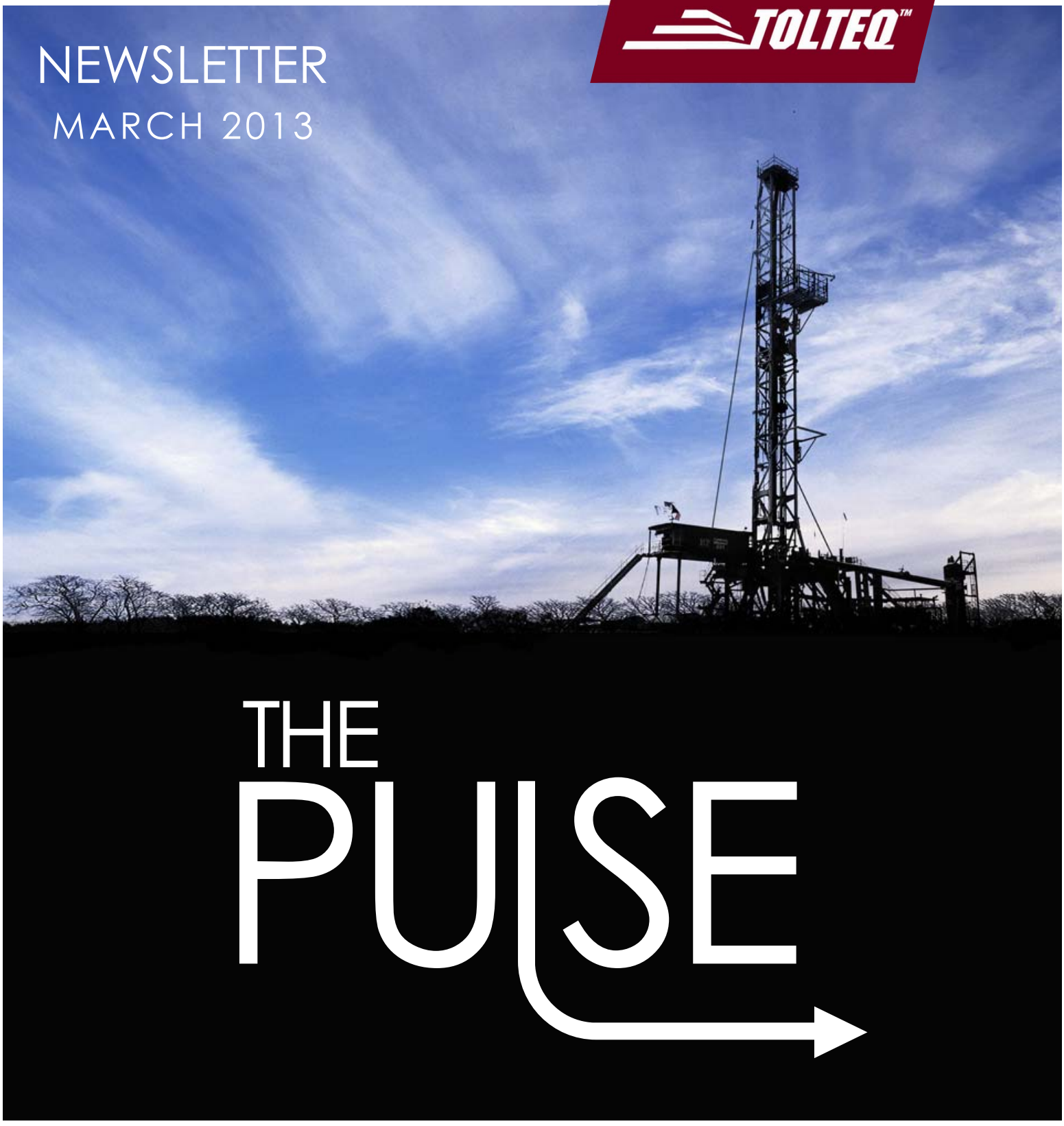
NEWSLETTER

MARCH 2013



THE PULSE

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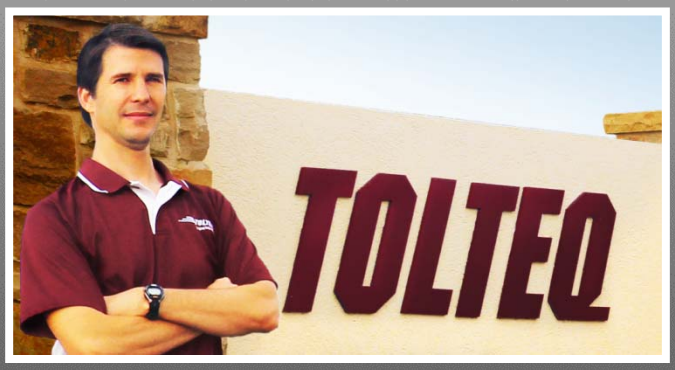
INSIGHT
FROM PAUL



On 14 August 1941, a monumental declaration was signed between two countries, one in the thick of war and the other soon to declare it: Churchill and Roosevelt, representing their two nations, drafted and agreed upon the eight tenets of the Atlantic Charter while docked off the coast of New Foundland.

Although the charter spelled out the mutual goals of both nations for a post-war world, for Britain it meant much more. For a country fighting for its very survival, this strengthened strategic partnership meant that the British could depend on America for continued support. After World War II, the shared goals gave both governments direction as they rebuilt Europe, and to this day both countries still benefit from this alliance.

What does this chapter in history have to do with Tolteq? I believe that there are lessons that we can derive from history and apply to a business context. In business, as in the military, a strategy refers to long-range planning and development, in order to ensure success or victory. I believe, like Churchill did, that strategic partnerships are vital to the long-term survival of any enterprise.

It is our strategic partners who have most contributed to our growth by allowing us to help solve their problems through our technology and know-how. By learning and tending to our partners' needs, we have gained the direction and drive to become the leader in the independent MWD market.

In a field teeming with new companies and new products, why should your organization partner with us, or deepen an existing partnership?

Because Tolteq will provide you:

- Rugged tools designed to give you thousands of hours of reliable operation in the most extreme environments.
