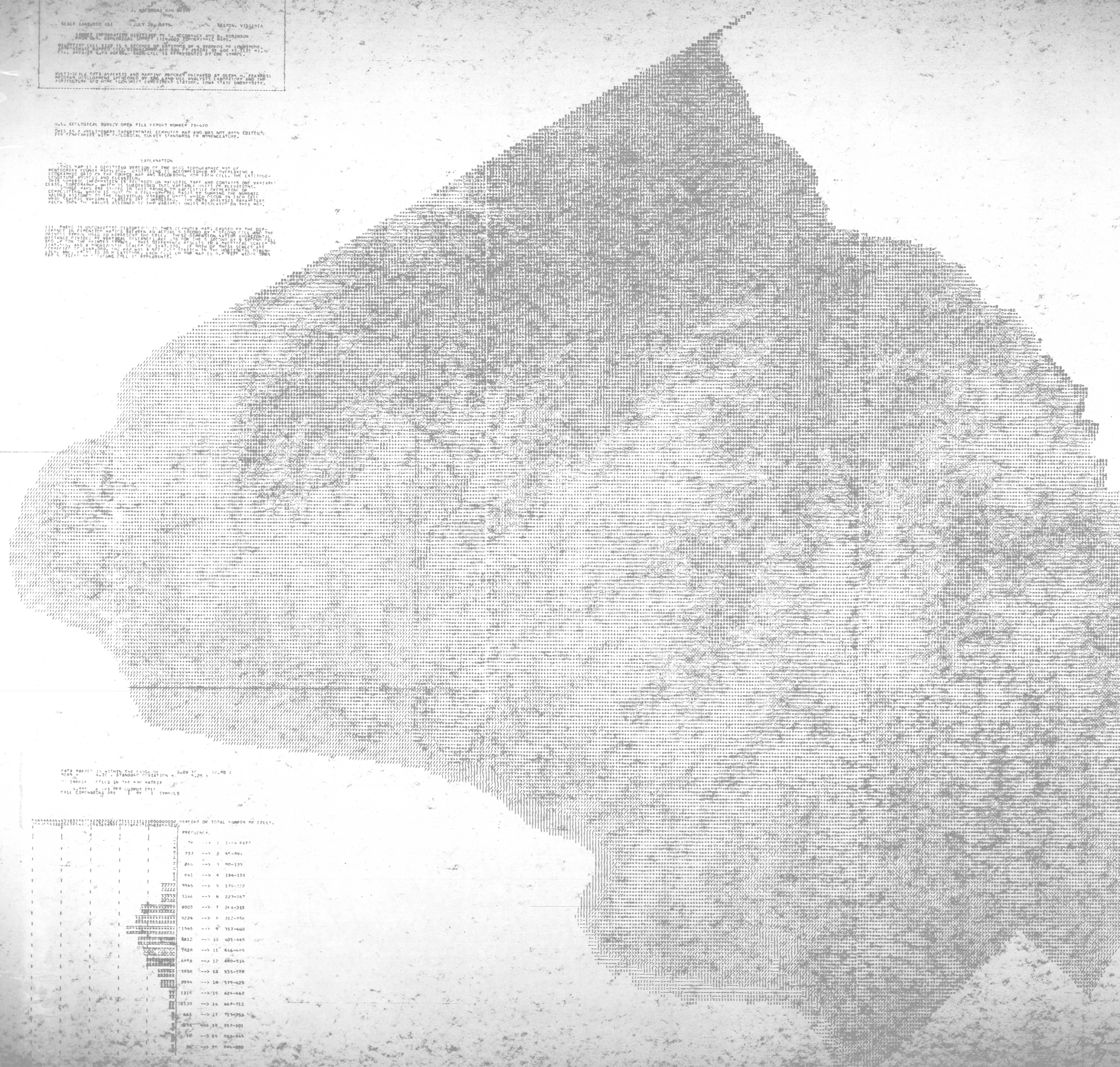
DIGITAL TOPOGRAPHIC MAP OF MONTGOMERY COUNTY, MARYLAND
BY
J. NICHOLAS VAN DRIE
1975
SCALE 1:48,000 AT JULY 29, 1975
RESTON, VIRGINIA
USING A COOPERATIVE DIGITIZER TO CONVERT AND RE-ROBINSON
PROJECTION OF A GEOLOGICAL SURVEY 1:24,000 TOPOGRAPHIC MAPS.
