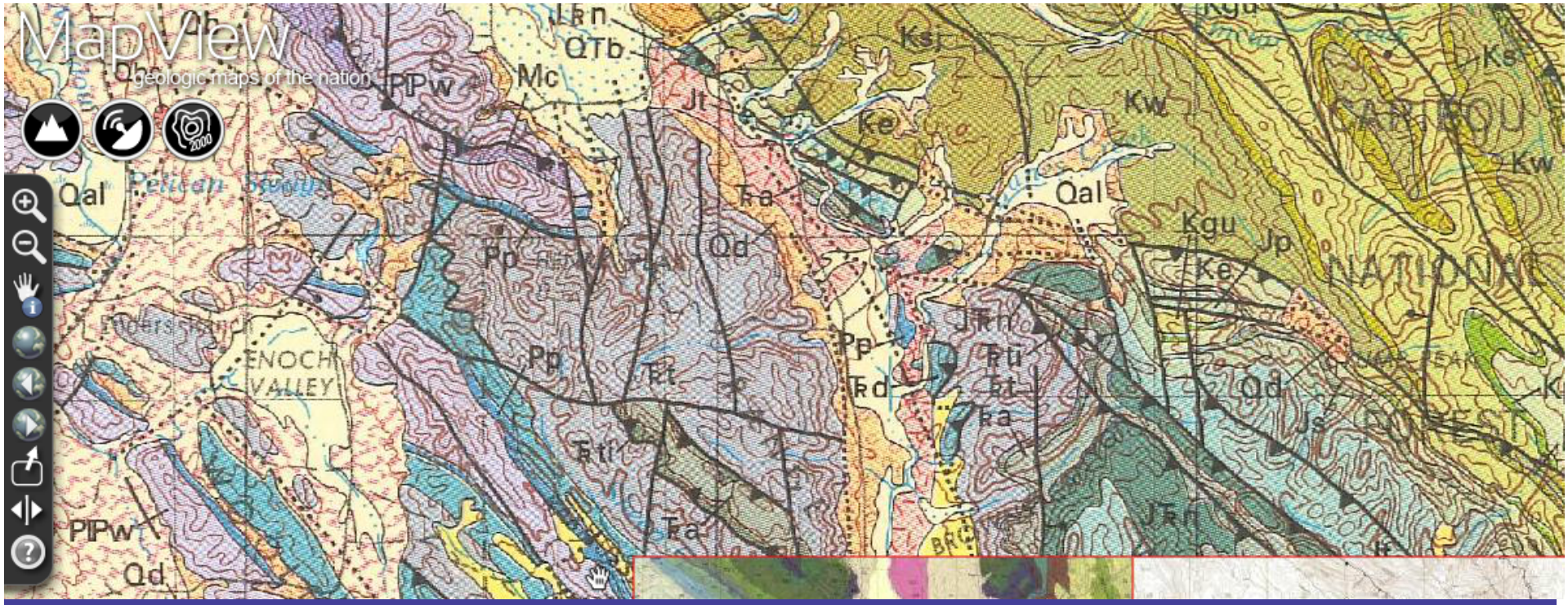
The following was presented at DMT'13
(June 2-5, 2013, Golden, CO).

The contents are provisional and will be
superseded by a paper in the
DMT'13 Proceedings.

