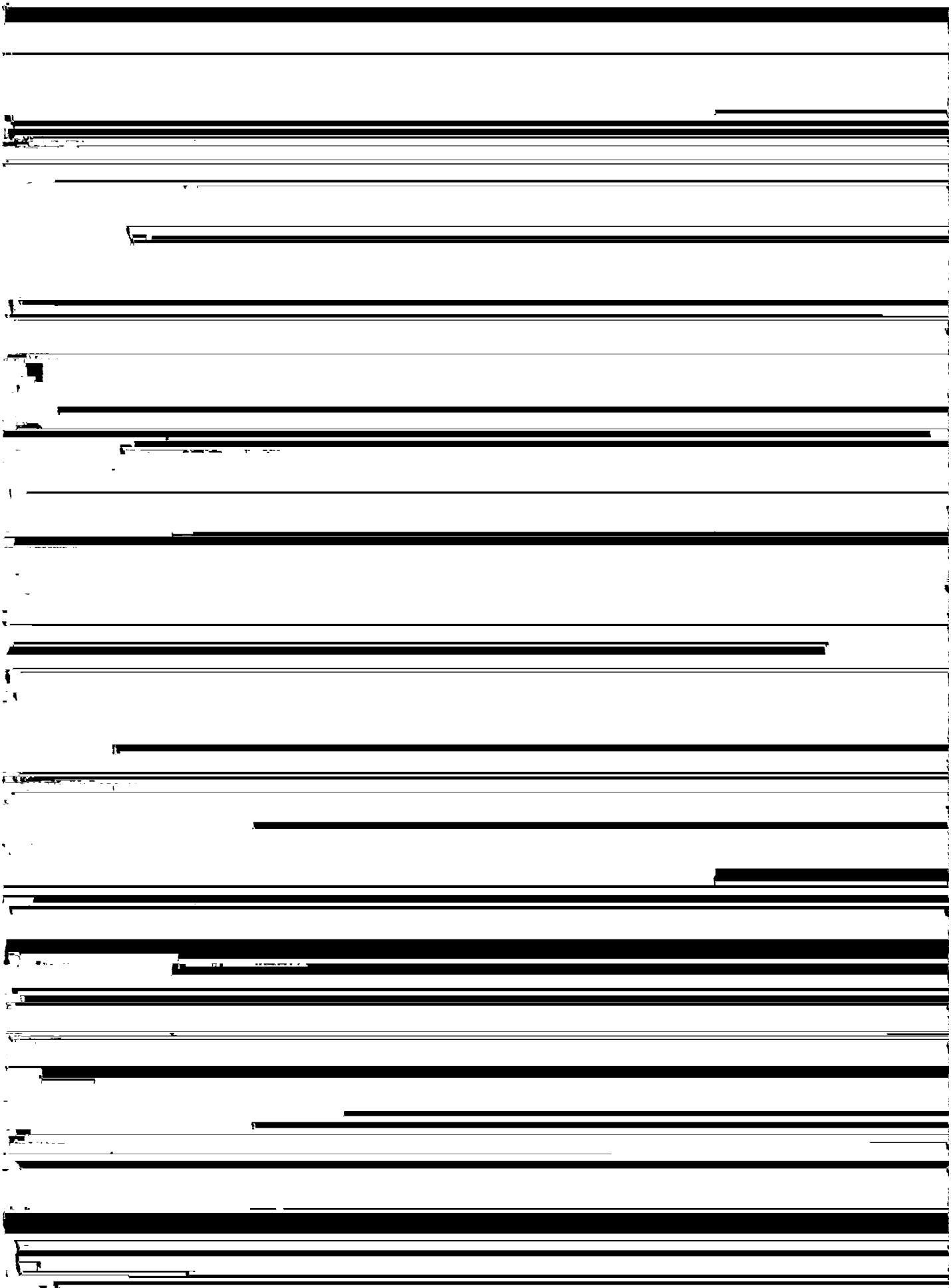


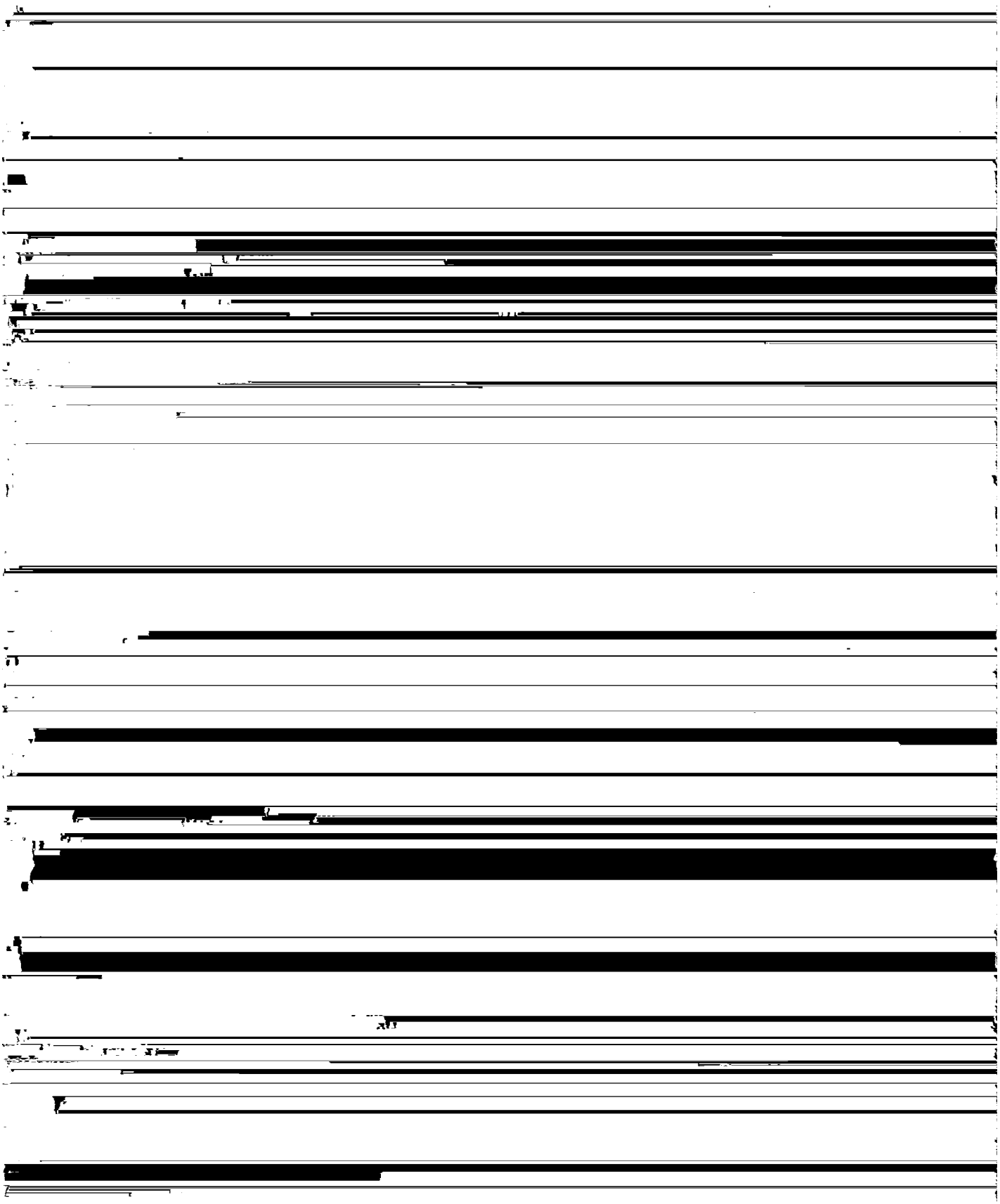
Okla., sponsored the author's research work.

Figure 2-1. Illustration of homology principle.

salt is at depth D_2. The diameter

[redacted]

This, of course, facilitates consider- [redacted] possible geometrical and petrographical [redacted] in Figures 2-2 through 2-5. These figures



