se been calibrated under pres-
nd displacement measure-

tic pressure loading, was
Since the pressure has only
(~1% at 10 kbar), the
As a result, it was possible
hin a few per cent as deter-

bly in the pressure vessel
by small fuse wires. After
ed, the load was applied by
In this way the "constant"
elongated to mechanical
in a small fraction of a
sus time on a Leeds and

ee-point loading constructed

ene film (0.002 in. thick).
cally. The stress distribu-
; the viscoelastic analysis
t much of a problem for a
ylene does not fall in this
nsile tests. Qualitatively, at
of tests.

m. Samples were cut and

$$(1)$$

width, T is the sample thick-
extension. The results of
ures is shown in Figure 1.
e mean stress is increased,
servation applies to both
nore, creep rates were gen-
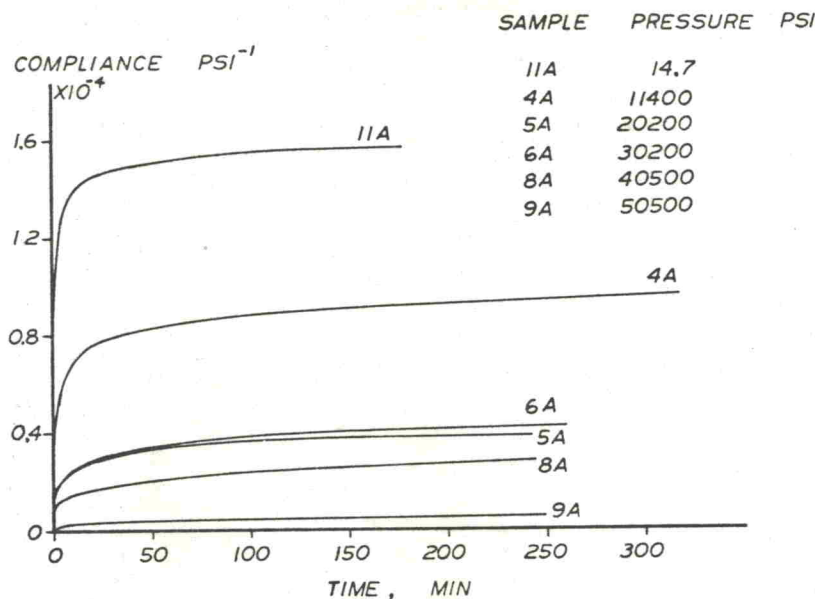
ly different results. As
rmined from sample geo-

Fig. 1. Compliance of polyethylene as a function of hydrostatic
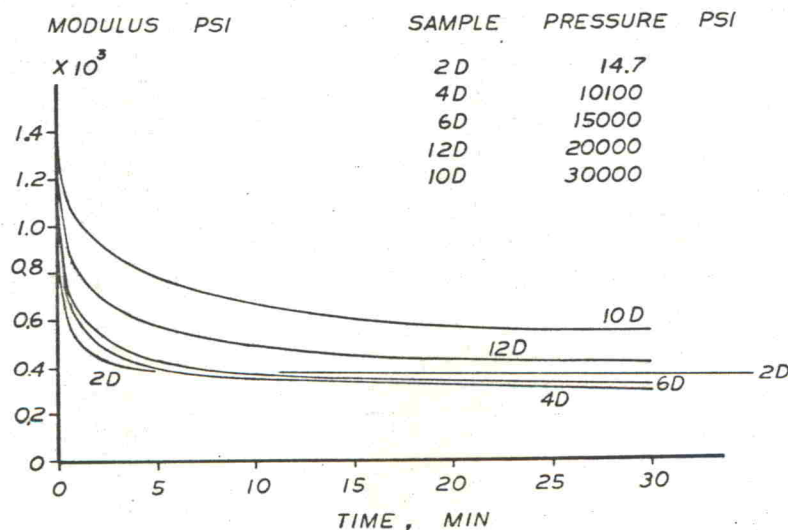pressure as determined from creep tests.

Fig. 2. Modulus of polyethylene vs. hydrostatic pressure as
determined from stress relaxation tests.

metry and the measured sample force by the equation

$$E(t) = \frac{W(t)/dT}{\Delta \ell / \ell} \tag{2}$$