



# GasGun™ Newsletter

J Integral Engineering, Inc.

Volume 4, Issue 1  
March 13, 2001

## J Integral Engineering Launches www.TheGasGun.com

In an effort to make information about the GasGun as readily available to our customers as possible, J Integral Engineering decided to launch a Web site in November 2000. The oil and gas business has been a little slower than some industries to take advantage of the World Wide Web, but acceptance by the industry is now gaining rapidly.

TheGasGun.com offers customers a quick method of obtaining information about GasGun stimulations. Some of the information that can be found on the Web site includes:

- Detailed field results
- Frequently asked questions
- Comparisons of the GasGun to other stimulation methods

- Contact information for wireline companies providing GasGun services
- Links to related Web sites
- Downloads for our newsletters and technical papers

This is just a small summary of the information that can be found on the site.

The GasGun Web site has already proven to be a valuable source of information for our customers, and it will be continually updated and refined. Any feedback about the Web site is greatly appreciated. Please visit [www.TheGasGun.com](http://www.TheGasGun.com) and follow the link to "Contact Us" with any comments or questions you may have. You may also send email directly to [JIntegral@thegasgun.com](mailto:JIntegral@thegasgun.com).

### Inside this issue:

*J Integral launches Web site* 1

*GasGun success in the field* 1

*Technology update* 2

### Quick Fact:

Each 3¼" X 10' GasGun delivers 40,000,000 foot-pounds of energy.



Wireline truck owned by Gain Wire Line Services, Inc., with Web site address displayed.

## GasGun Success Stories From the Field

Since the last newsletter, many excellent results from GasGun stimulations have been reported by well owners. Over 300 GasGun stimulations have now been conducted, and J Integral Engineering is working to expand into other parts of the country.

### Recent Results

A report was just received on a GasGun

stimulation performed in November 1999 on an injection well in Wabash County, Illinois. The well was completed in the Cypress formation at a depth of 2508 feet and had been previously acidized and hydraulically fractured in an effort to lower injection pressures. After each treatment, injection pressures would drop from 1600 psi to 800 psi, but would rise back to 1600 psi after just 2 months. A 6 foot GasGun was used, and again the

*“Oil production increased from 3 BOPD to 54 BOPD”*

pressure dropped from 1600 psi to 800 psi, but this time the improvement was long lasting. As of today, 16 months later, the injection pressure is still at 800 psi. (Note: All GasGun stimulations performed to date in injection wells have provided positive results.)

In March 2000, a well in Wolfe County, Kentucky, was stimulated with a 10 foot GasGun. This well is a cased hole completion in the Corniferous formation at a depth of 1183 feet and was suspected to have cement invasion. Production increased from 5 MCF/D to 60 MCF/D for 8 months. It is now making 30 MCF/D.

In June 2000, a well in Hamilton County, Illinois, was stimulated with a 6 foot GasGun. This well was completed open hole in the Aux Vases formation at a depth of 3224 feet. A water-bearing zone is known to exist just below this oil layer, and hydraulic fracturing would likely “bring in the ocean.” Immediately following the GasGun stimulation, oil production increased from 3 to 54 BOPD with a modest amount of water. This data helps confirm the fact that GasGun fractures stay in the zone treated. Production has been sustained at 10 BOPD.

In early November 2000, a well in Fayette County, Illinois, was stimulated with a 6 foot GasGun. This well is a cased hole completion in the Benoist formation at a depth of 2354 feet. Production increased from 1.5 BOPD to 10 BOPD. After 3 weeks production continued at 6 BOPD.

In December 2000, a new well in Muhlenburg County, Kentucky, was stimulated with a 6 foot GasGun. This well is a cased hole completion in the Bethel formation at a depth of 1861 feet. The well was perforated and acidized with no production realized. After the GasGun stimulation, the well was making 20 BOPD. Two months later, production was 5 BOPD.

In January 2001, a well in Russell County, Kansas, was stimulated with two 4 foot GasGuns. This well is a cased hole completion in the Tarkio limestone formation at a depth of 2385 feet. The GasGuns were successfully shot on top of a bridge plug. Production went from 0 to 5 BOPD and was making lots of gas. Unfortunately the gas cannot be sold due to the lack of a distribution line.



New end cap attached to GasGun tool.

For more information about the GasGun please contact:

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## Technology Update: New End-Cap Design

J Integral Engineering continues to search for improvements that can be made to the GasGun. In response to customer requests for reduced debris and wireline company requests for ease and reliability of fielding, a new end cap was designed.

The previous end cap was made of forged steel and has now been replaced with cast iron. While the top part of the GasGun is usually retrieved with the wireline, there have been a few occasions

where the cap was left in the well. Unfortunately, forged steel is very difficult to drill up. The cast iron, on the other hand, is very brittle and drills easily.

We would like to thank Mack Cox of Energy Associates, Inc., for bringing his concerns about the forged steel cap to our attention.