

## WORLD'S FIRST 30,000 PSI INTERVENTION PACKAGE ON THE WAY

As well as bringing new Tool Catcher and Slickline Stuffing Box assemblies to the market, Runi Joensen, head of development - WPCE, and his team are developing another NOV ASEP Elmar world first for the industry.

The team is developing the first ever 30,000 psi (207MPa) working pressure intervention string for use with both slickline and braided line and moreover, the first ever high temperature 300°F (150°C) H<sub>2</sub>S 30,000 psi intervention equipment.

This equipment will ensure that as the search for oil and gas takes our clients deeper and hotter, NOV ASEP Elmar is there to support the challenges that they will face.

Carl Wood, NOV ASEP Elmar's engineering director, said: "The project includes all the usual equipment one might find in a pressure control string plus some new assemblies and innovative executions that are required at these extreme environmental conditions. It also includes two innovative control modules that incorporate aspects from our newly delivered NESSIE products. Every aspect of this project is challenging; from the new design approach, the new materials used and their processing through to the final inspection and testing."

The first product will be off the machines in May 2011 with the core equipment available at the end of November 2011.



**David Brebner** Vice President of NOV ASEP Elmar

Although our industry is continually evolving and adapting to changing market conditions, the success of NOV ASEP Elmar remains dependent on the same fundamental principles of 'Product, Price and Place'.

The products designed and manufactured by NOV ASEP Elmar are considered 'best in class'. A position we must defend by investment in strong engineering support.

Through well managed departments and improved manufacturing methods, our product prices remain competitive in what is a very difficult market.

The manufacturing and support facilities of our company are strategically placed to be efficient with regard to product supply and effective with regard to client support.

A company with a reputation for poor delivery will only survive without competition. Client perception is an important consideration in any contract award and timely delivery is as important to the client as adherence to the 3 principles.

It is therefore imperative that we all continue to achieve deadlines and always bear in mind that on-time delivery is key to long-term success.



## CELEBRATING LONG SERVICE MILESTONES - Q1

We celebrated some big anniversaries in the first quarter of 2011 by holding lunches and dinners for staff receiving long service awards in NOV ASEP Elmar's regions around the world.

It is extremely impressive in today's workplace to see the number of employees with these lengths of service and a real achievement for both staff and NOV ASEP Elmar.

To all employees a sincere thank you from the management team for your loyalty and commitment.



### Americas

Employee Name	Service
Quoc Bui	10 years
Austin L Jolly	10 years
Jose C Montoya	5 years
DeMorris Burrell	5 years

### Far East

Employee Name	Service
Anuwar Bin Saliman	10 years
Virtuthachalam Pillai Velmurugan	10 years
Chan Ah Heng (Darren)	10 years
Roslaila Binte Osman	5 years

### UK

Employee Name	Service
Alan Smith	20 years
Sean Stewart	15 years
Nora Mather	10 years
Jacqueline Smith	10 years
Graeme McCall	10 years
Craig Wilson	10 years
Neil Morrison	10 years
David Taylor	10 years
Mark Slater	5 years
Christopher Cruickshank	5 years
Piotr Wisniewski	5 years
Craig Tosh	5 years
Gillian Milne	5 years

### Netherlands

Employee Name	Service
Piet Vink	20 years
Christiaan Naaktgeboren	15 years
Anton Eijkelenboom	15 years
Cor van Bommel	15 years
Dennis Sicking	10 years
Jan Korevaar	10 years
Karl Eikelenboom	5 years
Michel Willemse	5 years
Pieter-Jan Koppelaar	5 years



# Regional Updates

## Americas Update

The regional headquarters of the Americas region of NOV ASEP Elmar is in Houston, which is also its main manufacturing location and where the majority of staff are located. In this update, however, we focus on the smaller locations in the Americas, with a section supplied by an employee from each location.

### Louisiana, USA (David Thibodaux, sales representative, NOV ASEP Elmar Americas)

Business is very strong right now and the first offshore drilling permit since the Gulf of Mexico oil spill has just been issued, which is very promising for South Louisiana. The Haynesville Shale is still moving in the right direction with possible rig drops by the end of the year. South Texas, near Corpus Christie is also booming.

2011 is looking very good for South Louisiana and offshore activity should start to pick up, which will help our industry tremendously.



