DIGITAL MAPPING TECHNIQUES 2013

The following was presented at DMT'13
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The contents of this document are provisional

See Presentations and Proceedings
from the DMT Meetings (1997-2013)

http://ngmdb.usgs.gov/info/dmt/

Scanning and Digital Cleanup Of Out-of-print Maps

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Background

- KGS has a large archive of out-of-print maps dating to the late 1800's;

- Demand for digital and printed map versions for purposes ranging from GIS data conversion to hanging on a wall. Examples:

  - Interest in old oil-themed maps to aid in new exploration;

  - Governmental units looking for historical data related to current projects or issues;

  - Individuals wanting a copy of an old map that they've discovered in some other context;

  - Our own data-archiving and GIS needs.

Essential hardware

Our acquisition of a 42" sheetfeed scanner allowed us to take on projects that we couldn't consider in the past

No. (HP Scanjet desktop scanner)

YES. (Colortrac SmartLF Gx+ T42)

Steps

- Map is scanned at 300 dpi, 24-bit color, to an output .tif image;

- Digital cleanup in Adobe Photoshop CS6, though other photo-editing software will also likely work;

  - Crop any excess in scan beyond map edges;

  - Use Rotate tool to remove skew if map scan is not quite square;

  - Use tools found under the Photoshop IMAGE tab to make quick changes:

    - Auto Tone – sharpens and enhances color;

    - Replace Color – useful for eliminating crease marks and changing a yellowed background to white;