See also earlier Proceedings (1997-2012)
http://ngmdb.usgs.gov/info/dmt/



An End-User's Perspective on Geologic Data Consumption

Digital Mapping Techniques - 2013

June 4th, 2013

Brown AND Caldwell

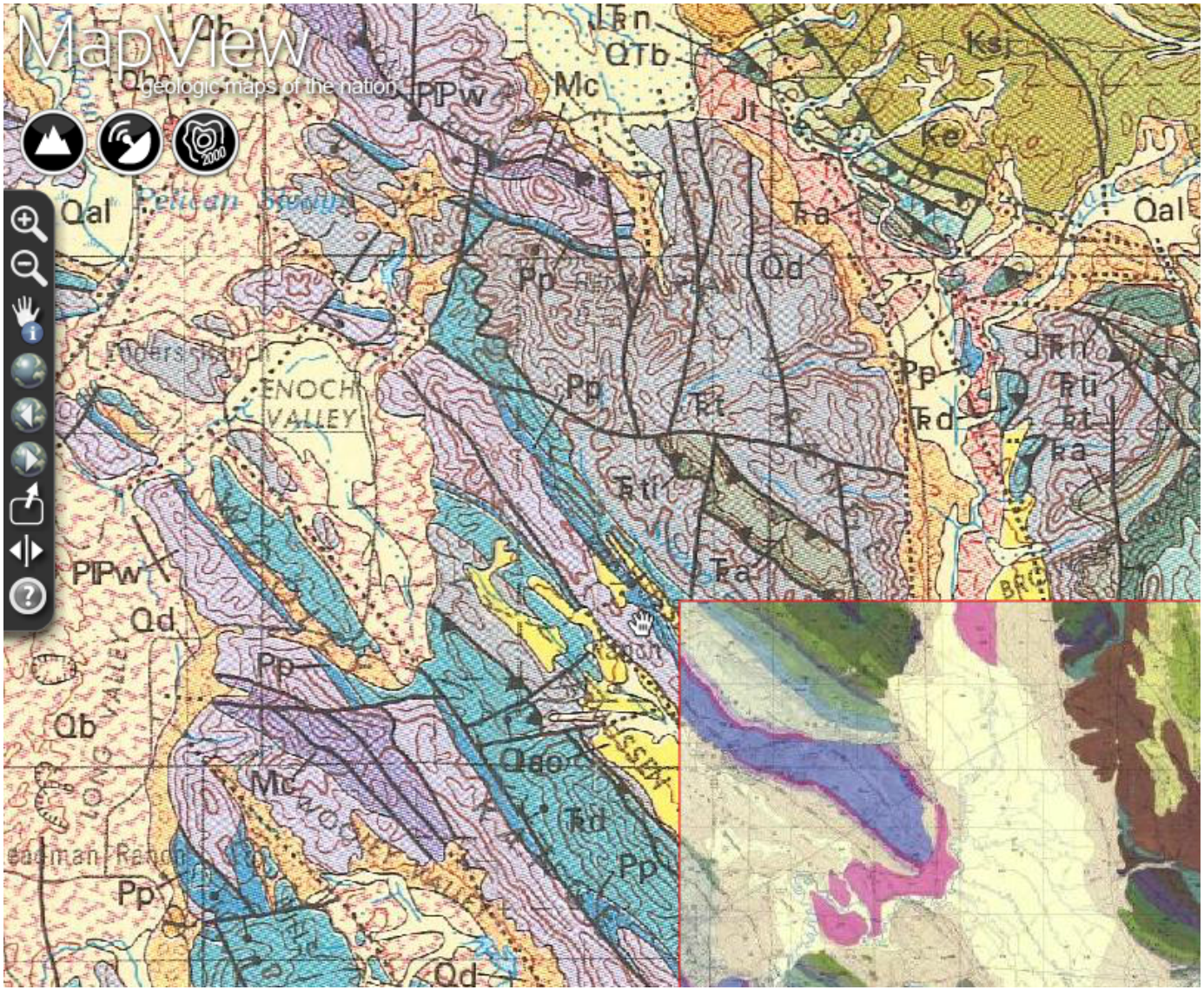
Background (why am I here?)

- GIS Specialist at Wisconsin Geological and Natural History Survey 2000-2003
- Attended DMT 2001, 2002, and 2003
- Consulting hydrogeologist 2003 onward
- Still a user and consumer of geologic and hydrogeologic data from the USGS and state geological surveys!

