

Shell's Colorado oil shale freeze wall test

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A freeze wall surrounding the process volume has been identified as the optimum subsurface containment system for the in-situ conversion of kerogen to producible hydrocarbons in oil shale formations with significant ground water accumulations. Once formed, the freeze wall serves as an effective barrier around the process volume to confine hydrocarbons and exclude ground water. Shell has completed construction and testing of a freeze wall in the Colorado oil shale demonstrating that the freeze wall can be formed over the entire commercial oil shale interval where water is present. Once formed, it effectively isolates the volume enclosed from the surrounding ground water. Details and observations from this test will be presented.