

## DATA REPOSITORY

*Established to provide supplementary materials for:*

**Climate controlled aggradation and cyclicity of continental siliciclastic sediments in  
Wolfcampian cyclothems, Permian, Hugoton embayment U.S.A.\***

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## **Introduction**

*Climate controlled aggradation and cyclicity of continental siliciclastic sediments in Wolfcampian cyclothems, Permian, Hugoton embayment U.S.A.* is an outcome of a larger study focused on the Wolfcampian gas resource in the Hugoton field. That comprehensive multi-discipline study represents nearly a decade of effort by Kansas Geological Survey and industry scientists. It included the building of a vast 3D geocellular model of the entire Wolfcampian volume over the study area. The finely-layered 108-million-cell model provided a 3D view of the distribution of marine and continental siliciclastic lithofacies. Readers interested in details on Hugoton geomodel construction and a more thorough discussion of the marine portion of the cyclothems in this study were directed to published work (Dubois *et al.* 2006b, 2007).

## **Purpose of Data Repository**

The purpose of the Data Repository (DR) is twofold: 1) provide additional tables and figures and associated text that directly supplement the material provided in the paper, and 2) provide background material not available through publications or other channels. Two digital files, one for each purpose, are provided in the DR. The file covering background material is the appendix to Dubois Ph.D. dissertation, *Ramp-scale geomodel for reservoir and stratigraphic analysis of the Hugoton field (Wolfcampian, midcontinent U.S.A.)*, completed in 2007. Two of the three dissertation' chapters have been published (Dubois *et al.*, 2006a, 2006b) and the third is the current paper under review.

Appendices include:

Appendix A: Core and lithofacies data

Appendix B: Training, implementation, and effectiveness of neural networks

Appendix C: Comparison between Geomod3 and Geomod4

Appendix D: Paleoslope and water depth estimate, lower Wolfcampian, Hugoton embayment of the Anadarko basin (also as KGS open file report (Dubois, 2006))

## **Web links of possible interest**

Dubois (2006)

[http://www.kgs.ku.edu/PRS/publication/2006/OFR06\\_30/index.html](http://www.kgs.ku.edu/PRS/publication/2006/OFR06_30/index.html)

Dubois *et al.* (2006c)

<http://www.kgs.ku.edu/PRS/publication/2006/2006-12/index.html>

Dubois *et al.* (2007)

[http://www.kgs.ku.edu/PRS/publication/2007/OFR07\\_06/index.html](http://www.kgs.ku.edu/PRS/publication/2007/OFR07_06/index.html)

**Dubois, M. K.** (2006), Paleoslope and water depth estimate, lower Wolfcampian, Hugoton embayment of the Anadarko basin. *Kansas Geological Survey Open-file Report*, 2006-30, 21 p., [http://www.kgs.ku.edu/PRS/publication/2006/OFR06\\_30/index.html](http://www.kgs.ku.edu/PRS/publication/2006/OFR06_30/index.html) (accessed January 23, 2011)

**Dubois, M.K., G.C. Bohling, G.C and Chakrabarti, S.** (2006a) Comparison of four approaches to a rock facies classification problem. *Computers & Geosciences*, 33, 599-617.

**Dubois, M.K., Byrnes, A.P., Bohling, G.C. and Doveton, J.H.** (2006b) Multiscale geologic and petrophysical modeling of the giant Hugoton gas field (Permian), Kansas and Oklahoma. In: *Giant reservoirs of the world: From rocks to reservoir characterization and modeling* (Eds. P.M. Harris and L.J. Weber). *American Association of Petroleum Geologists Memoir* 88, 307-353.

**Dubois, M.K., Byrnes, A.P., Bohling, G.C. and Doveton, J.H.** (2006c) Multiscale geologic and petrophysical modeling of the giant Hugoton gas field (Permian), Kansas and Oklahoma. *Kansas Geological Survey Open-file Report*, 2007-6. Poster format of Dubois *et.al.*, 2006b, with permission of the American Association of Petroleum Geologists. <http://www.kgs.ku.edu/PRS/publication/2006/2006-12/index.html> (accessed January 23, 2011)

**Dubois, M. K., Byrnes, A.P., Bhattacharya, S., Bohling, G.C., Doveton, J.H., and Barba, R.E.** (2007), Hugoton Asset Management Project: Hugoton geomodel final report. *Kansas Geological Survey Open-file Report*, 2007-6, 11 Chapters, 699 p., [http://www.kgs.ku.edu/PRS/publication/2007/OFR07\\_06/index.html](http://www.kgs.ku.edu/PRS/publication/2007/OFR07_06/index.html) (accessed January 23, 2011)