DIGITIZED CELL SIZE IS 5 SECONDS OF LATITUDE BY 5 SECONDS OF LONGITUDE.
ELEVATIONS ARE ROUNDED TO THE NEAREST 10 FEET (3.00 METERS).
FULL RANGE IS -45 TO 800.
EACH CELL IS REPRESENTED BY ONE SYMBOL.
MULTI-SCALE DATA ANALYSIS AND MAPPING PROGRAM PREPARED BY DEEMA H. FEAVERS;
MAPPAR DEVELOPMENT SPONSORED BY STATE AND U.S. ANALYSTS LABORATORY AND THE
AGRICULTURE AND HOME ECONOMICS EXPERIMENT STATION, IOWA STATE UNIVERSITY.
U.S. GEOLOGICAL SURVEY OPEN FILE REPORT NUMBER 75-420
THIS IS A PRELIMINARY EXPERIMENTAL COMPUTER MAP AND HAS NOT BEEN EDITED
FOR CONFORMITY WITH GEOLOGICAL SURVEY STANDARDS FOR NOMENCLATURE.
EXPLANATION
THIS MAP IS A DIGITIZED VERSION OF THE USGS TOPOGRAPHIC MAP OF
MONTGOMERY COUNTY, MARYLAND. THIS IS ACCOMPLISHED BY OVERLAYING A
COORDINATE GRID ON THE SOURCE MAP AND RECORDING, FOR EACH CELL, THE LATITUDE-
LONGITUDE ORIGIN AND ELEVATION.
THE NUMERIC INFORMATION IS RECORDED ON MAGNETIC TAPE AND CONTAINS ONE VARIABLE
CLASS, TOPOGRAPHY, WHICH IS SUBDIVIDED INTO VARIABLE UNITS OF ELEVATIONS.
OTHER MAPS ARE STORED IN THIS MANNER TO FACILITATE OVERLAYING
COMPUTER, WHICH IS DONE ON A CELL-BY-CELL BASIS BY SUMMING THE NUMERIC
VALUES ASSIGNED TO THE INDIVIDUAL VARIABLE UNITS WHICH OCCUR IN EACH CELL
WITH SEVERAL VARIABLE CLASSES INVOLVED. THE DATA ANALYSIS PARAMETERS
BELOW SHOW THE VALUES ASSIGNED TO THE VARIABLE UNITS DISPLAYED ON THIS MAP.
NOTE: THERE IS UNCORRECTED DISTORTION IN THIS COMPUTER MAP, CAUSED BY THE DIF-
FERENT INFORMATION RATIOS BETWEEN AN ACTUAL A SECOND BY A SECOND CELL AND THE
RECTANGULAR SYMBOL USED TO REPRESENT THE CELL. THESE DIMENSIONS RATION (HORIZONTAL
DISTANCE) IS 1.00 FOR THE SECOND BY 1.00 FOR THE SECOND BY 1.00 SECOND CELL
AND 1.00 FOR THE SYMBOL. THIS DISTORTING RESULTS IN A VERTICAL SCALE
DIFFERENCE AND A HORIZONTAL SCALE DIFFERENCE WITH OF THESE SCALES OFF
BY 30% AND 15% TO 30 N LATITUDE. EACH CELL IN THE MAP IS 5.00 METERS TRUE
TRUE FOR EVERY CELL IT REPRESENTS.
DATA RANGE IS WITHIN THE RANGE OF -3.09 TO 30.00 :
MEAN = 3.20 , STANDARD DEVIATION = 4.25 :
14400 CELLS IN THE MAP MATRIX
4,000 CELLS OFF OUTPUT CRT
CELL DIMENSIONS ARE 1 BY 1 SYMBOLS
PERCENT OF TOTAL NUMBER OF CELLS.
FREQUENCY.
70 --> 1 1-44 FEET
737 --> 2 45-89
266 --> 3 90-133
661 --> 4 134-178
3945 --> 5 179-222
3346 --> 6 223-267
8003 --> 7 268-311
9224 --> 8 312-356
1545 --> 9 357-400
8812 --> 10 401-445
7628 --> 11 446-489
6858 --> 12 490-534
3858 --> 13 535-578
2094 --> 14 579-623
1316 --> 15 624-667
2130 --> 16 668-712
463 --> 17 713-756
835 --> 18 757-801
70 --> 19 802-845
20 --> 20 846-889
U.S. GEOLOGICAL SURVEY
NOV 18 1975
LIBRARY