



BUREAU OF ECONOMIC GEOLOGY
THE UNIVERSITY OF TEXAS AT AUSTIN

*John A. & Katherine G. Jackson School of Geosciences • University Station, Box X • Austin, Texas 78713-8924
10100 Burnet Road, Bldg. 130 • Austin, Texas 78758-4445 • (512) 471-1534 • FAX (512) 471-0140*

To: John Estep
Fr: Jay Raney
Re: Final Letter Report, 2005 Surface Casing Database Project
Date: August 31, 2005

Introduction:

In 2005, the Bureau of Economic Geology expanded the surface casing database developed in 2004 for Brazos County to include three additional counties: Robertson, Madison and Leon. All work was funded by the Texas Commission on Environmental Quality (TCEQ) under the oversight of John Estep. Methods employed and the functionality of the database, which is designed to be accessed by the public using the Internet, are essentially the same as those of the prototype project for Brazos County. All TCEQ "Q-Logs" for the three counties were scanned and delivered to TCEQ. This letter report is a summary of a few refinements and changes from the initial project, and some recommendations for how the project may be expanded in the future. Bureau personnel are essentially the same as for the initial project, which greatly facilitated the work. The geology of the study area is mostly updip from Brazos County, and the three county area includes a salt dome and an impact structure.

Refinements:

- The data layer showing the county roads has been upgraded; road names are now displayed. (Data set from TNRIS)
- The data is now stored on an ArcSDE server, which allows data integrity to be ensured through versioning and archiving.
- The data layers that are queried for horizon depth calculation are stored as raster datasets, making retrieval of information more efficient; larger coverage area would mean polygon datasets would become more inefficient.

Recommendations:

- The four counties covered by the site could be served to the public by the TCEQ or the BEG.
- If the BEG is to continue this project, it is better that we serve the data so that modifications made as a result of future work or as a result of comments from public users can be readily addressed. The site should be linked to the TCEQ surface casing Website.
- We believe that multi-county areas can be developed with a seamless database. In order to divide the State into multi-county parcels, we propose using the Railroad Commission (RRC) districts. In most cases, a database covering a RRC district will not be so large as to cause a reduction in speed for the user.

- Creation and gridding of multi-county seamless data sets requires more time and effort than single county data sets, but the resulting consistency and ease of use appears to justify the added work.
- Future work should build onto counties proximal to the initial four counties in RRC districts 3 or 5, probably prioritized based on drilling activity.
- Implement more robust programming for websites. Although the HTML viewer does an adequate job of providing surface casing information, more robust packages (i.e. ASP.NET) should be used to integrate data and provide it to the user.

CC: Wade Wheatley
Richard Carmichael
Robert Traylor
Ian Duncan
Edward Collins
David Jordan
Jeff Kane
Shinichi Sakurai
Thomas Tremblay