

# OWEN TECHNOLOGY INSIDER

A Publication of the Owen Oil Tools Engineering Department



a high pressure gas pulse. This pulse initiates and propagates fractures into the surrounding reservoir improving both production and injection performance. A typical shaped charge event and the corresponding pressure pulse is completed in less than 120-180 microseconds. The KODIAK Enhanced Perforating System™ extends that pulse time by more than 6 times allowing the pressure from the KODIAK system's energetic material to extend and propagate fractures made during the perforating event.

Owen Oil Tools does not recommend substitution of any part of the KODIAK Enhanced Perforating System™. Any attempt to do so will result in loss of performance at a minimum and potentially gun system failure. Owen Oil Tools is constantly endeavoring to add value to our customers and the development of the KODIAK Enhanced Perforating System™ is the newest undertaking. Be on the look out

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## The New KODIAK System is Here!

Owen Oil Tools has recently completed development on the KODIAK Enhanced Perforating System™, which combines perforating and well stimulation in one operation. The KODIAK system was developed to address a broader range of potential applications. The system integrates specifically designed perforating charges with a new energetic material. Lower breakdown pressures are just one result from recent field tests.

The KODIAK Enhanced Perforating System™ is an available alternative to the StimGun™ line in several ways. As compared to existing StimGun™ products, the KODIAK system requires substantially less fluid tump in the well to ignite the energetic material and stimulate the well; as little as 100 ft (31 m) of fluid is

required. Due to the design improvements of the KODIAK Enhanced Perforating System™, it can go where StimGun™ cannot. It can be run in highly deviated wells without external rings and centralizers, allowing stimulation of wells with complex casing configurations. The high temperature rating of the energetic material also increases the range of potential applications. The KODIAK system is rated at 400°F, which exceeds the StimGun™ temperature rating of 330°F.

The KODIAK Enhanced Perforating System™ incorporates specifically designed shaped charges to enhance the effect of the pulse seen from the KODIAK system upon detonation. Detonation of the perforating charges initiates a complex, sequentially burning reaction of the energetic material generating

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*Congratulations to Bob Ford on his  
25 years of service with Owen Oil Tools.*

## Meet The Staff



### John Davis

#### *Engineering Customer Support*

Born and raised in the Cleburne/Godley, Texas area, John is married with 4 daughters.

John served for 3 years in the US Army and had tours in both Desert Shield and Desert Storm. He is currently studying for an Associates degree in Liberal Arts and will graduate in December 2008. John started working for Owen after leaving the Army in 1993. He has worked in Production as a presser, in the Maintenance department as a technician, and has been in the Engineering department since 1998. He is currently a Senior Ballistics Technician. John's hobbies include hunting, fishing, camping and enjoying the outdoors.



### Daniel Cuevas

#### *Explosives Technology Group*

Originally from Chicago, Illinois, Daniel moved to the DFW area in 1995. He graduated in 2008

from Texas A&M Commerce and has a BS in Applied Sciences. Daniel previously worked at Titan for over 8 years as a Ballistics Technician. He started working for Owen in 2008 as a Ballistics Designer developing shaped charges. In his spare time, he enjoys watching movies, spending time with his family and is currently studying Chinese.



### Adam Barrientos

#### *Engineering Customer Support*

Adam was born and raised in Fort Worth, Texas and started working for Owen in 2006 in the Shipping/Receiving department as a Shipping Clerk. He moved to the Engineering department in June 2008 and is currently working as a Ballistics Technician. He likes working on his pick up truck and hanging out with his friends.

## Product Update

### *Gravity Orienting Gun System (GOGS)*

The new Gravity Orienting Gun System (GOGS) is now available. This new gun system is composed of an internal orienting Charge Tube with an Eccentric Weight and Roller Endplates. The Eccentric Weight is oriented to the Charge Tube by the operator during gun assembly and provides charge orientation to a predetermined perforating plane (via gravity). This system was developed to provide a more accurate method to align perforations with the fracture plane and eliminate the need for gun swivels and welded fins. These 3.375" guns are available in the following configurations: 4 spf 0°, 4 spf 180° and 4 spf +/- 20°. Please see the online catalog for technical specifications and ordering details.

– **Tim LaGrange PE**

Manager – Innovative Development Group

### *X-SPAN™ Systems*

Owen Engineering would like to announce the completion and release of our new 3.5" 9.2-9.3# Stackable and 3.5" 9.2-9.3# GTX systems. These systems have been designed and tested to supply our customers with reliable zone isolation applications that can withstand both high working pressures as well as corrosive situations.

