

Assessments of in-place oil shale resources of the Eocene Green River Formation, Colorado, Utah, and Wyoming – a foundation for calculating recoverable resources

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The recently completed assessment of in-place resources of the Eocene Green River Formation in the Piceance Basin, Colorado; the Uinta Basin, Utah and Colorado; and the Greater Green River Basin Wyoming, Colorado, and Utah and their accompanying ArcGIS projects will form the foundation for estimating technically recoverable resources in those areas. Different estimates will be made for each of the various aboveground and in-situ recovery methodologies currently being developed. Information required for these estimates include but are not limited to (1) estimates of the amount of oil shale that exceeds various grades, (2) overburden calculations, (3) a better understanding of oil shale saline facies, and (4) a better understanding of the distribution of various oil shale mineral facies. Estimates for the first two are on-going, and some have been published. The present extent of the saline facies in all three basins is fairly well understood, however, their original extent prior to ground water leaching has not been studied in detail. These leached intervals, which have enhanced porosity and permeability due to vugs and fractures and contain significant ground water resources, are being studied from available core descriptions. A database of all available x-ray mineralogy data for the oil shale interval is being constructed to better determine the extents of the various mineral facies. Once these studies are finished, the amount of oil shale with various mineralogical and physical properties will be determined.