### Mexico (Bruce Dawson, sales manager, NOV ASEP Elmar Americas)

NOV ASEP Elmar is represented in Mexico by seven employees. Our office is located in one of the most important ports in Mexico, Veracruz, and the facility provides our customers with equipment, spare part sales and rental of well head equipment, compressors and cranes.

We also provide electro-mechanic cable maintenance (cleaning and spooling), and we provide one year recertification for well head equipment and repairs to grease and hydraulic modules.

Garcia & Mallitz recently purchased NOV ASEP Elmar's pressure control equipment, including modules and pressure test units, for Pemex projects and we hope to see a high volume of spare sales in 2011 following the purchase of this equipment into Mexico.

### Bogotá, Colombia (Ricardo Salom, sales engineer Latin America, NOV ASEP Elmar Americas)

The outlook for the oil and gas industry in Latin America is very promising after the rise in oil prices earlier this year. In particular Colombia, Brazil, Chile and Peru are buoyant markets showing signs of major growth.

In Colombia, according to Ecopetrol projections, the petroleum industry will see production rise from 600,000 to one million barrels per day until 2015 and with investment of \$44billion forecast, this presents many opportunities for NOV ASEP Elmar over the next four years and beyond.



### Edmonton, Canada (Carl Hart, sales manager and Dave Pearson, inside sales, NOV ASEP Elmar Americas)

The Canadian hostile deep hole environment and harsh winters have Edmonton Alberta's NOV ASEP Elmar location providing lightweight, high pressure equipment with specialist material specifications and Arctic grade elastomers suited to the region's operating conditions.

We are leading the way with Wireline Pressure Control Equipment and related products from large bore low pressure equipment for shallow multi well gas projects, to deep sour high pressure equipment with working pressures routinely of 10,000 and 15,000 psi.

Following the global recession, heavy oil, oil sands and shale gas reserves have remained at the forefront of activity in Canada. We are supplying equipment to Halliburton and Schlumberger for shale gas projects in the Rocky Mountains and Alaska, providing complete strings and spares for our WPCE products. We also deliver equipment to these companies in the East Coast of Canada for on and offshore projects.

### Brazil (Bill Morris, general manager, NOV ASEP Elmar Brazil)

The new Brazil operation in Macaé is up and running. Bill Morris has been appointed as general manager and manufacturing is already underway to deliver high pressure subsea crown plugs for Cameron. Equipment is being installed in wellheads used offshore by oil multinational Petrobras.

The new site includes a state of the art machine shop and office facilities. We hope to have around 45 local staff working in Brazil and expertise from Aberdeen are assisting in the initial set-up of the new operation.

By the end of 2011, we will locally manufacture perforating guns and the new site will also act as an after sales support base for all NOV ASEP Elmar equipment sold into Brazil, including winches and pressure control equipment.

# Regional Updates

## Aberdeen Update

by Brian Garden, general manager, NOV ASEP Elmar, UK

In line with customer delivery demands and wider requirements for our growth, we have increased our production capacity. This has led to increases in headcount in several departments and we would like to welcome our new employees to NOV ASEP Elmar. Whilst the employee increase has been mainly in workshop staff, there has also been a rise in support staff. As we move forward in 2011 we will be in a position to employ a fresh group of apprentices who will provide the basis for our next generation of home grown, highly skilled and well motivated personnel.

As part of our continued growth and development we are delighted to announce the following promotions and wish all concerned every success in their new position.

Laura Downie, fabrication supervisor, has been back on our television screens this time as part of the engineering team that recreated the Titanic at a similar scale. Laura helped to construct the Titanic's 30ft hull in Belfast, where the ship was originally built in 1912, by using old and modern techniques.

To speed up the riveting process, Laura came up with a new method whereby the rivets were squeezed and heated to 1,100 degrees, rather than using the old sledge hammer technique.

Finally, equipment has been delivered from Aberdeen to Aker Solutions in Norway, including the WLV control skid pictured below.



Laura Downie, fabrication supervisor

### UK Manufacturing Facility Promotions

John Burnett	Production Manager, Standard Products
Robert Bruce	Materials Supervisor
Laura Downie	Fabrication Supervisor
Scott Hardie	Senior Buyer
Stuart Cheetham	Facility & Maintenance Chargehand
Ian Skirving	Paint Shop Chargehand
Ian Donald	Fabrication Chargehand



WLV control skid

## Middle East Update

by Brian King, general manager, NOV ASEP Elmar Middle East



Ruel Geron, dual combi Coiled Tubing BOP after service

It has been 10 years since we launched NOV ASEP Elmar Middle East in Dubai. Over the years, our manufacturing, service and rental operation has grown rapidly and in the second quarter of 2011 we will begin to manufacture winches.