    - Eraser – changes one color, such as handwriting, smudges, or a library stamp, to that of the surrounding background.
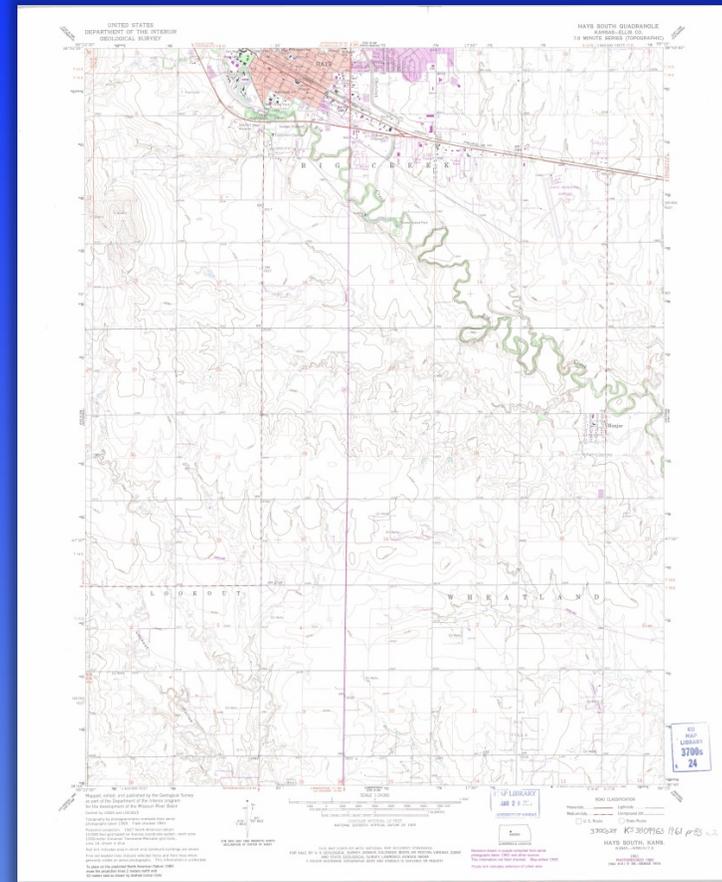
Steps
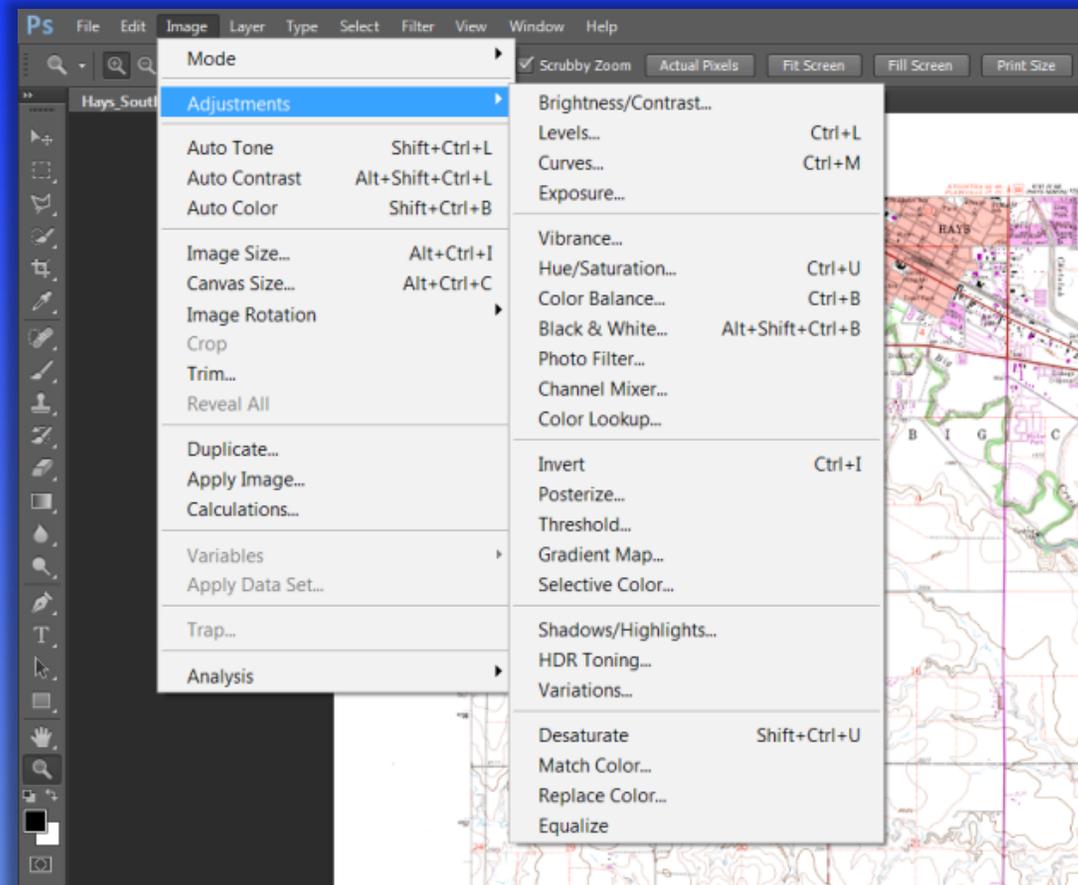