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WO 2008/078060 A1 **US 7400262 B2**
US 20080142215 A1 **US 20080033653 A1**
US 20070079997 A1
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(54) Title of the Invention: **Downhole communication devices and methods of use**
Abstract Title: **Downhole communication devices and methods of use**

(57) The invention provides downhole communication devices and methods of using downhole communication devices. One aspect of the invention provides a downhole communication device including: a first energy harvesting device; a downhole transceiver in communication with the first energy harvesting device; an accumulator in communication with the energy harvesting device; and a microcontroller. The microcontroller manages communication between the first energy harvesting device, transceiver, and accumulator.

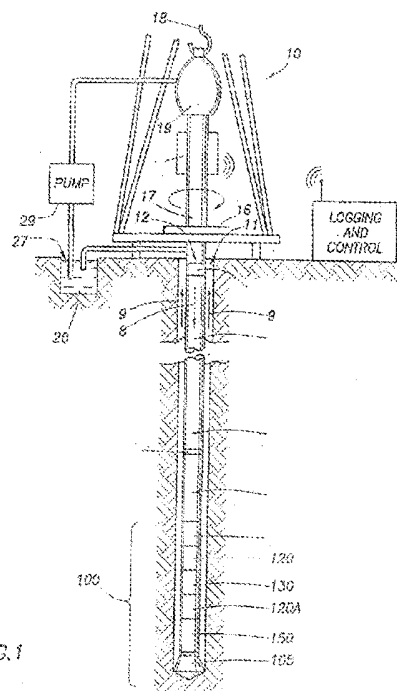


FIG. 1

GB 2478477 A