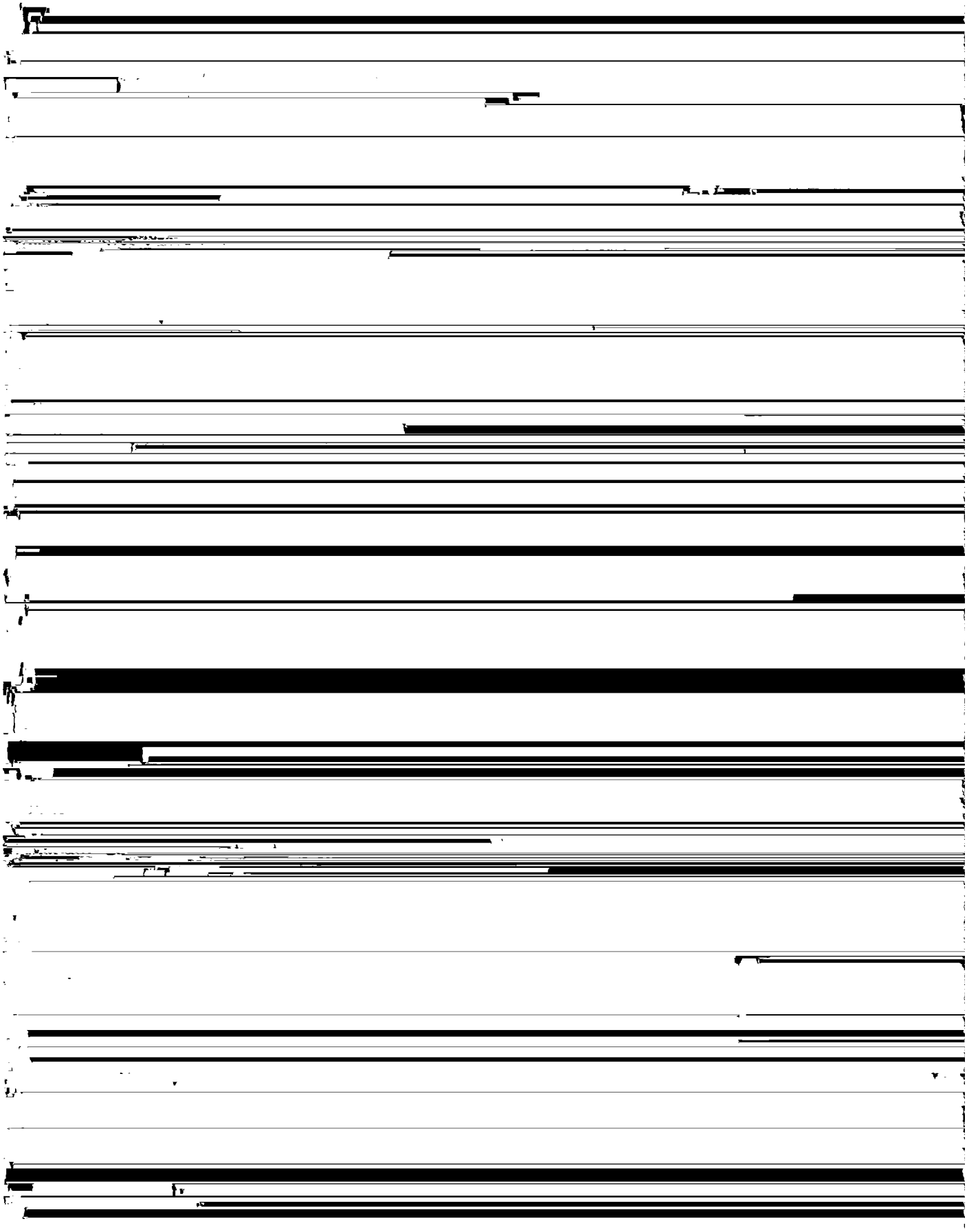
20. The actual value of the units used for the foregoing dimensions is immaterial for the following discussions, and it can be 1000 feet if the reader so wishes.

The formation overlying the salt is supposed to be uniform and its heat conductivity is one fourth as great as that of the salt, except for Figure 2-5, for which it is a little less (1/5).

The dotted lines represent the depth-temperature graphs which would be obtained far from the intrusions, at N for example, or farther. These lines give therefore the normal temperature of the formation in the non-disturbed areas.

The first remark which can be made regarding these figures is that the isogeotherms are raised above and around Figure 2-1), the greater the rate of temperature increase in the vicinity of the salt.