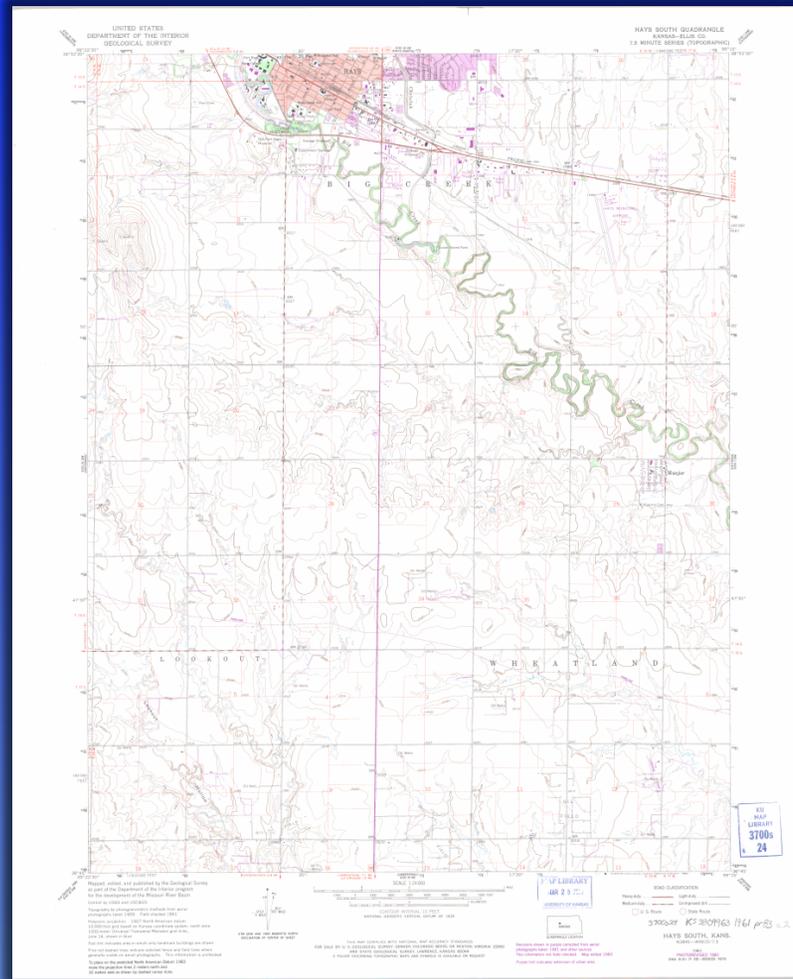
Example – 24K quadrangle
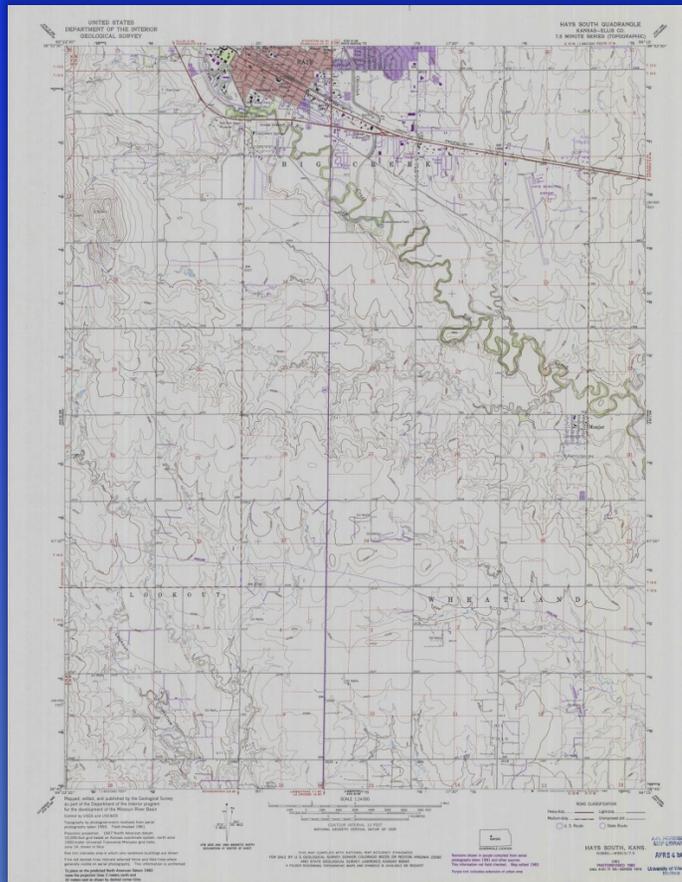
USGS US Topo version, Hays South, 1961-PR83
Gray background makes it difficult to use