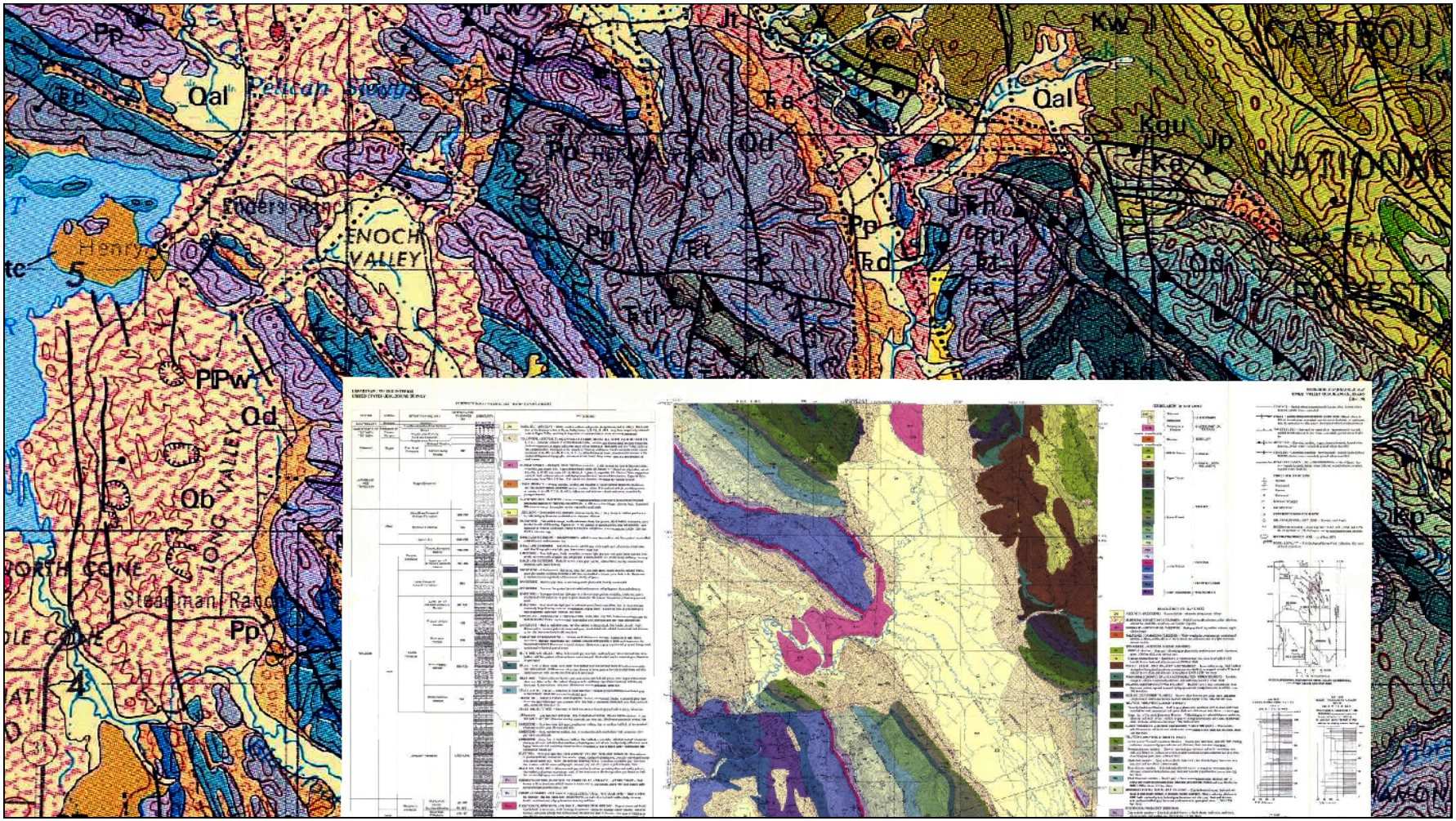
Case Study

- Mine permitting in the western U.S.
- Near-surface mining of material at core of anticline
- Need to build groundwater flow model of the anticline
  - Conceptual model
  - Numerical model
- Build 3D geologic model of the anticline
  - Use existing geologic mapping of contacts and strike & dip measurements to generate structure contours
  - Use structure contours with some drilling at proposed site to build 3D model in EVS

