ABSTRACT

INTELLIGENT PRODUCTION RISER

A production riser 10 provides the benefits of a slug catcher, riser based gas lift, and multiphase meter in a single device and is suited to both shallow and deep-water oil/gas field developments. The riser 10 is formed from an inner pipe 12 within an outer pipe 14. The inner pipe 12 provides the path for the production fluids. Perforations 22 are provided near the base and top of the inner pipe 12. The top of the annulus 20 between the pipes 12, 14 is closed other than being in fluid communication with a gas supply/compression system 16 via an isolation control valve/choke 40. The bottom of the annulus 20 is also closed. Three sets of pressure and temperature transducer transmitters 28 are installed at the top, centre, and base of the riser 10 through the outer pipe wall.

Fig.1