

Table 2  
PHYSICAL ENVIRONMENTAL CONDITIONS

Conditions	Engineering Applications (to depths of 9km)	Geologic-Geophysic Applications (to center of Earth)
Effective pressure	Static: $\leq 2 \text{ kb}^{(1)}$ Dynamic (shock): $\leq 10,000 \text{ kb}^{(3)}$	$\leq 3600 \text{ kb}^{(2)}$ $\leq 10,000 \text{ kb}$
Temperature	Static: $\leq 300^\circ\text{C}$ Dynamic: $\leq 1500^\circ\text{C}^{(4)}$	$\leq 3000^\circ\text{C}^{(2)}$ $\leq 1500^\circ\text{C}^{(4)}$
Strain rate	Static: $10 \text{ to } 10^{-10}/\text{sec}$ Dynamic: $10^{10} \text{ to } 10/\text{sec}$	$10 \text{ to } 10^{-16}/\text{sec}$ $10^{10} \text{ to } 10/\text{sec}$
Differential stress	Static: $\leq 2 \text{ kb}(?)$ Dynamic: $?$	$\leq 2 \text{ kb}(?)$ $?$
Boundary conditions	Rigid to non-rigid to free air	

(1) 1 kilobar (kb) =  $10^9 \text{ dyne/cm}^2$  = 987 atm = 14,500 lb/in.<sup>2</sup> = 1020 kg/cm<sup>2</sup>

(2) Katz (1966)

(3) Brode (1964)

(4) Ahrens and Gregson (1964)