- A planned upgrade path for every tool through regular firmware/software updates, assuring you that your inventory will not become obsolete.
- The most energy efficient tools, saving you hours of battery time and money down the line.
- A new line of tool string test equipment designed to reduce human error before going down hole.
- A support system with expert product champions and design engineers as well as a forthcoming online knowledge base, all ready to answer your questions.

The list above only touches on a few of the reasons why Tolteq is your best choice for a strategic partner. In this issue of *The Pulse*, we are excited to feature our new testers, the SurePulse pulser tester and the SureCircuit make-break box.

To find out more about what Tolteq can bring your organization, schedule a meeting with one of our account managers today.

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TEST YOUR TOOLS
BEFORE YOU GO DOWNHOLE

Tolteq simplifies MWD once again, this time with our new line of easy-to-use test equipment.

SurePulse

The *SurePulse* pulser tester is a one-box solution that will dramatically streamline your workflow by allowing you to activate your pulse function, test pulser flow, and display current draw, all without the need for complicated connections and cumbersome MWD tools.

Features

- Connect directly to a pulser with the supplied cable
- Powered with AC/DC universal power supply (110/230V A/C)
- Uses an LCD display with a simple menu interface
- Activate a pulse signal with selectable predefined pulse widths
- Can be set for indefinite hold, causing a constant pulse signal
- Monitor pulse and flow states with dedicated LEDs
- Compact extruded aluminum enclosure

SureCircuit

The *SureCircuit* make-break box combines battery and signal functionality in one convenient field-ready device.

