

COAL REGIONS AND FIELDS OF THE UNITED STATES IN DIGITAL FORM

by

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This report is preliminary and has not been edited or reviewed
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INTRODUCTION

The coal fields of the United States have been published by the U.S. Geological Survey (USGS) in the past as maps in paper form. The most widely used version was by Trumbull (1960) and Barnes (1961) at a scale of 1:5,000,000 in the Albers Equal Area projection. The map was published again in 1988 by Wood and Bour using the Transverse Mercator projection, revising the extent of some fields. There is often a need to use the coal fields in page-size drawings for reports or presentations. Because of this need, Trumbull's coal fields map was digitized using the USGS program GSMAP8 (Selner and Taylor, 1992). Digitizing of the fields was generalized, because the intent was to create files usable in diagrams, with less need for cartographic accuracy. The digitized extent of the Gulf Coast lignite region was revised in accordance with Wood and Bour's 1988 map.

This open-file report contains the coal fields on floppy disks in various digital formats, including gsmmap, ascii, Geographic Resource Analysis Support System (GRASS), and ARC/INFO. There are gsmmap files (version 8.0) for the conterminous United States (US) and Alaska. There are ascii versions of these files that were produced from gsmmap utilities. The ascii conterminous US and Alaska files were imported into GRASS as vector files (using lon_0=96w and lat_0=23n as standard parallels of the Albers equal area projection and units in meters). GRASS can export ARC/INFO files, which are also included on the disks. In GRASS, the separate polygons were labeled according to predominant rank of coal in the region (1-lignite; 2-bituminous; 3-subbituminous; 4-anthracite) and converted to raster form. A Tagged Image File Format (tiff) file created from a GRASS graphic display of the rasters (with state line vectors) is also included. Yellow, blue, orange, and violet colors in the tiff file relate to the four respective GRASS categories. For convenience, the state and county outlines in GRASS vector format and the counties in ARC/INFO format are also included (modified from USGS digital line graph [dlg] files). The ARC/INFO files are in generate file format.

This text exists as a README file on disk 1. The following list describes the file types and names for the contents of the DOS-formatted floppy disks (1 through 5).

FILE NAMES DESCRIPTION

GSMAP FILES Disk 1 (total bytes: 99,004)

cfmap.ndx	conterminous US coal fields
cfmap.lsf	
alaska.ndx	Alaska coal fields
alaska.lsf	
cfmap.prj	files to use for conterminous US
cfmap.plt	
alaska.prj	files to use for Alaska
alaska.plt	

ASCII FILES Disk 1 (total bytes: 249,250)

cfmap.asc	conterminous US coal fields
alaska.asc	Alaska coal fields

TIFF FILE Disk 1 (total bytes: 925,054)

cfields.tif	uncompressed color tiff file of coal fields in conterminous US and Alaska (colors are keyed to coal rank)
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GRASS SUPPLEMENTARY FILES Disk 1 (in GRASS directory) (total bytes: 96)

PROJ_INF	projection information file, PROJ_INFO
PROJ_UNI	projection units file, PROJ_UNITS

GRASS REGION FILES Disk 1 (in windows subdirectory) (total bytes: 324)

us_reg	GRASS region for conterminous US
ak_reg	GRASS region for Alaska

GRASS VECTOR FILES Disks 1,2,3 and 4
 (in GRASS subdirectories: dig, dig_att, dig_plus)
 (total bytes: 3,441,316) NOTE: dig and dig_plus are binary!

uscoalfd	conterminous US coal fields (119012 total bytes)
akcoalfd	Alaska coal fields (9375 total bytes)
states	conterminous US state outlines (367326 total bytes)
counties	conterminous US county outlines (2132876 total bytes)
akstate	Alaska state outline (376727 total bytes)
akborough	Alaska borough outlines (436000 total bytes)

ARC/INFO FILES Disks 3 and 5 (in ARC directory)
 (total bytes: 1,587,347)

uscf.pol	polygon file for conterminous US coal fields
uscf.lab	
akcf.pol	polygon file for Alaska coal fields
akcf.lab	
counties.lin	line file of conterminous US counties
counties.txt	

INSTRUCTIONS

GSMAP and ASCII FILES - Use the provided *.plt and *.prj files to display the cfmap and Alaska data base files in GSMAP8. ASCII files from the GSMAP utilities are in latitude and longitude format and can be imported to other software programs.

GRASS FILES - If you have GRASS available (minimum version 4.0), use the information provided in the PROJ* files and the limits of the us_wind region to set up the default region for a new GRASS location. (The National Coal Resources Data System (NCRDS) version of GRASS is assumed to be installed.) Create a mapset and transfer the dig, dig_att, dig_plus, and windows files from the disks into respectively named subdirectories of the mapset. The attribute files (dig_att) for state and county lines are empty.

ARC/INFO FILES - If you are an ARC/INFO user, these files can be imported into ARC/INFO using the Generate command. The lines option can be used to import the *.pol and *.lin files. The *.lab files are label points files for the fields and the *.txt is a label-text file for the county lines.

TIFF FILE - This graphics file can be imported into most display and word processing software.

