

at fracture for the crystals tested. Note the very high stress at fracture measured for specimen ISR-12 at the highest hydrostatic pressure. Substantial ductility was indicated for this crystal test as will be described below.

Table I

SUMMARY OF SINGLE CRYSTAL C-AXIS COMPRESSION TESTS
UNDER HYDROSTATIC PRESSURE

Spec.	Pressure Range		Fracture Stress ksi	Observed Behavior
	P_i^* ksi	P_f^{**} ksi		
ISR-10	145.8	168.1	299.0	Brittle
ISR-11	238.0	255.0	297.0	Brittle
ISR-12	261.0	293.0	438.0	Ductile
SR-11-1	156.0	164.0	331.0	Brittle

* P_i = pressure at onset of loading.

** P_f = pressure at crystal failure.

STRUCTURAL CHARACTERIZATION

The structural characterization of all crystals tested by c-axis compression under hydrostatic pressure consisted of:

- (1) The macrophotography of at least two mutually perpendicular lateral surfaces of the tested crystal at a magnification of 15X.
- (2) Optical microscopy of the lateral surfaces to determine the active slip or twinning modes which operated.
- (3) Electron transmission microscopy studies of at least one foil cut from the bulk crystals.