My scanned version of the same
map before a quick cleanup
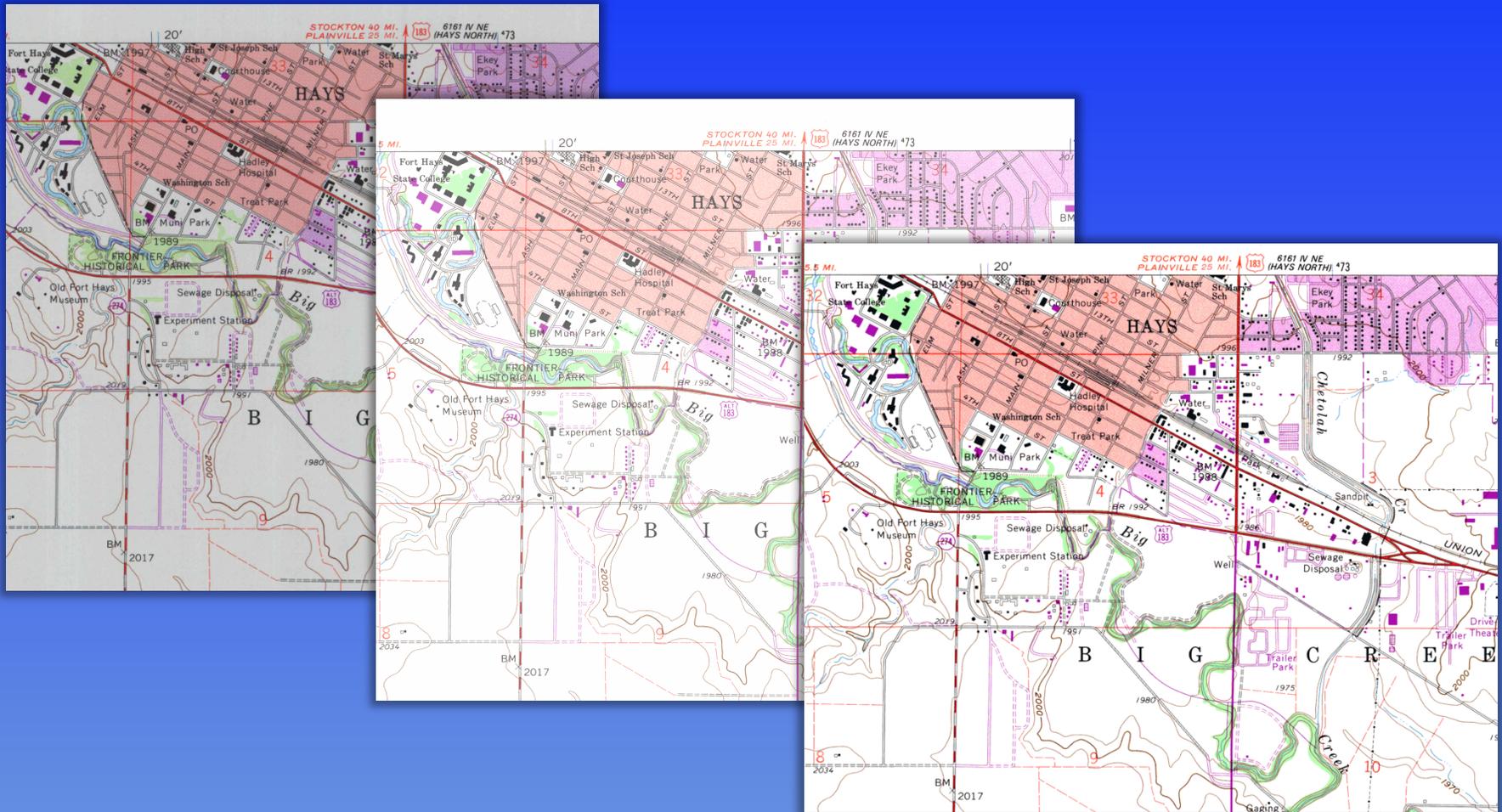
24K quadrangle after cleanup

