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(54) Title: METHOD FOR EXTRACTING OIL FROM OIL-CONTAMINATED SOIL

(57) Abstract

Oil is extracted from oil-contaminated soil by mixing a solvent with the soil to form a slurry, passing the slurry through a shaker screen (14) to remove soil particles greater than 1/4 inch and then feeding the slurry into the top of an acoustic chamber (16). Fresh solvent is injected into the bottom of the acoustic chamber (16) and flows upwardly through it at a rate such that the soil particles fall through the flowing solvent. The soil particles and solvent in the acoustic chamber are subjected to acoustic energy in the frequency range of 0.5 to 2.0 kHz to displace the oil from the soil particles without cavitation of the solvent. Soil particles (26) containing only 0.2 to 0.4 wt.% oil are recovered from the bottom of the acoustic chamber (16) and spread over the land for land farming. The method may also be used for extracting oil from oily sludge or oil-based drill cuttings.

