

Seismic Shock Shakes World Oil Industry; Applied Seismic Research Corp. Introduces Hydro-Impact Technology

AUSTIN, Texas, Dec. 15 /PRNewswire/ -- Applied Seismic Research Corporation (ASR) today announced the approval of the first new development in oil recovery since the 1970s: Hydro-Impact Technology (HIT). The new technology, currently licensed by ASR to both Oxy Elk Hills (Occidental Petroleum Company's Bakersfield California Subsidiary) and Oxy Permian (Occidental Petroleum Company's Texas subsidiary), uses seismic wave stimulation technology to shake loose oil trapped in existing wells. The low-cost procedure was developed by ASR to enhance oil recovery in depleted fields, make it economically possible to restore wells previously abandoned, and increase the yield in currently producing fields.

"Given the economic driving force of today's energy market, an invention that increases the amount of oil recovered from existing wells is truly a technology of worldwide importance," said Bill Wooden, Vice President, Applied Seismic Research.

A yearlong record of solid results in an ongoing stimulation of Oxy Elk Hills' field was presented to The Railroad Commission of Texas this month. The Commission, which regulates Texas crude oil, was impressed and approved an application to treat ASR's seismic stimulation as an "Enhanced Recovery Technique," granting it tax abatement advantages.

"I think this is pretty exciting stuff," Texas Railroad Commissioner Charles Matthews said. "It will be interesting to see how it works."

Commission Chairman Victor Carrillo lauded ASR's advancement, recognizing what he called "innovating thinking."

Proof is in the drilling.

Recent Volume 6 Issue 47 of Texas Drilling Observer reported:

"Oxy (Elk Hills) has been using seismic waves as part of its enhanced recovery operations since October 2003. Oil production was declining rapidly and was at 1,800 barrels per day just before the pilot seismic induction began. After the seismic activity started ... oil production increased by 22% in 2,220 barrels per day and continued to increase over time.

Some of these wells, which were producing no oil ... began producing oil again because of the seismic waves. Some ... started producing as much as 40 barrels of oil per day, recovering residual oil that had been liberated because of the shock waves."

The report goes on to say that Oxy Permian estimates that in 24 months, a minimum additional 124,000 barrels of oil will be produced thanks to the seismic project. ASR notes that this estimate is based on a conservative 5% increase in oilcut/oil production, and ASR's computer modeling of the field estimates increases to exceed 15 to 20%.

Build a Better Shockwave ...

Unlike costly and less effective acoustic and surface vibroseis stimulation, Hydro-Impact Technology produces shockwaves with a power ranging from 2 to 10 million watts (compared to 10 - 100,000 watts) and a pressure at the wave front in excess of 3000 psi. The shockwaves travelling at 1.5 miles/second cover distances of well over 1 mile and in all directions. The shockwaves release oil that otherwise would never have moved.

The Hydro-Impact tool is one of the least expensive technologies in the entire oil industry. ASR's rental agreement for the US market calls for an up-front payment of US\$30,000 and a monthly rental thereafter of US \$6,500. Sandstone, carbonate, diatomite, waterflood, natural water drive, and one gas injection oil field have proven fertile fields for HIT.

ASR's High-Impact technology is protected by a series of US patents (5.586.602, 6.015.010 and 10.132.371) the most recent of which was issued in July 2004. The registration of these patents in the jurisdiction of all oil-producing countries provides the technology with worldwide patent protection.

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