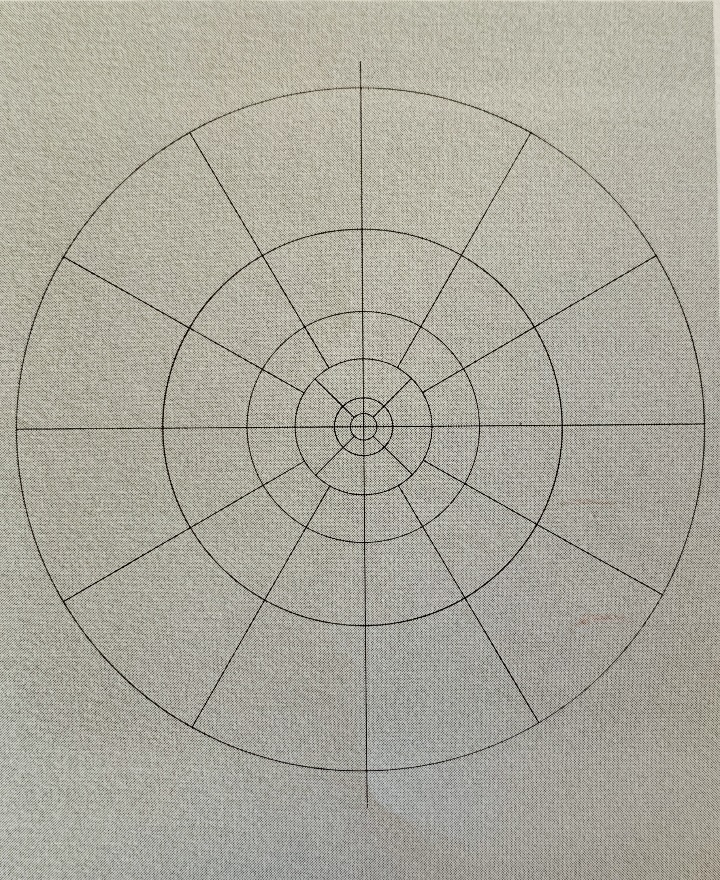
**EXTENDED HAMMER CHART  
  
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Digital Technology Pty. Ltd.  
  
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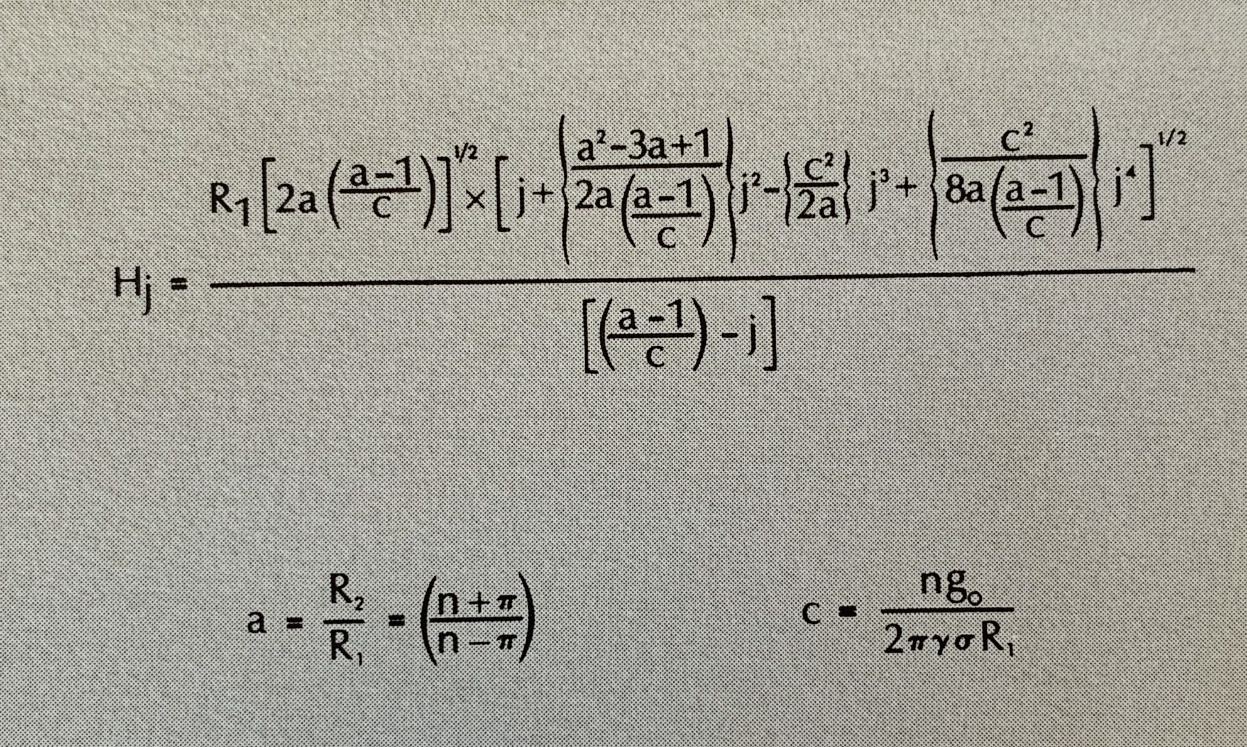
**INTRODUCTION**Previously published Hammer Charts for computation of terrain corrections for gravity data have been limited in their range of elevations, T-values, and radii. We have developed a program to compute extended tables of the standard form to any value of T and to any radius. The attached chart is representative of the results computed to a T value of 100 (where possible).  
  
