

CATALYTIC UPGRADING OF H-COAL SYNCRUDES. Dennis J. O'Rear, Richard F. Sullivan, and Bruce E. Stangeland, Chevron Research Company, P.O. Box 1627, Richmond, California 94802.

The net liquid product from the H-Coal liquefaction process was refined to liquid fuels by commercial catalysts in pilot plants which simulate advanced state-of-the-art petroleum hydroprocessing technology. Liquids derived from two different coals were studied: Illinois No. 6 coal (Burning Star Mine) and Wyodak coal. One hydrotreating stage, operated at several severities, upgraded the whole product to either jet, diesel, or heating fuels. In addition, a naphtha was produced which can be used for hydrogen production or as feed to a catalytic reformer. The kerosene jet fuel meets all critical specifications, including smoke point and stability. The maximum yield of jet derived from Illinois coal is almost 90%. The diesel and heating fuels meet most specifications when additives are used. For maximum gasoline production, the hydrotreated H-coal product was converted to naphtha in a single-stage extinction-recycle hydrocracker.