

## **USSI Successfully Demonstrates a New Class of Optical Sensors**

*Offers Significantly Increased Sensitivity in Seismic Monitoring to Enhance Oil and Gas Production*

**Northridge, CA – January 27, 2010** – US Sensor Systems Inc. (USSI), a subsidiary of Acorn Energy, Inc. (NASDAQ: ACFN), announced today that recently completed side-by-side testing of its new class of Ultra High Sensitivity (UHS) fiber optic geophones exhibited over 300 times the sensitivity of the best electronic geophone. This dramatically higher level of sensitivity will enable oil and gas producers to more accurately map reservoirs and therefore improve production while reducing the potential environmental impact. USSI's new class of UHS fiber optic sensors were tested vs. legacy electronic geophones at the US Dept. of Energy's Lawrence Berkeley National Laboratory Richmond Field test site.

The market for geophone systems exceeds \$1 billion annually. The oil and gas industry currently uses over ten million of these legacy geophones a year to map out underground reservoirs. The importance of seismic monitoring has increased as technologies like directional drilling, CO2 flooding and horizontal drilling have become essential to enhanced oil recovery as well as unconventional oil and gas extraction requiring improved visualization of the field's geology.

“The traditional electronic-based sensor systems are simply too expensive and lack the needed sensitivity and bandwidth for these rapidly growing unconventional and tight shale gas and oil monitoring applications,” stated Jim Andersen, CEO of US Sensor Systems. “Our sensor systems will enable cost-effective mapping of the fracking process which can increase the efficiency of extraction, and at the same time address environmentalists' concerns regarding the possibility of the fracking process extending into underground aquifers.”

“We were very impressed with the performance of USSI's fiber optic geophone during the Richmond field trials. Our Stanford University based imaging team participated in the trial and is especially pleased with the high sensitivity and broadband capability,” stated Scott Taylor, President of Octave Reservoir Technologies, Inc. “The performance exhibited by the USSI fiber optic geophone will provide the opportunity to extract more value and information from active and passive borehole seismic data. The improved resolution achieved with the USSI sensors is significant and will have meaningful and positive repercussions within the oil and gas industry.”

In October 2010, USSI announced an agreement with Octave Technology, whereby USSI will develop a custom miniature fiber optic geophone (MFOG) for use in Octave's Slimhole seismic reservoir monitoring system.

“Unconventional gas extraction now makes up over 40% of US domestic production. In addition, enhanced oil recovery is becoming an increasingly important source of production. For example, Saudi Arabia is currently conducting the first enhanced oil recovery trial on their supergiant Ghawar field where a 1% hike in recovery means an extra billion barrels of oil. As world demand for oil and gas accelerates, we believe the market will quickly adopt advanced seismic technologies like the UHS fiber optic sensor, stated John Moore, CEO of Acorn Energy.

### **About US Sensor Systems**

US Sensor Systems Inc. (“USSI”) designs, integrates, manufactures, and sells fiber optic sensing systems and solutions for the Energy and Defense markets. USSI utilizes all-optical fiber sensing technology for

its state-of-the-art sensors. USSSI's proprietary optical fiber and electronics combine to form the sensor system. It is designed to replace the legacy electronic-based sensor systems at a lower cost and with improved performance and reliability. USSSI's new fiber optic geophone was recently awarded the coveted the 2010 Oil & Gas Industry Innovation of the Year Award by Frost & Sullivan, the world leader in technology, market, customer, and economic research. For more information visit the USSSI website at: [www.ussensorsystems.com](http://www.ussensorsystems.com).

### **About Octave Reservoir Technologies**

Octave Reservoir Technologies is an oilfield service company headquartered in Houston, TX that is pioneering the first fully integrated permanent "life-of-field" asset characterization service. Building on 3D and 4D seismic imaging technologies, Octave's **ReservoirAlpha** service integrates both active and passive seismic data with pressure ("APP") measurements captured from fiber optic sensors deployed in targeted, low-cost monitor wells.

Octave's mission is to become the first turn-key service provider of real-time asset characterization to the oilfield and emerging carbon and geothermal industries. Octave seeks to maximize the return on investment in **ReservoirAlpha** by providing relevant, real-time, value-answers appreciated by a broad client-audience spectrum. Octave is lead by a seasoned management team which has participated in many of the largest milestone permanent reservoir monitoring projects to date. For more information please go to [www.octavereservoir.com](http://www.octavereservoir.com)



Acorn Energy, Inc. (Nasdaq:ACFN) is a publicly-traded holding company with equity interests in CoaLogix, DSIT, GridSense and US Sensor Systems Inc. These companies leverage advanced technologies to transform and upgrade the energy infrastructure around the world. Acorn companies are focused on three problems in the energy sector: improving the efficiency of the energy grid, reducing the risk for owners of large energy assets, and reducing the environmental impact of the energy sector. Acorn's strategy is to take primarily controlling positions in companies led by great entrepreneurs. For more information visit <http://www.acornenergy.com>.

### **Safe Harbor Statement**

*This press release includes forward-looking statements, which are subject to risks and uncertainties. There is no assurance that US Sensor Systems Inc. or Acorn Energy, Inc. will continue to grow their respective businesses, execute the initiatives described above or meet the expectations described above. A complete discussion of the risks and uncertainties which may affect Acorn Energy's business generally and the businesses of its subsidiaries is included in "Risk Factors" in the Company's most recent Annual Report on Form 10-K as filed by the Company with the Securities and Exchange Commission.*

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