as well at the minimum, recovery for these oils at the varying temperatures and pressures recorded seems to have been uniform

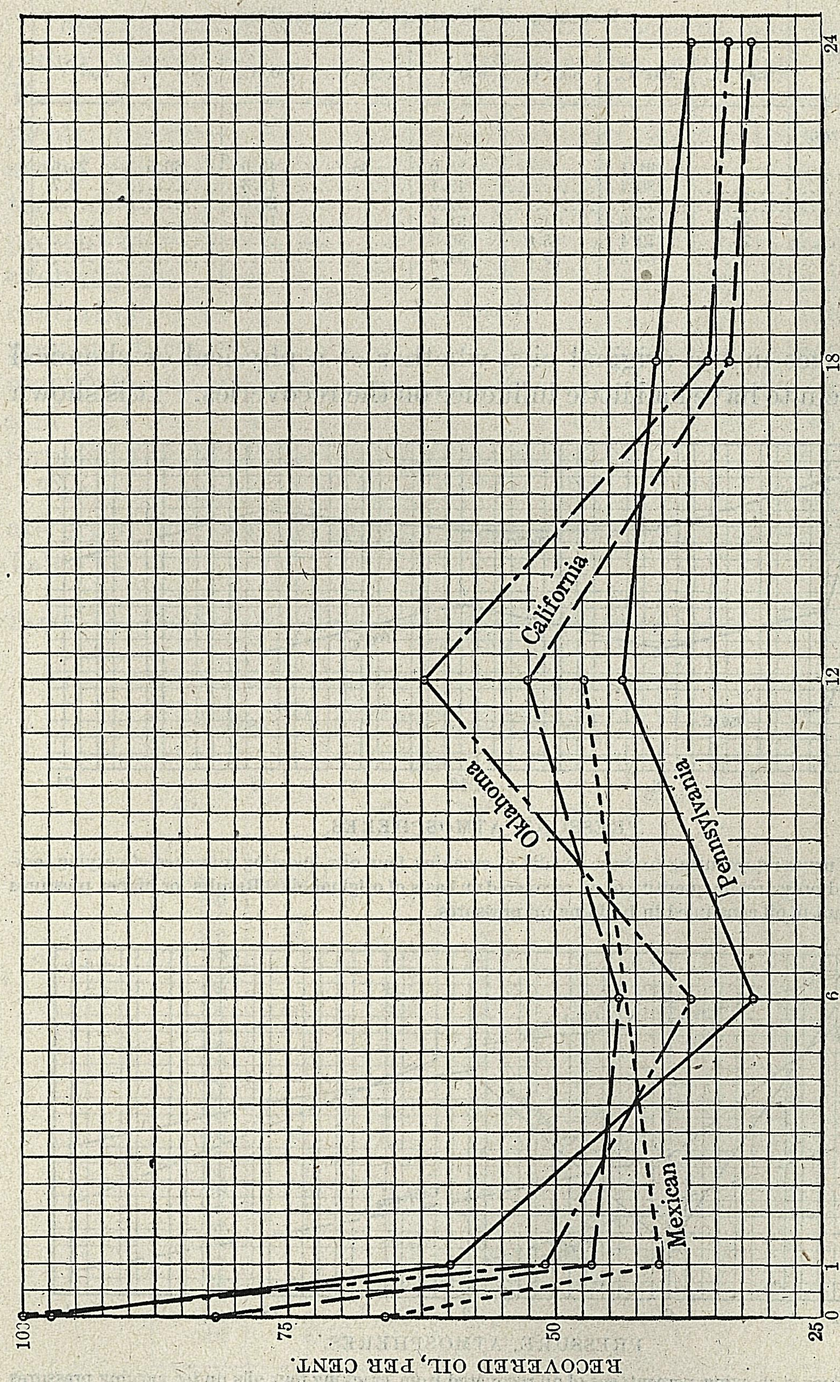

FIGURE 13.—Curves showing percentages of oil recovered from cracking four oils under varying pressures at 600° C. Results for higher pressures low on account of oil consumed in building up pressures.

At the higher temperatures there appears to have been a tendency toward increased yields at a pressure of 12 atmospheres, and a falling off for the higher pressures at the same temperatures. In consider-

ing yields under increased pressure, however, the conditions of the experiments must not be overlooked. These of necessity were distinctly disadvantageous to pressure work. The influence of pressure at constant temperatures on quantitative yields is graphically shown in figures 12, 13, and 14.

CARBON FORMATION.

The percentage of carbon formed in any cracking process is likewise a factor of the greatest industrial importance, for as has been

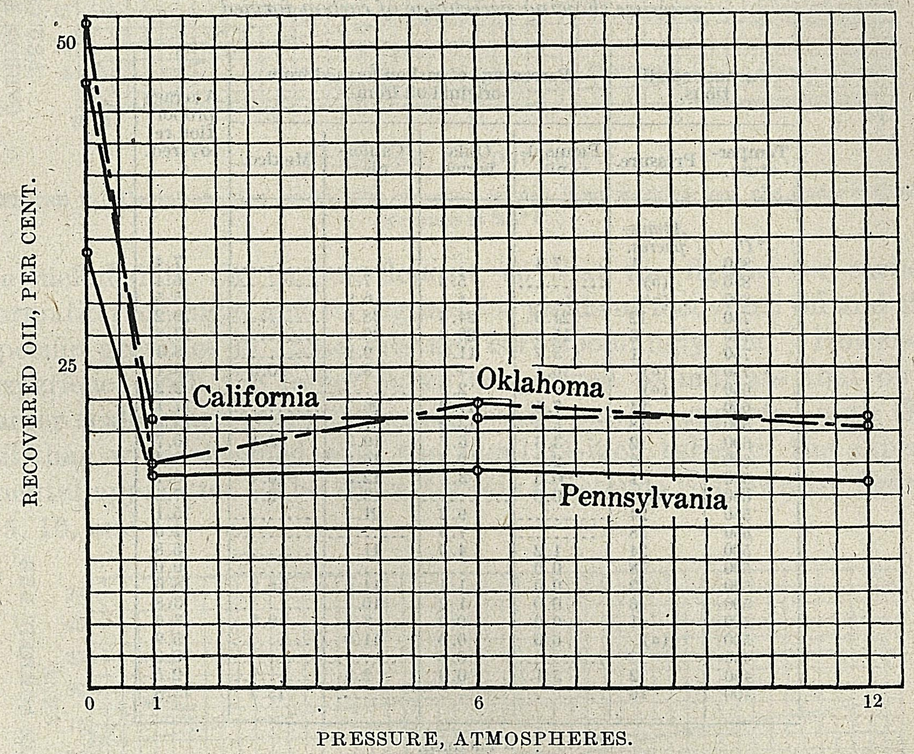

FIGURE 14.—Curves showing percentages of oil recovered from cracking three oils under varying pressures at 750° C. Results for higher pressures low on account of oil consumed in building up pressures.

pointed out, the formation of carbon in tubes of small internal diameter has been considered the greatest objection to their use in cracking processes.

Without efficient means of removing carbon that might form in considerable quantities, the operation of any process would not be continuous. The rapidity with which carbon forms and the cost of removing carbon will be decisive factors in determining the commercial practicability of a process.

With the machine used in the present experiments little carbon is formed in the range of temperature and pressure favorable for gasoline formation. A much greater quantity of carbon is formed at the temperatures and pressures favorable for the formation of aromatic