Praseodymium

Above about 600 °C at all pressures up to 70 kilobars a compound was formed whose X ray diffraction pattern could be matched line for line to the $LaSb_2$ type orthorhombic pattern for $NdSb_2$ given by Wang (25). It was concluded that $PrSb_2$ had been synthesized. This compound had not been reported previously. No other reaction products were observed.

Neodymium

Only $LaSb_2$ type $NdSb_2$ was observed above 600 °C for all pressures up to 70 kilobars. $NdSb_2$ was identified by comparing its X ray powder diffraction pattern with the pattern given by Wang (25).

Samarium

Only $LaSb_2$ type $SmSb_2$ was obtained above 600 °C for all pressures up to 70 kilobars.

Europium

A white or yellow powder plus antimony was obtained for all conditions above 400 °C and up to 70 kilobars. The powder was not definitely identified but was probably a europium oxide.

Gadolinium

Several different reaction products were obtained in this case. The reaction product diagram is shown in Figure