Features

- Traditional make-break functionality
- LCD display with a simple menu interface
- Check battery voltage and depassivate at the push of a button
- Eliminate accidental battery drainage through automated depassivation
- Isolate any part of your tool string with uphole and downhole connectors
- Quickly identify inactive signals with LEDs dedicated for each line
- Compact cast aluminum enclosure

FIRMWARE UPDATES

COMING YOUR WAY

Tolteq will be releasing several new firmware updates. To access all current and past release notes, go to www.tolteq.com/documents.

HOW TO UPDATE

To update your existing firmware, ensure that you are connected to the internet and that your tool is connected to your computer via a Tool Tracker cable. Open MWD Desktop and select Utilities > Firmware Update Utility.

MCU

This new release, 6.32, updates the existing version 4.12, and includes the following new features and enhancements:

- Enhanced battery logging during pulsing (pull, base, hold)
- Added support for additional CBG resistivity tool features
- Added support for JobID
- Enhanced battery switching logic and logging
- Enhanced logging for survey data
- Added automatic battery 1 and 2 depass feature
- Enhanced power down detection to prevent data log corruption
- Added new Shock, Vibration, and RPM range pulsed variables

iMCU

This new release, 6.32, updates the existing version 5.17, and includes the following new features and enhancements:

- Added support for additional CBG resistivity tool features
- Enhanced battery depass logging
- Enhanced power down detection to prevent data log corruption
- Added new Shock, Vibration, and RPM range pulsed variables

iSDU

This new release, 4.06, updates the existing version 4.05, and includes the following new features and enhancements:

- Shock and vibration standardization and enhancements
- Flow sensor status tracking
- Under the hood enhancements to data log retrieval

Configure your GUIDE software to monitor

REAL-TIME SHOCK & VIBRATION

In the first of a new how-to series, we tackle the frequent customer request for real-time shock and vibration.

The information in this article is based on a new Tolteq document (# 500429) that covers some of the options for displaying real-time shock and vibration using MWD Desktop. For a more thorough treatment of this topic, please refer to that document at *tolteq.com/documents*.

The need for immediate (real-time) shock and vibration feedback is clear: damage to an MWD tool could lead to costly delays during drilling, as well as the expense of having to repair or replace the tool.

There are several ways that you can get real-time shock and vibration data when using the Tolteq GUIDE Surface System:

1. **Shock/vibration** – Provides the most accurate picture by transmitting actual values of what the tool is exposed to, but "costs" the most in terms of bandwidth to get the data to the surface (8 bits).
2. **Shock/vibration range** – Provides a middle ground option by reporting a pre-defined span into which the actual shock or vibration value falls, instead of an actual value. This option requires 3 bits of data to transmit.
3. **Shock/vibration warning** – Provides the most "economical" choice, as it is transmitted with only 1 bit of data and will notify you if you have exceeded 45G for shock or 25G for vibration.

NOTE: In order to be useful in detecting extreme conditions, all six readings are based on the maximum value since the previous transmission.

The following table shows the available shock and vibration readings in the order in which they are displayed on the GUIDE surface system compass rose display, along with their corresponding GUIDE abbreviation and resolution requirements, i.e., the number of bits required to transmit the data.

Display Order	Advanced Reading	GUIDE Identifier	Minimum Resolution
1	Shock	SHK	8 bits
	Shock range	SHKR	3 bits
	Shock warning	SHKw	1 bit
2	Vibration	VIB	8 bits
	Vibration range	VIBR	3 bits
	Vibration warning	VIBw	1 bit

Based on the minimum resolution requirements, the most accurate readings are also the most costly in bits. Based on your specific job requirements, it may be necessary to prioritize one need over the other.

After including any or all of these measurement in your configuration file, the data will appear on the GUIDE compass rose screen after a short delay.

To find out more about our GUIDE Surface System, click here.

UPCOMING RELEASES

3/6
- iGS Intelligent Gamma Sensor
- SurePulse pulser tester
- SureCircuit make-break box
- iSDU Firmware Update 6.32

3/18
- MWD GUIDE Software Update 5.3
- SSI2 Surface System Interface