The new 3.5" 9.2-9.3# Stackable System (STX) gives Owen Oil Tools the capability to run a complete modular system for the customer solving various zone isolation problems they may have down hole. With the help of X-SPAN™ Systems Technology, this system has the capability to be run and cover up hundreds of feet of corroded pipe or can be deployed in smaller sections to clear aggressive dog legs. It has a running diameter of 3.780" and a running inner diameter of 3.260". This system incorporates a VTR seal stack (Viton, Teflon, Ryton) system allowing for a strong seal between stinger and polish bore receiver as well as allowing the system to be run in various fluid types with out the worry of corrosion issues. This stackable system has a hydraulic pressure rating of 5,000 psi collapse and 6,000 psi burst.

The new 3.5" 9.2-9.3# GTX system gives the customer a high burst and collapse rating with the largest working bore possible. This system has a running outer diameter of 2.775" and an inner diameter of 2.260". It has been rated with nitrogen to pressures of 9,000 psi collapse and 7,000 burst and also has a hydraulic rating of 9,500 collapse and 7,500 burst.

– **Kurt Schneidmiller**

Mechanical Design Engineer

### *Small Packaging for Circulation Charges*

Following up from an article in the September 2008 issue of the Insider, we are pleased to announce that the smaller packaging for circulation charges was officially put in production on October 1, 2008. The new box is roughly half the size of the older box and holds only 20 charges, with 2 layers of 10 charges. This reduced charge count and layered packaging was created to reduce the amount of humidity that each charge is subjected to, which with circulators is vitally important. The initial response from our customers has been very positive. If you have any questions regarding this or any other Owen product, please see your local Owen representative.

– **Matthew Clay**

Manager – Explosives Technology Group

# Initiation Systems

Owen has a lot of new developments underway this year, after taking the past year to lay a solid foundation to forward its initiation product line. This past year has been all about taking a look at customer complaints and suggestions concerning our different initiation products, so that we can understand where we were and where we needed to go. Owen appreciates all of its customers and the time they took to help improve our detonator product line. We hope that our customers will continue to notify us of issues and improvements, as we strive to offer the best products on the market that meet the standards and needs of our customers.

Recently, Owen has focused its efforts on improving the reliability of some of its electric detonators, such as the O-86, Unidet, and 301 Cutter detonators. One of the results is that the new Unidet (DET-3050-001) now replaces the 022HE and has improved higher pressure and reliability. The improved reliability comes from a new seal nut and high temperature epoxy that prevents any leaks at the seal nut connection. This design has been released and is currently being manufactured. The improved

seal nut design will soon be available on the O-86 dump bailer and the 301 Cutter detonators as well. For the O-86 dump bailer, we will be improving its output and reliability, and a new version should be available in the coming months.

At the time of this article, Owen has approved the construction of a new Detonator Development and Testing Facility. This facility will be used in developing new initiation devices and upgrading existing products. The building will have the capability to manufacture and test initiation devices, all under one roof. Testing abilities will include heat and pressure up to 30,000 psi and 500°F, and ambient/fluid tests. This facility will also be used to complete customer requested tests.

Owen Oil Tools is thankful for the support of its customers. We look forward to future detonator development that will provide our customers with more reliable and safe initiation products for their jobs.

– **Brian Stokes**

*Mechanical Design Engineer*

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## **Split Shot® Upgrades, 0.875 in. and 1.000 in.** *Modular design simplifies assembly and facilitates safe arming and operation*

Every now and then, even time-proven designs can benefit from small changes. Reducing assembly time, improving reliability and enhancing performance, rank among the top priorities. Another thing to consider is the safety of your crew — a topic the engineers at Owen Oil Tools were consumed with in the design of their New Split Shot® cutter.

Owen's hallmark of API RP-67 compliant tools continues with the New Split Shot®, now designed to be armed electrically before ballistic assembly. The tools boast spring-contact detonators and compatible top subs, as well as modular segment holders utilizing a "Snap and Go" concept to speed explosive installation. Many parts attach with bend tabs or spring plungers, meaning no more hex wrenches and tiny, hard-to-find screws. Three setscrews connect the primary components using only one tool!

The Split Shot® has shown proven performance throughout the years in all the latest oil country tubular materials, Owen's New Split Shot® provides confidence in the field. In addition, they're safer to run, faster and easier to assemble, and carry on the time-proven legacy of high performance you have come to expect from Owen Oil Tools!

More information at: <http://www.corelab.com/owen>

– **Wade Box**

*Mechanical Design Engineer*

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### **continued from page 1**

for more KODIAK system offerings in the coming year. If you have any questions about this new development, please feel free to contact your local Owen representative.

– **Matthew Clay**

*Manager – Explosives Technology Group*



**Core Lab**

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**Warning:** Use of Owen equipment contrary to manufacturer's specifications or operating instructions may result in property damage, serious injury or fatality. If you are not trained in the handling and use of explosive devices, do not attempt to use or assemble any Owen perforating systems or Owen firing devices.

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