of Defense (DOD). Contractors have been required since early 2007 to put passive RFID tags on shipments to Defense Logistics Agency-operated distribution depots, but compliance with that rule is reportedly less than 50 percent. And the DOD has spent over \$12 million on RFID protocol in an effort to improve supply chain visibility.

In the offshore oil and gas environment, however, companies considering RFID implementation will do so for the obvious reasons, but also for a laundry list of others, including but not limited to:

- Security/Anti-theft
- Mitigation of Risk
- Supply-Chain Management
- Better Collaboration of Equipment Data/Information, and
- Maintenance and Repair.

The need to do a better job in tracking, maintaining and generally managing company assets is an important metric at \$100 per barrel of recovered crude oil. It’s even more important at \$65 per barrel. And that’s why the Wescorp solution just might gain some traction, no matter what happens in the Oil Patch going forward.

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