This highlights our commitment to locally manufacturing our products and producing products close to where our customers will use the equipment.

With business going strong we plan to increase our headcount by 50% this year,

adding around 30 people to our team.

We have recently delivered major WPCE orders to OilServ and Halliburton for oilfields in Iraq. These significant orders were delivered on time to both customers.

Coiled tubing WPCE recertification is going well and we will commence recertification of coiled tubing injector heads in quarter two.

# Regional Updates

## Far East Update

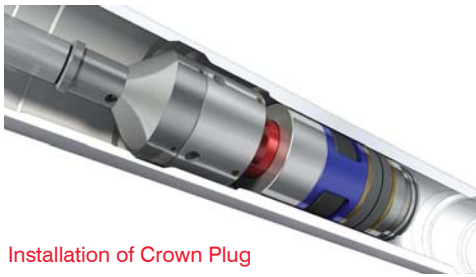
by Murdo Bain, general manager, NOV ASEP Elmar Far East

In recognition of the clear and significant value that is gained from investing in personnel development, staff in the Far East have received increased levels of training during the last year.

In summary:

- **Total annual training hours: 7,079**
- **Average annual training hours per employee: 58**
- **Percentage of employee total time invested in training: 3%**

Training initiatives are structured to maximise the effectiveness and efficiency of our workforce and to provide each member of our team with the ability



Installation of Crown Plug

to achieve their maximum attainable level of performance and position in the company.

Training covers topics including technical, safety, sales, management, communication and compliance.

Last year the Singapore facility was selected as the global focal point for engineering development and production of NOV ASEP Elmar's Wireline Tools product line.

We have subsequently established the most cost-effective and efficient methods to produce these products and now plan to introduce new tools and enhanced designs of existing tools to the product range.

To view the NOV ASEP Elmar Wireline Tools interactive training aid, employees go to nowwire - Sales - Training Material - Wireline Tools (Animation). Customers can obtain a copy from your local sales representative.

PCE Releasable Overshot



We plan to launch a unique jar test facility in our Singapore test cell by the end of 2011.

This will allow us to test, and demonstrate to customers, the effectiveness of these tools in a range of operating scenarios.

Our new facility further enhances the market leading status of NOV ASEP Elmar's Wireline Tools product range.

## Netherlands Update

by Alastair Ellis, general manager, NOV ASEP Elmar Netherlands



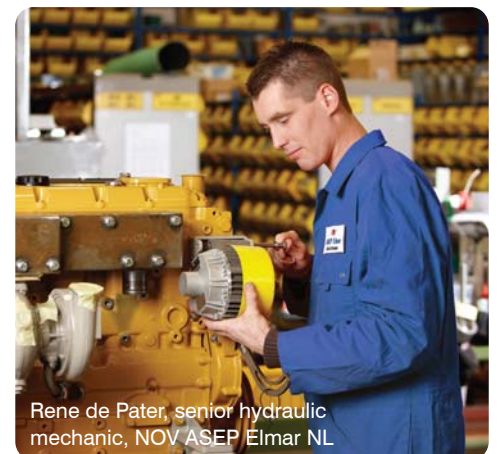
Alastair Ellis, general manager, NOV ASEP Elmar NL

We have a very healthy order book for the next 12 months which has resulted in expanding our manufacturing with a 5th production team. To increase efficiencies in production further we have strengthened

our production planning and purchasing teams. In February we passed our handover audit for ISO 9001 and in March for ISO14001 and ISO 18001 - all 3 have now been certified by Lloyds for the first time.

In February we delivered the first E-Drive winch to Aker Solutions along with the control units from the UK and in March we delivered the first E-drive winch to Deepwell. Both customers are delighted with the products and Aker Solutions has been using the first set at their Academy for a month with good results. So much so that the first set is heading offshore with the single power hook up and the second set was delivered at the

beginning of April. In March we received a large volume order for Brazil for our new Zone 2 CAT powered Slimline.



Rene de Pater, senior hydraulic mechanic, NOV ASEP Elmar NL



**Roberto Poggesi**  
Business Development

## What's so special about NOV ASEP Elmar's WPCE? Let's ask Roberto

Some innovative features are available on NOV ASEP Elmar pressure control equipment which serve to maintain our position as market leaders. On this page I will remind you of some of those features, both recently added and long accepted.