Before-after comparison
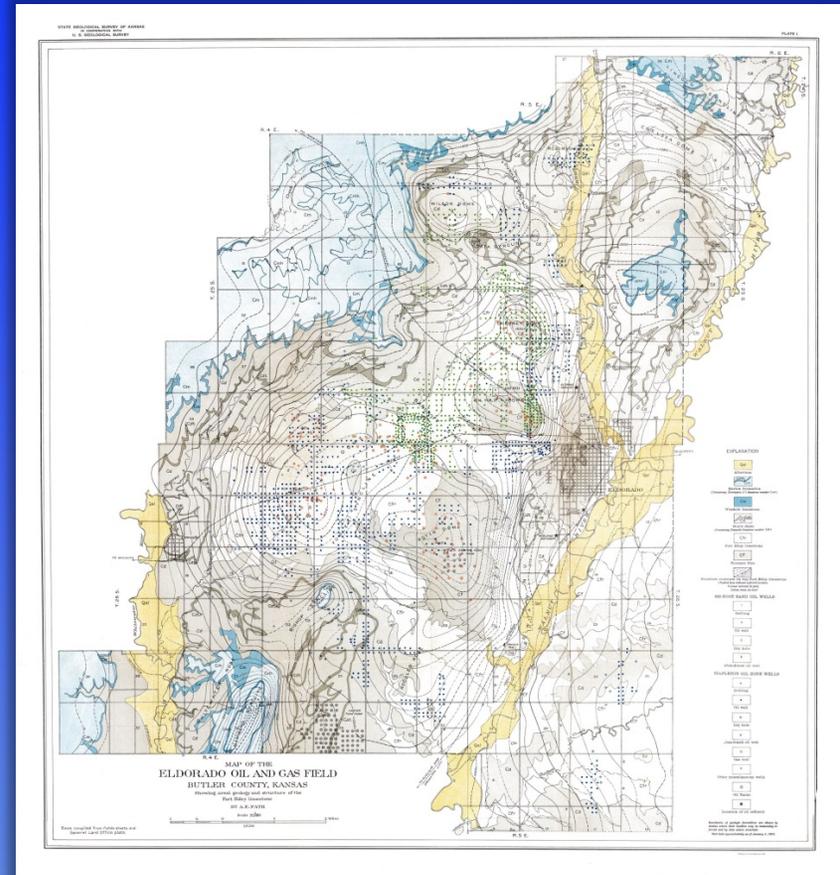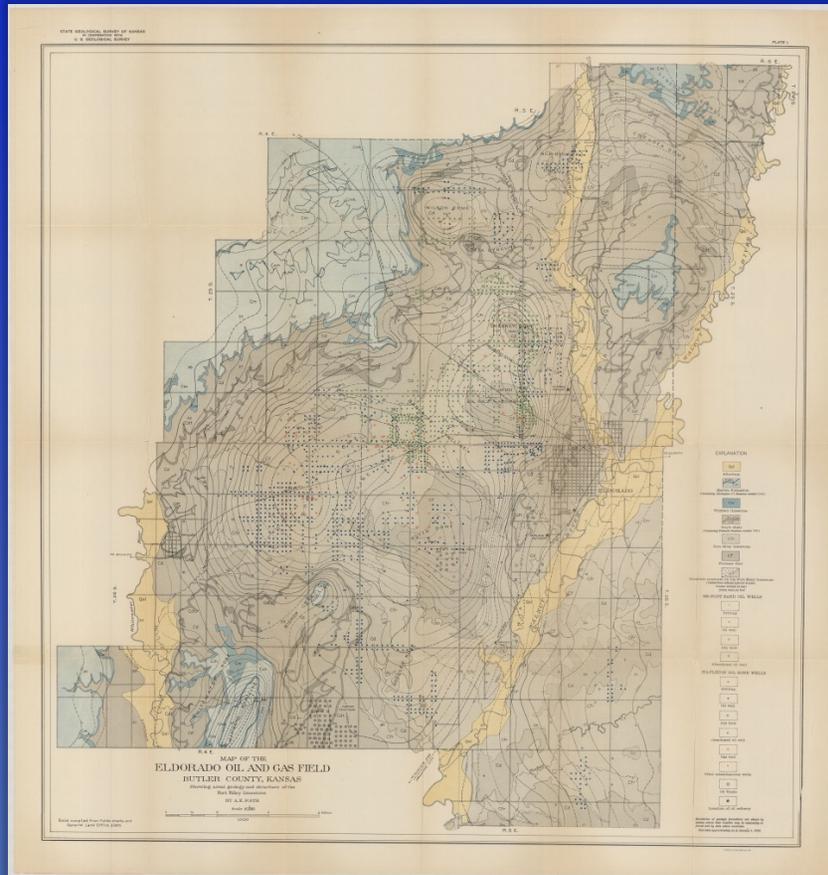
Before-after comparison II

To clean…or not to clean?

Map of the El Dorado, Kansas oil and gas field (1920) before and after cleanup

Questions?