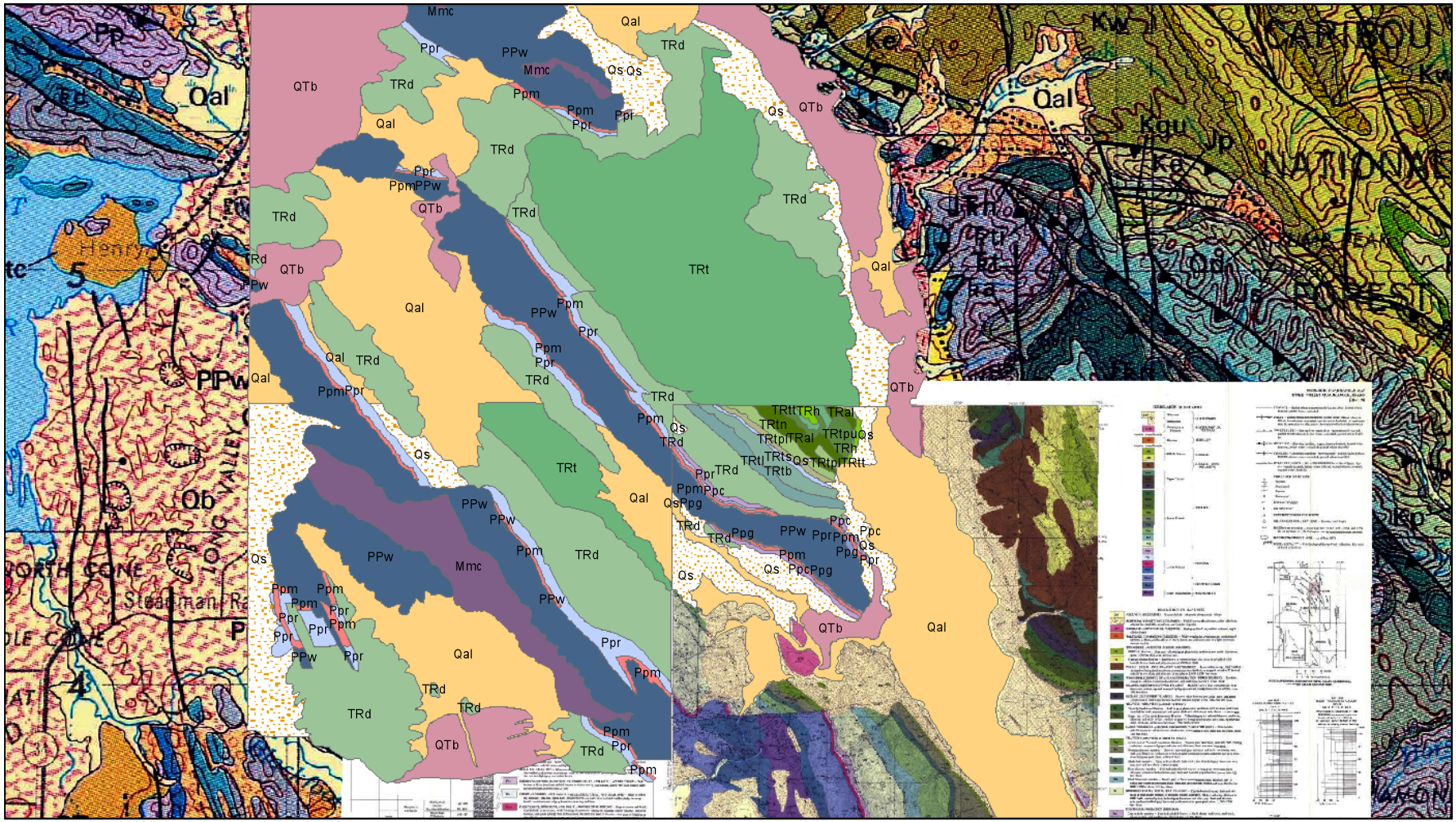
To the NGMDB…and MapView….