Roberto Poggesi joined Elmar in 1996 after a distinguished career with Schlumberger for whom he authored the first Pressure Operations Manual. Based in London, Roberto was responsible for the introduction of new technology and for client relations with several major customers. Roberto now works part-time for NOV ASEP Elmar on special projects.

### Tool Catcher: the new "Piranha"

**Q.** We have heard that NOV ASEP Elmar have a new Tool Catcher design. Why?

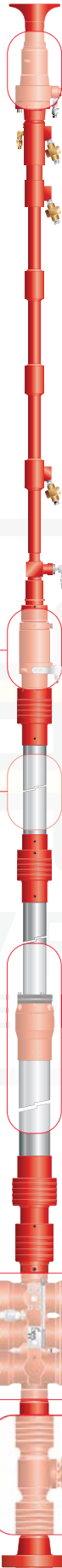
**Roberto** This new NOV ASEP Elmar development has recently been successfully field tested in challenging environments. Because of its advanced design using FEA simulations, it is lighter and more compact than its predecessor, while offering several benefits:

- A corrosion resistant design
- One piece collet, making assembly much easier
- Multi-catch for 1" to 1 3/4" fishing necks
- Fail-safe goes to catch position in the absence of hydraulic power

### 5 1/8" ID LW Lubricator and Slick-line Tapered String

**Q.** 5 1/8" seems like an odd size of lubricator for wireline operations. Why use it?

**Roberto** The very significant weight reduction achieved by NOV ASEP Elmar's 5 1/8" ID 10K H2S Light Weight Lubricator has allowed unprecedented ease of logistics when dealing with large bore high-pressure WPCE strings. An 8ft joint of LW lubricator weighs just over 300 lbs., vs. over 540 lbs. for a conventional integral 8ft joint. This has opened the possibility of running large OD HSD guns on e-line under-balanced with full pressure control using a manageable string. Another application made possible by the significant weight gains is a 5 1/8" Slickline Tapered String using 4 1/16" and 3" Lubricator on the top. *Coming soon: The new style easy loading Slickline Stuffing Box!*



### Air Line Wiper

**Q.** Our client complains that too much grease ends up on the rig floor during e-line operations. What can we offer?

**Roberto** This new Air Line Wiper significantly reduces the amount of grease spillage on the rig floor. Jets of compressed air in a spiral pattern wipe the line and force the grease into a return line where it can be cleanly collected. It can be used instead of a hydraulic line wiper (of which it uses the same body) for 5K psi applications or in tandem with a conventional hydraulic line wiper for 10K psi applications.

### Variable Length Lubricator (VLL)

**Q.** We have heard of the Variable Length Lubricator, but what is it?

**Roberto** NOV ASEP Elmar's Variable Length Lubricators are available for 3" ID and 4 1/16" ID strings. The VLL allows safe access to the wireline in case of operational problems (e.g. stranded lines) without resorting to the unsafe practice of stripping through a closed wireline valve.

### Wireline Valves: Q-Guides™ - Multi Line Ram Seals, Shear and Seal Ram Assemblies

**Q.** In the current environment we have to ensure as much as possible that a wireline valve seals on the wire, be it slickline or e-line, with minimum redressing between runs. What does NOV ASEP Elmar have to offer?

**Roberto** The patented Q-Guide™ feature provides positive alignment for the wireline, thus avoiding costly incidents where the electric line is pinched and damaged or cut by the rams. Before the introduction of the Q-Guide™ there had been frequent occurrences of pinched lines especially in large bore strings and lubricators off-vertical.

The Multi Line Ram Seals, available in two ranges : blind to 0.326" line OD and 0.326" to 0.472" line OD allow the user to switch from one line to another without rigging down and redressing the wireline valve.



The Q-Guide™ Shear and Seal Ram assemblies use the same inner and outer seal as a normal Q-Guide™ Ram offering reduced inventory benefits.

### Pump-in Sub: (PIS) API Flanged Design

**Q.** Is the Pump-in Sub an unnecessary addition to a WPCE string? If not, then why do we need it?

**Roberto** Several oil companies specify that on PIS located below the wireline valve on a well with surface pressure, a ball valve or gate valve must be used upstream of the WECCO connection. NOV ASEP Elmar has designed a compact pump-in sub with 2 1/16" API Flange side outlet, thus allowing the use of commercial gate/plug valves. When the valve is not required the PIS is equipped with a standard 1502 WECCO adapter to connect to the flanged outlet. Kits are available to convert old style PIS assets already in the field.

