ABSTRACT

DOWNHOLE CASING AND TUBING JOINT LOCATION

The joints (18) in a downhole jointed tubular structure (12), such as a well bore casing or production tubing, in a subterranean well, are sensed or logged by moving a detector (20) through the jointed tubular structure (12) on an elongated positioning member (22), such as a slick line. As the detector (20) passes through each joint (18), it electromagnetically senses the joint and responsively generates an electric output signal which is used to momentarily change the tension in the positioning member (22). This tension change, which may be either an increase or a decrease, serves as a mechanical output signal transmitted upwardly through the positioning member (22), and may be plotted on a strip chart recorder (34) at the surface to record the joint locations and correlate them to the lowered depth odometer (36) readings of the detection system. Using this joint detection apparatus, correlative joint logging procedures may be carried out for tool setting purposes without the necessity of utilizing an electrical conductor line.

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FIGS. 1 and 2