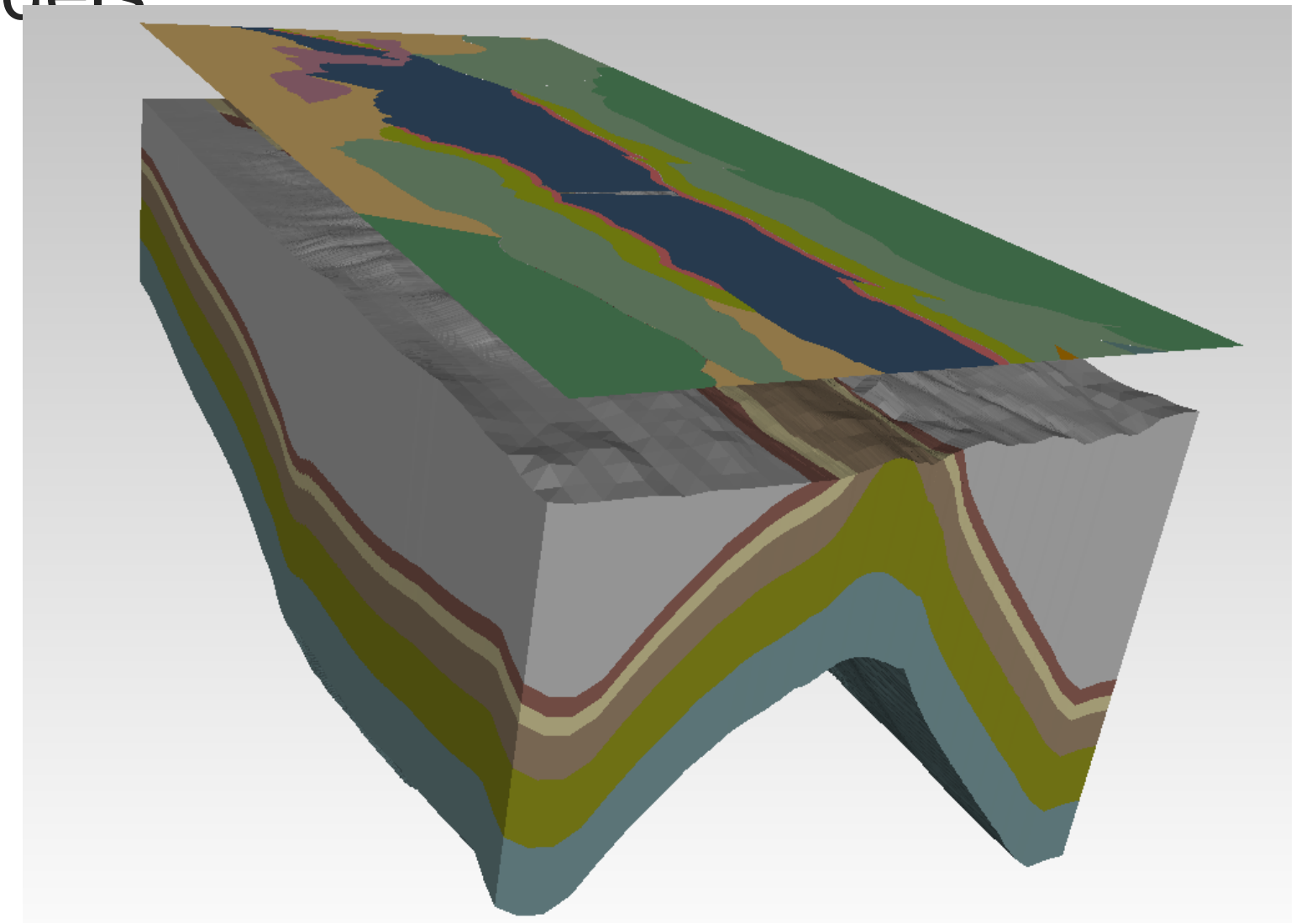
Downloaded the data….



Digitizing….



Geologic Block and MODFLOW Models



What do end users want?

- We want it all – all the data!
- When do we want it – NOW!
  - Time can be the most important cost
    - Download from the web, not USPS/FedEx
    - Product descriptions before we download
    - Location search to find data, preferably by web mapping interface
  - Monetary cost often secondary (but non- negligible); method of payment has a time element, too

How do we want it?

- Definitely prefer vector formats (likely only available for newer products)
- Georeferenced rasters (map collars clipped)
- Ungeoreferenced rasters
- PDFs of maps

Getting the word out

- Within your own offices and institutions
- To other related agencies (through existing coordinating committees and working groups)
- The broader geological community

Conferences	Publications
GSA	GSA Today
AGU	Eos (AGU)
NGWA Groundwater Summit	Ground Water/GWMR
AAPG	AAPG Explorer