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ABSTRACTS

Edited by: Lawrence H. Skelton

Kansas Geological Survey, 4150 Monroe, Wichita, KS 67209, lskelton@kgs.ku.edu

**THE KANSAS STATE BOARD OF HEALTH AND ITS
NATIONAL LEADERSHIP ROLE IN OIL FIELD
SALTWATER DISPOSAL, 1927-1962**

Mary L. Barrett, Department of Geology and Geography,
Centenary College of Louisiana, 2911 Centenary Blvd.,
Shreveport, LA 71134, mbarrett@centenary.edu

Oil field saltwater pollution control varied significantly in the oil-producing states during the 1930s-1960s. Reasons included: inland vs. seaboard states, freshwater availability, and the regulatory strength of a designated state agency to oversee pollution. Common 1920s national saltwater disposal practices included pit evaporation and seepage, release during high stream flow, direct input into coastal waters, and direct ground spillage. Saltwater re-injection was in its infancy, and only minor research had been conducted by the U.S. Bureau of Mines due to limited funding.

Growing Kansas oil production, thus growing oil field waste, became a looming threat to the state's limited fresh water supplies in the 1920s. The Kansas State Board of Health was the main regulatory agency over water pollution, and its responsibilities were expanded in 1927 and 1933 to oversee oil field-related water pollution. Under Earnest Boyce, chief engineer of the Division of Sanitation, the agency received stable income from an oil production tax to support oil field waste management. Acute danger to limited drinking water supplies prioritized the oil fields for study and possible regulatory action.

In 1932, Boyce contacted the Bureau of Mines which led to cooperative research on saltwater issues through the 1930s and 1940s. While the research was in Kansas, the results were disseminated nationally in Bureau of Mines publications, API meetings, and in major trade journals. Saltwater re-injection, under the regulatory authority of the Kansas Corporation, expanded rapidly. By 1945, Russell County alone had more saltwater re-injection wells than Oklahoma, Arkansas, Texas, and Louisiana combined. By the early 1960s, 99.8% of all Kansas oil field brines were disposed of by re-injection.

**GERMAN OIL PRODUCTION IN THE SOVIET
CAUCASUS, 1942-43: MINERALOEL KOMMANDO
(K)**

J.G.C.M. Fuller, History of Geology Group, The Geological
Society, Burlington House, Piccadilly, London W1V 0JU

This is an account of a major oilfield operation from its first conception to be carried out with deadly force against armed resistance. Planning began in Berlin during the early months of 1941, while German military strategists were preparing to launch a violent assault on the Soviet Union. The army would be more powerful than anything seen in Europe, and would include a new force of petroleum engineers and geologists whose primary task would be to seize oilfields in the Soviet Caucasus, nearly a thousand miles beyond the German frontier. Preparations for the Caucasus operation were made knowing that the vast military cost of overwhelming and defeating Soviet resistance could draw down the Reich's oil reserves to the point where consumption might exceed existing means of replacement. From the German point of view, the military high command knew that effective administration of their growing European Empire could not succeed without a major additional supply of crude oil. The existing main source in Romania was in decline, and had been since the 1930s.

To meet the Wehrmacht's needs for an oilfield workforce, armed and under military control, the strategists organized a technical brigade fully equipped for restoring production in former Soviet oil-producing areas, and capable of drilling up new fields and building refineries. This task-force would consist of some six thousand personnel, including geological and production staff, supported by engineering units to assemble drilling-rigs, refineries and pipe-lines, the whole being provided with transportation and military protection. This huge and unique creation was called *Technische Brigade Mineraloel*, and subtitled 'K', meaning *Kaukasus*. Its designed purpose to seize and operate major crude-oil sources was so bold, so highly planned and yet so clumsily realized, that it must be worthy of serious historical comment.

By the summer of 1942, *Mineraloel* geologists and engineers actually did reach the northern Caucasus oilfields, and in the face of Russian guerilla attacks among the wreckage and