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(54) Title: SYSTEM AND METHOD FOR MONITORING DOWN-HOLE FLUIDS

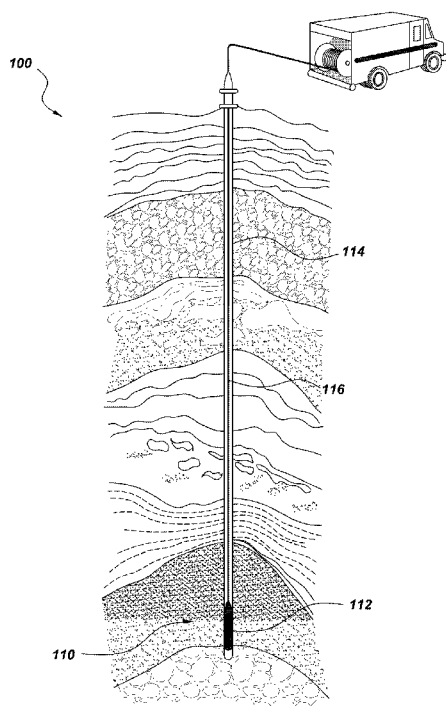


Fig. 1

(57) Abstract: In one aspect the present invention provides a down-hole monitoring system, comprising one or more pieces of down-hole equipment, for example a down-hole logging tool (112), and at least one resonant sensor (12) for obtaining physical and chemical parameters of a down-hole fluid in proximity to the sensor. In another aspect, the present invention provides a method for detecting material properties of a down-hole fluid, the method comprising placing a resonant LCR (112) sensor within a piece of down-hole equipment, taking sensor readings down-hole, transmitting the sensor readings to a reader device, and analyzing the sensor readings.



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