

The Microhole Technology Initiative

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The U. S. Department of Energy (DOE) in cooperation with American industry has undertaken an integrated program of development to show that the cost of obtaining subsurface information can be drastically reduced through microhole technologies expressly developed to obtain that information. Collectively termed "Microhole Drilling and Instrumentation Technology," engineering efforts encompass drilling of shallow microholes using currently available coiled tubing technology, evaluating the feasibility of drilling deep microholes, miniaturization and testing of bottomhole drilling assemblies, miniaturization of geophysical logging tools, and incorporation of emerging miniature sensor technologies in borehole seismic instrumentation packages. The development of microhole technologies is based on the premise that because of the historic advances in electronics and sensors, conventional-diameter wells are no longer necessary for obtaining subsurface information. Thus, the combination of microholes having diameters at their terminal depth ranging from 1-3/8 to 2-3/8 inches and logging tools having a 7/8-inch diameter will comprise a very low cost alternative to currently available technology for exploration and reservoir characterization.