Pronounced structural dependence is apparent in the values of the compressibility. The effect of structure, however, tends to disappear as the pressure increases as shown in the following example: (Slide #7)

Compressibility $(\text{bar})^{-1}$
135° C

P(bars)	PSU 174	PSU 87	PSU 528
atmos.	9.16×10^{-5}	11.8×10^{-5}	18.3×10^{-5}
3350	2.02	2.14	2.28
6700	(1.14)	1.18	1.21

The value in parentheses was computed from the Tait equation for the 135° C isotherm for PSU 88, as 6700 bars was above the maximum pressure to which PSU 174 could be taken.

The isobars, with specific volume as a function of temperature, were plotted for each compound at 335 bar intervals. The isobars for each hydrocarbon had the same general form and were almost linear. Representative isobars are shown in the next slide. (Slide #8)

Slopes of the isobars were determined from large scale graphical plots by the use of a tangentometer. These slopes revealed a change in sign of $(\partial^2 v/\partial T^2)_p$ at elevated pressures. This effect is observed by noting that at lower pressures the magnitude of the slope of the isobar, $(\partial v/\partial T)_p$, increases with increasing temperature but above a certain pressure, the value of $(\partial v/\partial T)_p$ decreases with increasing temperature.

Representative values of the pressure range in which the sign reversal of $(\partial^2 v/\partial T^2)_p$ has been observed in the present study are as follows: (Slide #9)

PSU 174	1000 - 1340 bars
87	1000 - 1340
528	2340 - 2680
532	1680 - 2020

Isochores (curves of constant specific volume) were drawn over the entire range of temperature and pressure at intervals of 0.01 cc/gram. Representative