1. SR Ingot Crystals

a. Specimen ISR-10 (146-168 ksi Pressure)

A macroscopic photograph showing two mutually perpendicular lateral surfaces parallel to the $(\bar{1}010)$ and $(11\bar{2}0)$ planes after compression to failure under hydrostatic pressure is shown in Figure 2(a) and (b) respectively. Failure appears to have occurred by shearing on a non-crystallographic plane which was nearly parallel to the $(10\bar{1}2)$ traces seen at T on the $(11\bar{2}0)$ surface. Basal slip lines and $(10\bar{1}2)$ twin traces were quite prominent as seen in the optical photomicrographs in Figures 3 and 4.

Unusual rectangular markings as seen at S were frequently observed on the lateral surfaces. In some cases the markings appeared to be associated with twins as in Figure 4 but they also frequently appeared in regions free of twins as in Figure 3. Interferrometric studies revealed that the rectangularly shaped regions were actually extrusions and were very likely the result of slip on closely spaced basal and $(\bar{1}010)$ prism planes.

Localized regions of intense basal and prism slip were commonly observed as seen in Figure 5. It should be noted that such markings were not observed for c-axis compression at ambient pressure and are believed to be associated with the hydrostatic high pressure environment.

There was no evidence of profuse pyramidal slip; however, some evidence of slip lines which were inclined to the (0001) traces were observed, for example, at G in Figure 5 and at the fracture in Figure 6 which is near the region F in Figure 2. These closely matched a $\{11\bar{2}2\}$ trace for this surface. $(10\bar{1}0)$ traces were also seen in these regions. Although a single set of slip traces observed on one surface is generally insufficient evidence to make a positive identification, it is strongly felt from prior experience that slip on the $\{11\bar{2}2\}$ type plane had occurred in a very localized region near the fracture.