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(54) Title of the Invention: **Systems and methods for terahertz modulation for telemetry**
Abstract Title: **Systems and methods for terahertz modulation for telemetry**

(57) Systems and methods for terahertz modulation in a terahertz frequency band from about 0.1 terahertz to about 10 terahertz propagating in a wellbore intersecting a subterranean earth formation. A transmitter generates the EM radiation in the terahertz frequency band. A modulator located in the wellbore receives the EM radiation and generates an amplitude modulated signal with the EM radiation.

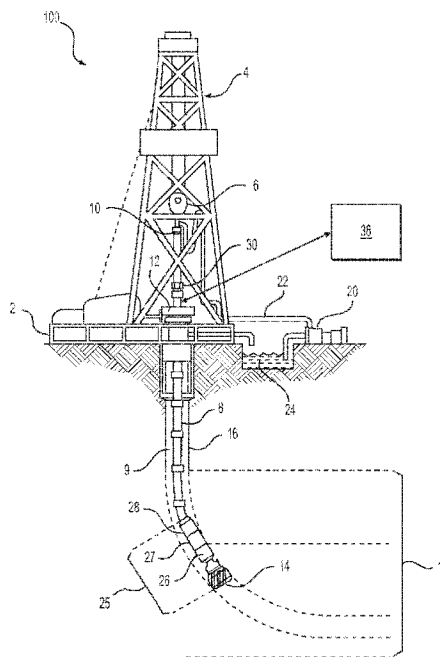


FIG. 1

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