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(54) Title: METHOD FOR FORMING HIGH EFFICIENCY GEOTHERMAL WELLBORES

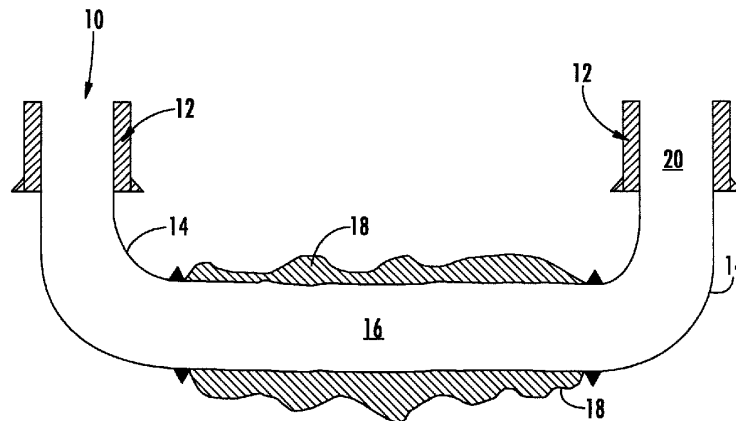


FIG. 3

(57) Abstract: Wellbore synthesis techniques are disclosed suitable for use in geothermal applications. Embodiments are provided where open hole drilled wellbores are sealed while drilling to form an impervious layer at the wellbore/formation interface. The techniques may be chemical, thermal, mechanical, biological and are fully intended to irreversibly damage the formation in terms of the permeability thereof. With the permeability negated, the wellbore may be used to create a closed loop surface to surface geothermal well operable in the absence of well casing for maximizing thermal transfer to a circulating working fluid. Formulations for the working and drilling fluids are disclosed.

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