*Author’s Note:*

A large scale image (3900x1800px) of the sample Extended Hammer Chart is available for download.

*Figure 1: Schematic diagram of elevation cylinders for terrain corrections using Hammer’s method 🡺*

**THEORY**

The formula used for the computation is from the paper “Terrain Corrections for Gravimeter Stations” by Sigmund Hammer, Geophysics Vol IV, No. 3 (1939) pp 184 – 194; Hammer’s equation is as follows:



*Figure 2: Extended Hammer Equation*

Where:

Hj = height of cylindrical segment of one compartment which produces a gravity effect j.g0

R1 = inner radius of zone

R2 = outer radius of zone

a = ratio of outer to inner radius

n = number of compartments in the zone

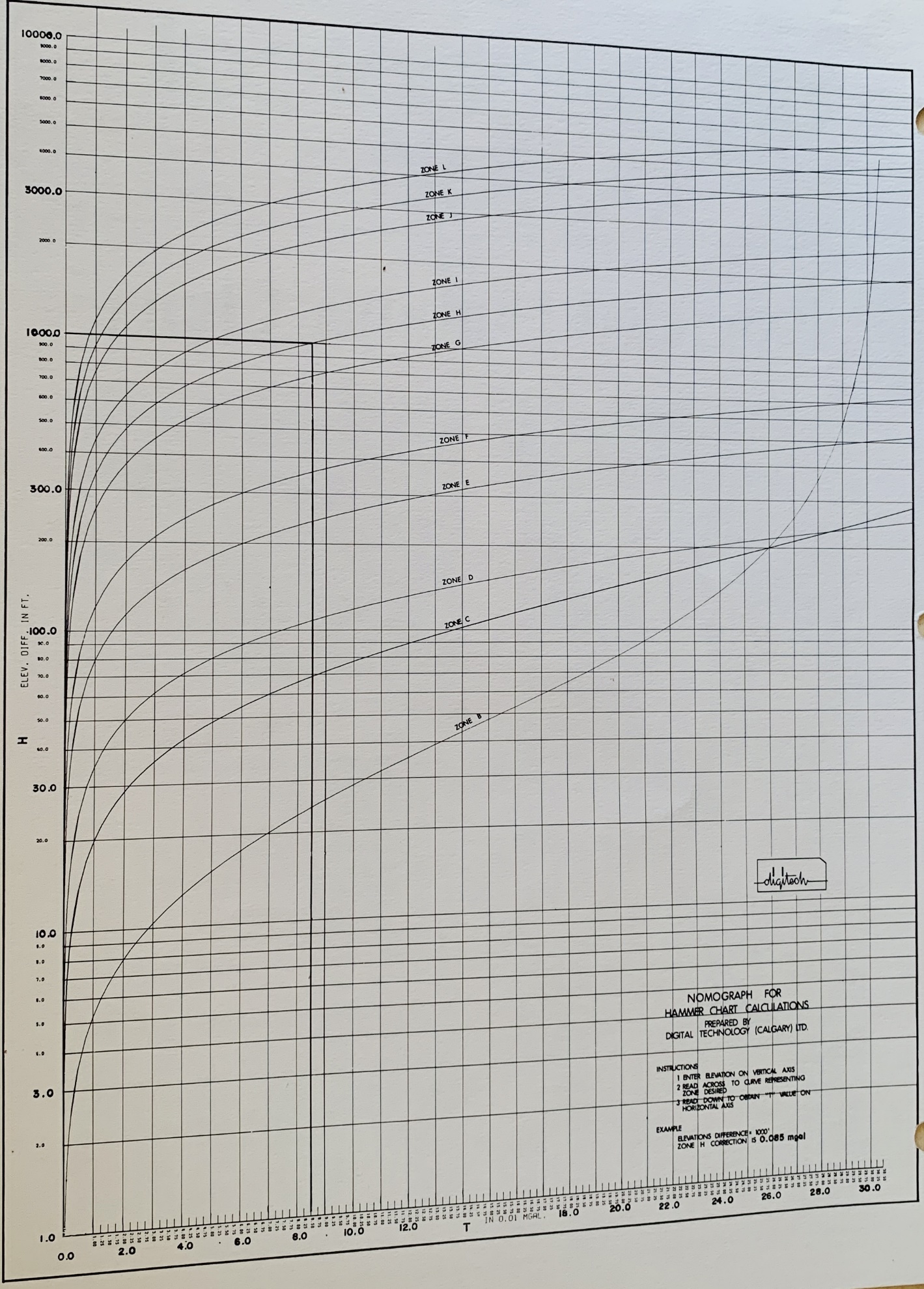
g0 = 10.5 gals.

y = 6.670 x 10.8 dyne cm2 / gm2

j = any positive number

rho = rock density (2.00 gm/cc assumed)

This formula is exact and not the first few terms of a series expansion.



*Figure 3: Nomograph for Hammer Chart Calculations*