If the diameters of the intrusions are different from those assumed in the figures, the temperature distribution above the dome or near it is not appreciably changed, unless the diameter becomes



temperature graphs of Figures 2-2 through 2-5 are calibrated neither in degrees nor in feet. This is because they have been established according to the homology principle mentioned previously: they are therefore, in certain ways, universal curves that can be used to fit

areas of the ground is known and equal, for instance, to 64 feet per degree, and that the mean surface temperature is 60°. Point X of graph N represents the mean surface temperature. Therefore, its coordinates are:

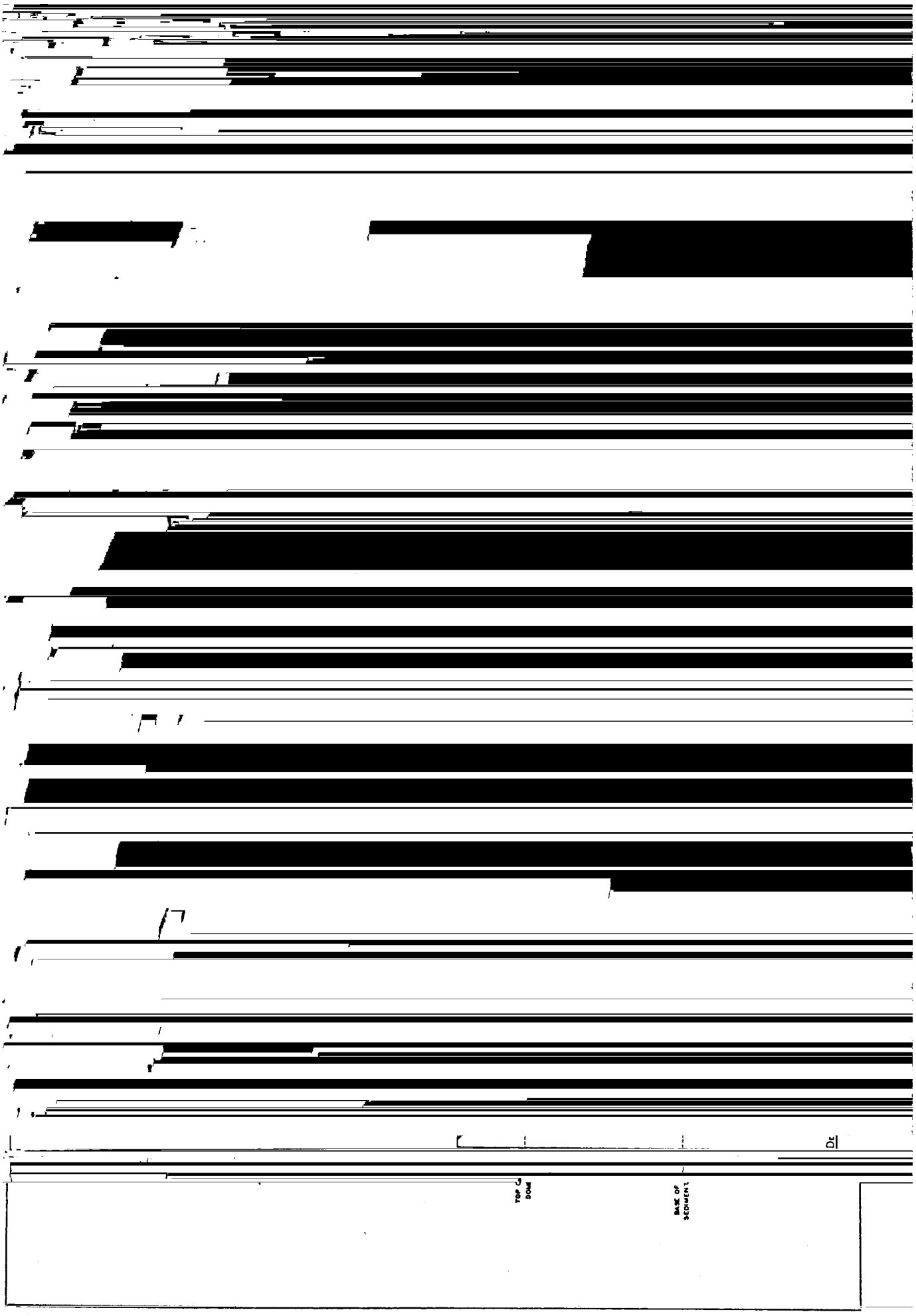
depth: 0'

temperature: 60°.

N) the same temperature and depth scales have to be used.

