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(56) Documents Cited:
WO 2012/129058 A2   US 20120247833 A1
US 20100100329 A1   US 20080258733 A1
US 20050024060 A1

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(54) Title of the Invention: **Method and apparatus for deep transient resistivity measurement while drilling**
Abstract Title: **Method and apparatus for deep transient resistivity measurement while drilling**

(57) A method for estimating a property of an earth formation penetrated by a borehole includes conveying a drill tubular through the borehole and transmitting a signal into the formation with a transmitter transducer disposed at the drill tubular. The method further includes receiving a first signal with a first receiver transducer having a sensitivity oriented in a first direction and disposed an axial distance from the transmitter transducer and receiving a second signal with a second receiver transducer having a sensitivity oriented in a second direction different from the first direction and disposed an axial distance from the transmitter transducer. The method also includes calculating a corrected signal that corrects for at least one of bending and torsion of the drill tubular between the transmitter transducer and the first and second receiver transducers using the first signal and the second signal and estimating the property using the corrected signal.

FIG.1

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