28. The method of claim 27, wherein said contacting extracts at least 80% of solvent and any solvent-associated liquids contained within said solvent--treated material before said contacting.

29. The method of claim 1, wherein said contacting further comprises boiling and refluxing said solvent-extracting composition.

30. The method of claim 1, wherein said method comprises contacting said solvent-treated material with a substantially non-aqueous solvent-extracting composition.

31. The method of claim 1, wherein said method does not involve the use of water or an emulsion.

32. The method of claim 1, wherein said method does not involve the use of salt or salt solution.

33. The method of claim 1, wherein said solvent-extracting composition comprises a surfactant.

34. The method of claim 1, wherein said solvent-extracting composition is surfactant-free or substantially surfactant-free.

35. The method of claim 1, wherein said solvent-extracting composition is micelle-free or substantially micelle-free.

~~36. A method of extracting hydrocarbon-containing organic matter from oil shale or tar (oil) sands into turpentine liquids and/or other associated liquids and subsequently dissolving, extracting, recovering, and/or removing turpentine liquids and/or other associated liquids~~

from a turpentine liquid-treated material, comprising the steps of extracting the hydrocarbon-containing organic matter by a process comprising:

providing a hydrocarbon-extracting liquid comprising a non-aqueous turpentine liquid;

contacting oil shale or tar (oil) sands with said hydrocarbon-extracting liquid such that an extraction mixture is formed, the extraction mixture comprising at least a portion of hydrocarbon-containing organic matter from said oil shale or tar (oil) sands extracted into the turpentine liquid;

separating the extraction mixture from a residual turpentine liquid-treated material containing non-soluble material from the oil shale or tar (oil) sands that is not soluble in the hydrocarbon-extracting liquid;

providing a solvent-extracting composition;

contacting said residual turpentine liquid-treated material containing non-soluble material from the oil shale or tar (oil) sands that is not soluble in the hydrocarbon-extracting liquid with said solvent-extracting composition such that said solvent-extracting composition penetrates into pores of said residual turpentine liquid-treated material,

forming a recovery mixture, wherein the recovery mixture comprises at least a portion of the turpentine liquid and any associated liquids extracted into the solvent-extracting composition; and

separating the recovery mixture from any material containing non-extracted material from the turpentine liquid-treated material that is not extracted into the solvent-extracting composition.