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### KCP Drills Down Drilling Cost

An advanced geophysical exploration system has the prospect of reducing U.S. dependence on foreign oil.

The newly developed Drill String Radar (DSR), engineered by Stolar Research Corporation as part of the National Nuclear Security Administration's Initiatives for Proliferation Prevention (IPP) program, effectively locates missed oil and gas reserves.

Partners in the project included the Kansas City Plant (which served as project facilitator, funding provider and technical partner) and the Measuring Systems Research Institute in Nizhny Novgorod, Russia.

IPP focuses on reducing the proliferation of weapons of mass destruction by redirecting the skills of former Soviet weapons engineers, technicians, scientists, and production workers to commercial, non-weapons product development and manufacturing.

DSR serves as an excellent IPP success story, and its technology has important implications. DSR equipment integrated into the coal bed drill string immediately behind the drill bit. Its specialized radar measures the electrical properties of the surrounding material, and identifies nearby structures and geologic layering, helping to detect and map unknown strata.

This capability makes DSR a necessary tool for advanced drilling and mapping of coal bed methane or natural gas.

DSR's economic benefits are only beginning to come into focus. Accurate horizontal drilling allows for drilling optimal zones at a lower cost than employing real-time drilling techniques in which the borehole repeatedly washes the strata.

Thus, DSR yields two important economic benefits—reduced drilling costs and more efficient strata production.

Furthermore, in addition to maximizing the overall production level, the strata production rate could also increase.

These increases would yield substantial economic benefits to not only the producing company, but also the U.S. economy.

#### Future Benefits

The DSR project recently received \$1.4 million to develop related technology, including acoustic intensification and bed degassing.



The Drill String Radar (DSR) technology recently received the prestigious 2005 R&D 100 Award. Part of the NNSA Proliferation Program, the DSR project received full support and facilitation from NNSA's Kansas City Plant.

Draining methane gas decreases chances of explosions, increasing miners' safety. As an added benefit, the methane gas could become a resource to sell

While some coal mines cannot be mined for coal, with DSR technology these mines could still be degassed & captured methane gas sold at market

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