## PROJECT VOTAN PDM AND ERP SYSTEMS STAGES ARE COMPLETE

### Entering The Final Stage - CRM

In October 2009 Project Votan was launched; the objective of which was to transition from using four different enterprise resource planning (ERP) systems and two product data management (PDM) systems to a single ERP and PDM system for NOV ASEP Elmar.

Over the following 13 months the ERP and PDM systems were completed with the assistance of 'SuperUsers' from each region. Data was prepared, training was provided and any remaining technical issues were managed and closed out. What remains is to import and structure old data if and when it is required for products that have not yet been manufactured since the move to a single PDM or ERP system.

**With the ERP and PDM portions of Votan complete, we are now reaping the rewards of lower ongoing costs, superior performance, more efficient sharing of information and greater reliability of reporting.**

The management team would like to thank all staff and in particular the SuperUsers for their assistance with this important project.

The successful completion of the ERP and PDM phases does not mark the end of Project Votan, but instead marks the beginning of the customer relationship management (CRM) stage of Votan. CRM software is designed to manage communications to and from our clients. This includes the production of quotations, management of opportunities and other client data, entry of orders, tracking of credit status and tracking of client affecting events such as warranty support requests.

The chosen CRM system will therefore be the key tool for client facing employees such as sales, SAS and management. It will make us more efficient and provide better access to important data. Given that CRM will be a sales and SAS resource, it is necessary for the three systems to communicate – CRM, PDM and ERP.

#### What Happens Next?

The regional sales managers have already provided the input that created a specification for the CRM system, and we are now at the stage of evaluating the tender submissions from participating suppliers.

After the decision is made, we will recruit SuperUsers from each region who will assist with the rollout first to a pilot location then to all other locations, around the middle of 2011.

We can then expect to enjoy the benefits of a single sales process and the availability of client data at a keystroke.



Erik Poliste, sales engineer, NOV ASEP Elmar NL

# Employee Profile



## Manufacturing Locations

### NOV ASEP Elmar - UK

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### Perth, Australia

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### Bogota, Colombia

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### Moscow, FSU

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### Istanbul, Turkey

Tel: +90 262 679 0500

### Louisiana, USA

Tel: +1 337 839 0024 ext 201

### Beijing, China

Tel: +86 10 8485 1973

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NAME: Adam Blight

JOB TITLE: QA & Rental Operations Supervisor, NOV ASEP Elmar Perth.

QUALIFICATIONS: Advanced Certificate 3 in Automotive Engineering, Certificate 3 in Transport & Distribution (Marine Engine Driving - Grade 2).

GETTING THERE: I graduated from Bunbury Cathedral Grammar School in Western Australia and completed an apprenticeship in Automotive Engineering. I then worked offshore as a Marine engineer. I joined NOV ASEP Elmar in Perth five years ago as a Mechanical Fitter and have since progressed into QA and Operations Supervision, where I've been for three years.

WHAT ROLE DOES YOUR DEPARTMENT PLAY WITHIN THE COMPANY? NOV ASEP Elmar Perth looks after almost all the rental equipment for the Asia region. We have a rental fleet of more than 50 sets of pressure control equipment, masts, pressure test units, hydraulic control units and wireline units and our responsibility is to keep these all fully certified, serviced and available for rental. We also service, repair and recertify customer-owned equipment.

BEST BITS OF YOUR JOB: When you are able help a client and they genuinely appreciate the effort you put in.

WORST BITS OF YOUR JOB: It can be frustrating when you try to help a customer and they do not have an understanding of the work required to get them what they have asked for in the time they have given you.

IN MY SPARE TIME: I enjoy surfing, diving, fishing and boating. And of course drinking the local Margaret River wines.

FUTURE AMBITIONS: To learn more, further myself in my career and go forward for any opportunities which may arise in the future.

ADVICE TO OTHERS: Work, and to a certain extent life in general, is usually only difficult when someone is being unreasonable. If we are honest and fair in our expectations and contributions, have good balance between work and home life, are passionate about what we do and learn as much as we can along the way it is more enjoyable and rewarding for all concerned.