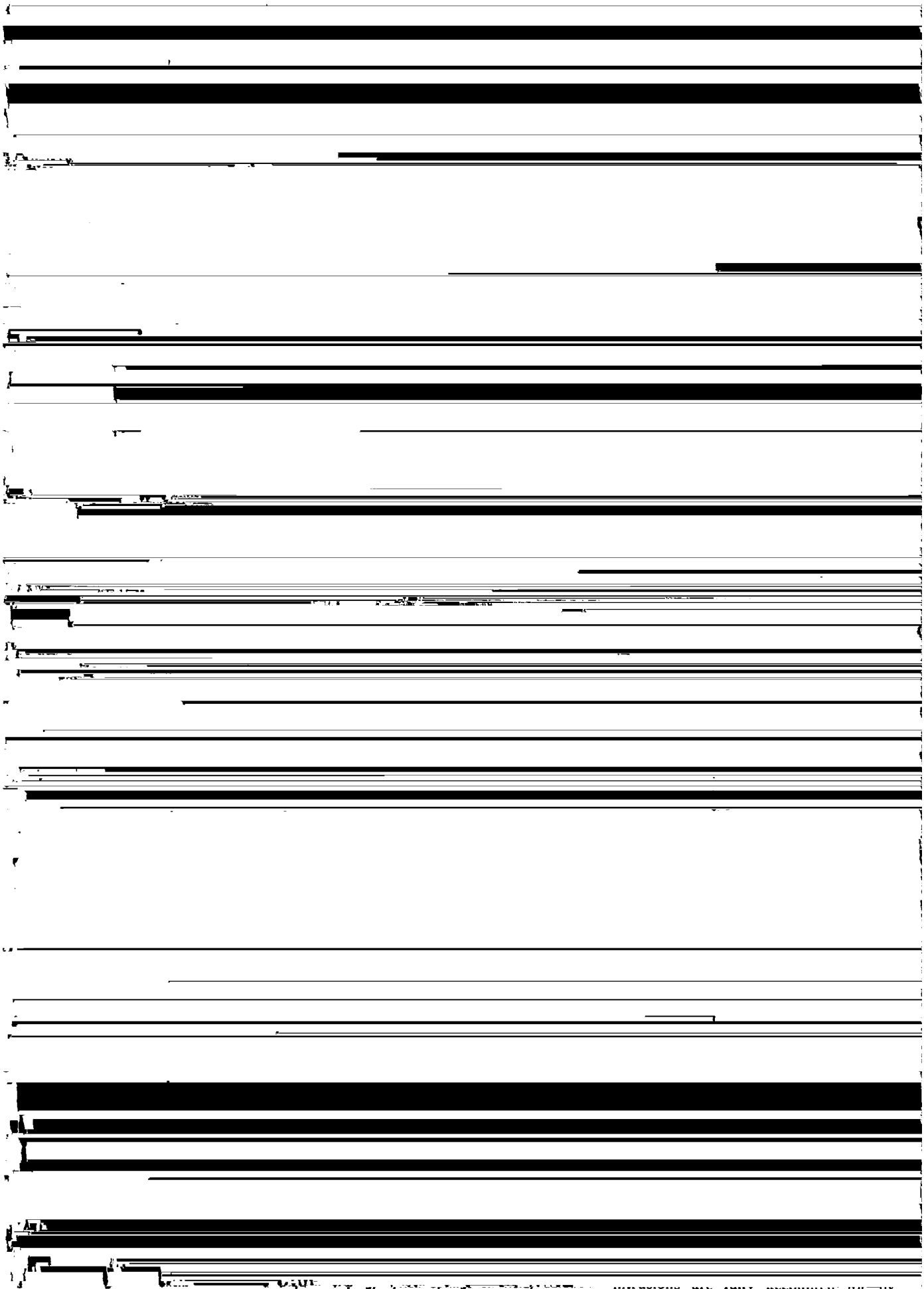
If similar temperature determinations are desired near a homologous salt dome, the same graphs have to be used (Figure 2-3) using the adequate numerical values.

