

The Analysis and Annotation of 3D Photorealistic Geological Outcrop Models

Miao Wang¹, Michele Iris Rodriguez-Gomez¹, Lionel S. White, Jr.², Jarvis R. Cline², Mohammed S. Alfarhan³, and Carlos L.V. Aiken¹

¹*The University of Texas at Dallas, Richardson, TX, US*

²*Geological & Historical Virtual Models, LLC, Dallas, TX, USA*

³*Alfarhan, Oil & Gas Research Institute, King Abdulaziz City for Science and Technology, Riyadh, Saudi Arabia*

Abstract

Photorealistic models of geological outcrops provide a detailed replication of the outcrop in digital format. Loaded into a computer graphics system the model can be viewed, inspected, and measured with equal ease regardless of the height or accessibility of the outcrop in the field. Analytical capability has been implemented on the ESRI ArcGIS platform in the GeoAnalysisTools extension to ArcScene. Detailed orientation and thickness measurements can be made rapidly in the office. The tool set provides substantial documentation and annotation capability that is present in the ArcGIS software suite.