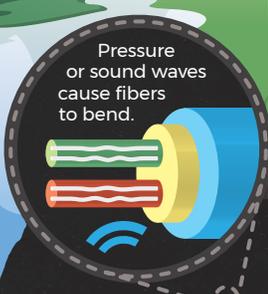
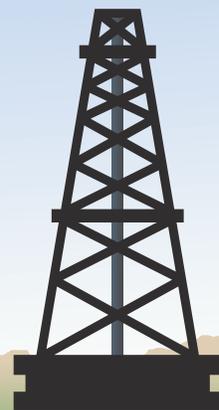




Intelligence at the Speed of Light

Phosonic™ provides real-time measurement of subsurface variables, such as oil, gas, water, sand, and pressure, for next-generation hydrocarbon exploration and pipeline safety monitoring.

Phosonic™ protects the environment by providing instant notification of pipeline leakage.



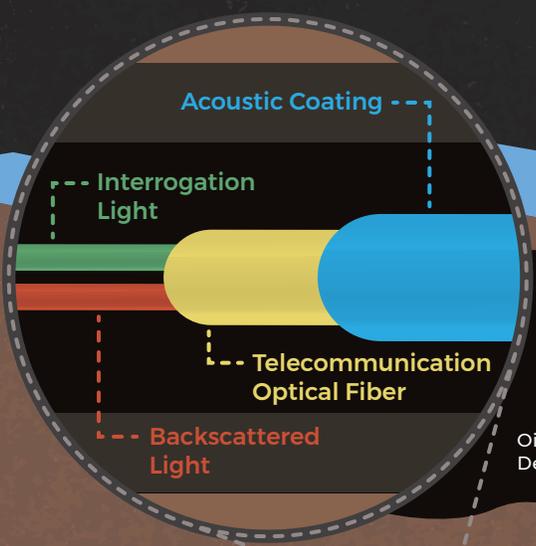
Fiber optic cable buried 12-24" underground

Detects leaks or breaks

By quickly addressing the problem, Phosonic™ prevents oil and gas from seeping further into the environment, where it could have a major impact on plants, wildlife, and drinking water.

OIL & GAS PIPELINE LEAK DETECTION

Underground sensors detect, identify, and localize pipeline leaks and breaks with high spatial accuracy. This real-time detection allows potential emergencies to be addressed immediately, saving oil, money, and the environment.



HYDROCARBON EXPLORATION

From inside the fracking pipe, sensors detect the pressure waves of hydrocarbons given off by oil- or gas-rich deposits. This real-time sensing allows for more intelligent exploration, saving time and money.

Water Table

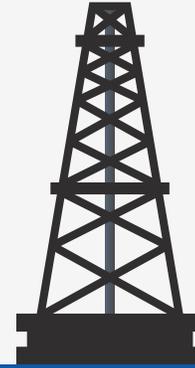
Oil- or Gas-rich Shale

Oil-rich Deposit





Intelligence at the Speed of Light



Phosonic™ provides real-time measurement of subsurface variables, such as oil, gas, water, sand, and pressure, for next-generation hydrocarbon exploration and pipeline safety monitoring.

Based upon patented U.S. Navy technology in digital opto-acoustic fiber optic sensor arrays, the Phosonic™ sensor system utilizes an opto-electronic interrogator and fiber optic cable to detect pressure waves at specific frequencies (Rayleigh Optical Scattering). It processes and analyzes these digital signals, and provides real-time detection, classification, localization, and communication of specific geophysical phenomena.

Historically utilized for its advanced surveillance for national security projects, Phosonic™ also has immediate applications in the oil and gas market.

Phosonic™ is ideal for oil and gas pipeline leak detection, and next-generation hydrocarbon exploration.

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HYDROCARBON EXPLORATION

From inside the fracking pipe, sensors detect the pressure waves of hydrocarbons given off by oil- or gas-rich deposits. This real-time sensing allows for more intelligent exploration, saving time and money.

Phosonic™ can provide time-delay frequency modulation, and zonation (what, when, and where) information in continuous, real-time feeds associated with various seismic anomalies occurring across the drilling horizon.

The Intelligent Oil Field delivers the ability to provide a complete and continuous profile of oil and gas assets. Phosonic™ provides high-fidelity site characterization and seismic analysis, delivering a world-class predictive capability. Massive geophysical data volumes are reduced to manageable, actionable intelligence.