If a depth-temperature graph is de-


TOP OF DOME
BASE OF SEDIMENT

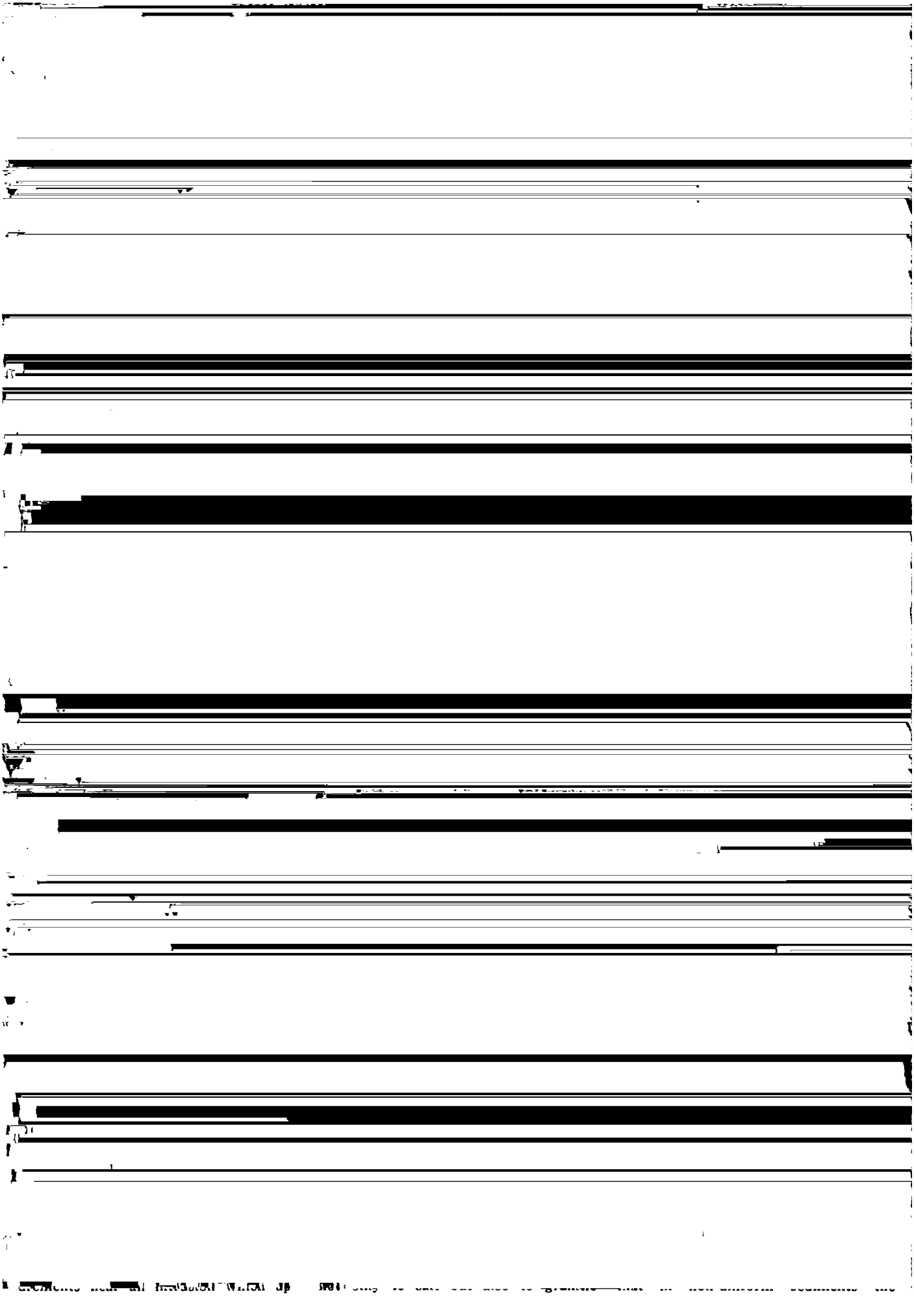
trusion conductivity and K_1 the sediments conductivity. This ratio will be assumed to be equal to 4 in

Figure 2-7. Chart giving correction factor for estimating temperature above a heat-conductive intrusion.



County, Texas. Temperature interval between isogeotherms: 2° F. (Data from Hawtof, API Production Bulletin 205, 1930.)

considering the conductivity and geometry of the formations involved.



B

[1] Hubert Guyod, "Electrical Well Logging, Part 5," The Oil Weekly, September 4, 1944.

atmosphere is taken into account (estimated).

tion, Part 3," The Oil Weekly, December 17, 1945.