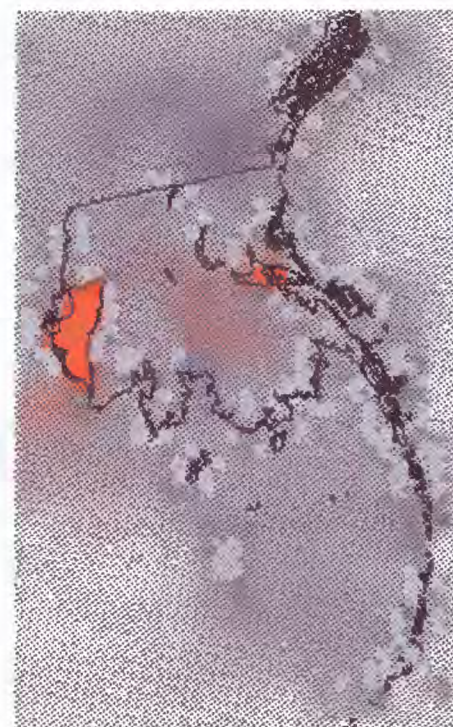
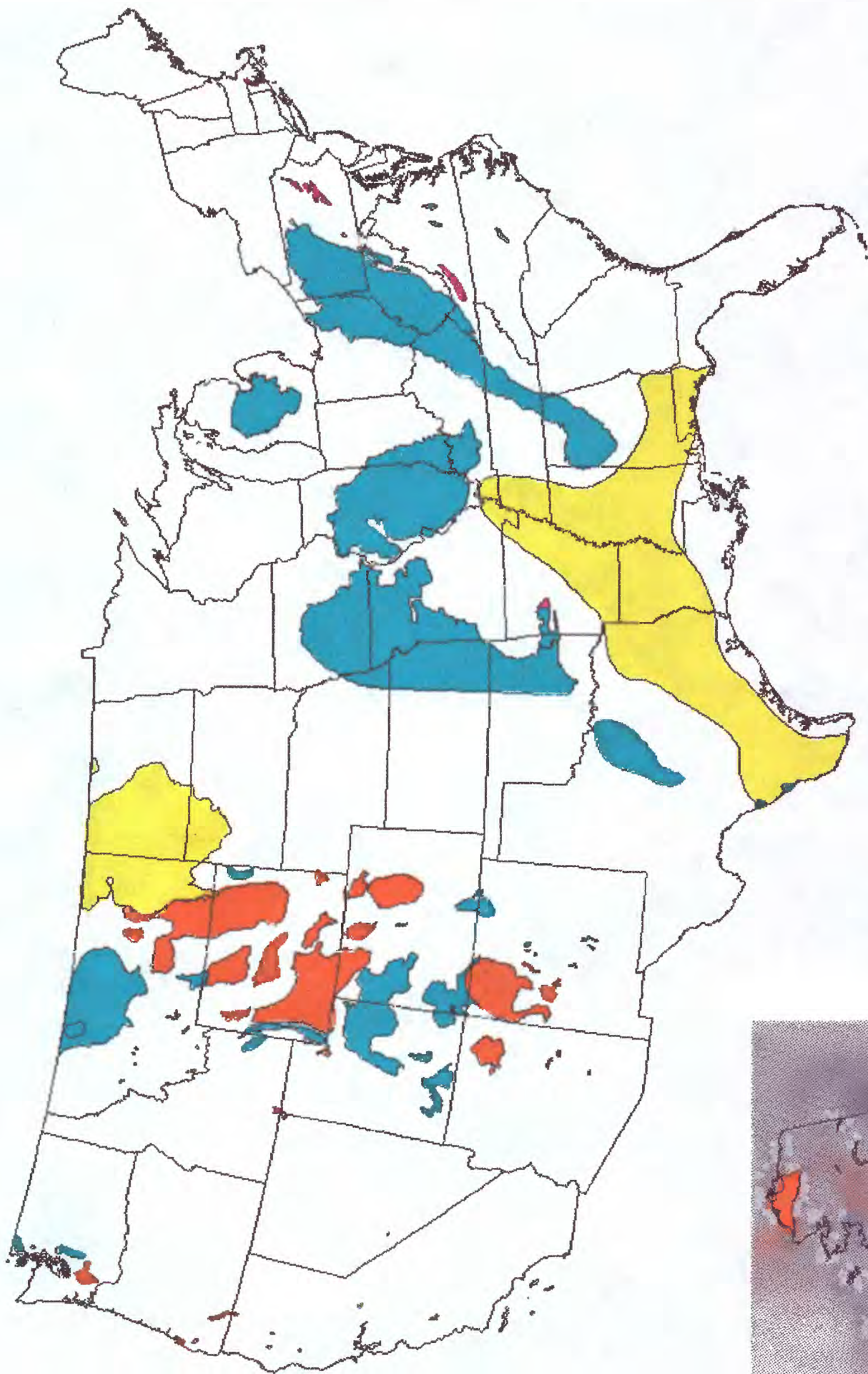
If you have problems reading or using any files, please send email to stewart@ncrds.er.usgs.gov.

REFERENCES

Barnes, F.F., 1961, Coal Fields of the United States, Sheet 2, map Scale 1:5,000,000.

Selner, G.I. and Taylor, R.B., 1992, GSMAP System 8.0, U.S. Geological Survey Open-file Report 92-217.

Trumbull, James, 1960, Coal Fields of the United States, Sheet 1, map scale 1:5,000,000.



ex. cfields.tif