U.S. DEPARTMENT OF THE INTERIOR

U.S. GEOLOGICAL SURVEY

A BASIC ARC/INFO ARC MACRO LANGUAGE PROGRAM FOR

PLOTTING 7.5-MINUTE QUADRANGLE MAPS DISPLAYING GEOLOGIC DATA

by

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Note for New Publications booklet:

OF 95-588. A Basic ARC/INFO ARC MACRO Language Program for plotting 7.5-Minute Quadrangle Maps Displaying Geologic Data by Karen Bryant and William D. Watson. 2 pages. 1 3 ½ diskette.

The AML and associated files are on a 1.44MB, high density, 3 ½ inch, DOS-formatted diskette. All files are ASCII text files in UNIX format.

INTRODUCTION

The United States Geological Survey (USGS) in cooperation with State geological surveys has conducted several detailed coal availability studies at the 7.5-minute quadrangle scale (Eggleston and others, 1990, Carter and others, 1989). In addition, a Geographic Information System (GIS)/statistical method to extrapolate aspects of the results of the detailed studies to other quadrangles has been developed (Watson and Bryant, 1993). To date, the analyses of the coal resources have been performed with GRASS (Geographical Resource Analysis Support System). Although the GRASS/MAPGEN interface or the ps.map command in GRASS can be used for map generation, each program has its drawbacks. Map generation with GRASS/MAPGEN is purely interactive. Map generation with the GRASS command, ps.map, can be performed with scripts; however, the process is tedious. In contrast, map generation with ARC/INFO has the advantages that it can be performed noninteractively and easily with an ARC Macro Language program (AML). Thus, an AML was written in order to serve as a template for generation of 7.5-minute quadrangle maps displaying coal resource data. The AML can also be modified to serve as a template for generation of maps displaying other data on 7.5-minute quadrangle maps.

This open-file report contains the AML, a data file which accompanies the AML, a file containing an explanation of the data elements in the data file, two texts files containing the text and reference which appear on the right side of the map produced by the AML, and a map produced by the AML (Plate 1). Coal data generated during development of the extrapolation method mentioned above were selected to display on the map. The roads and streams were extracted from the U.S.G.S. 1:100,000 scale digital line graph for the Hazard quadrangle in Kentucky. The magnetic declination was obtained over the internet from the algorithm on the VAX at the U.S.G.S. in Denver, Colorado. The files present on the DOS-formatted disk in this open-file report are in Unix format. Explanations of their contents are the following:

readme	the text of this report
quadmap.aml	the ARC/INFO AML to generate the map
quaddata	the text file containing data required by the AML
explantn.txt	an explanation of the data elements in the data file required by the AML
qmtext.txt	the text file containing the block of text which appears on the right side of the map generated with the AML.
qmref.txt	the text file containing the reference which appears on the right side of the map generated with the AML.

ACKNOWLEDGEMENTS

REFERENCES

Carter, M.D., and Gardner, N.K., 1989, An assessment of coal resources available for development: Central Appalachian region--first year summary: U.S. Geological Survey Open-File Report 89-362, 52 p.

Eggleston, J.R., Carter, M.D., and Cobb, J.C., 1990, Coal resources available for development--a methodology and pilot study: U.S. Geological Survey Circular 1055, 15 p.

Watson, William, and Bryant, Karen, 1993, Assessing U.S. coal resources: an integration of GIS and statistical methods: GIS/LIS Proceedings, November 1993, Minneapolis, MN Vol. 2, American Society for Photogrammetry and Remote Sensing, p. 738-752.