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(54) Title: SYSTEM AND METHOD FOR AN AC POWERED DOWNHOLE GAUGE

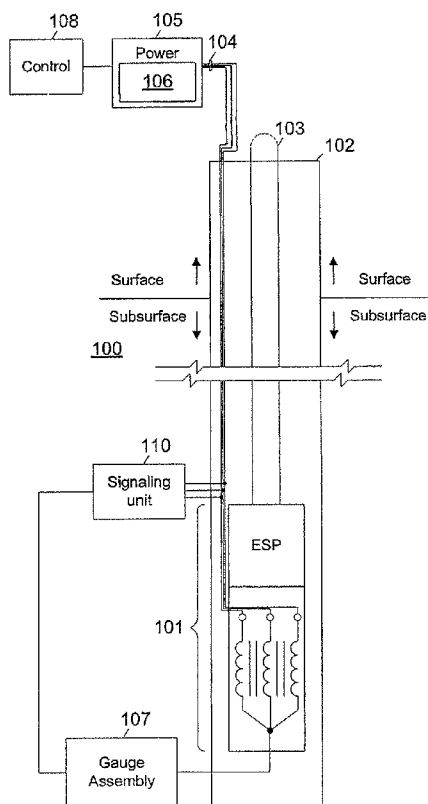


FIGURE 1

(57) Abstract: Borehole instruments are powered by AC instrument power transmitted on all three phases of a power cable concurrently carrying three phase motor power, the instrument power transmitted at a multiple of the motor power frequency and having a corresponding fraction of the motor power voltage, and received via a capacitive coupling sufficient to withstand high-voltage cable insulation testing. The phase-to-neutral motor power provides approximately the same power level to the borehole instruments if a phase shorts to ground.



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