

Vertical Exaggeration & Large Project Areas

12/8/22/JPR

Introduction

The dimensions of items within RockWorks diagrams are specified in terms of the "Project Diagonal". The *Project Diagonal* is the distance from the lower southwest corner to the upper southeast corner (Figure 1). As a consequence, the Vertical Exaggeration must be set to a very high number when plotting well logs within very large project areas. In this example, the width/height ratio is approximately 240,000/1,600 (150), which means that the vertical exaggeration must be at least 50X in order to visually discriminate anything useful within cross-sections and three-dimensional diagrams. Accordingly, this presents challenges when switching between large- and small-scale diagrams.

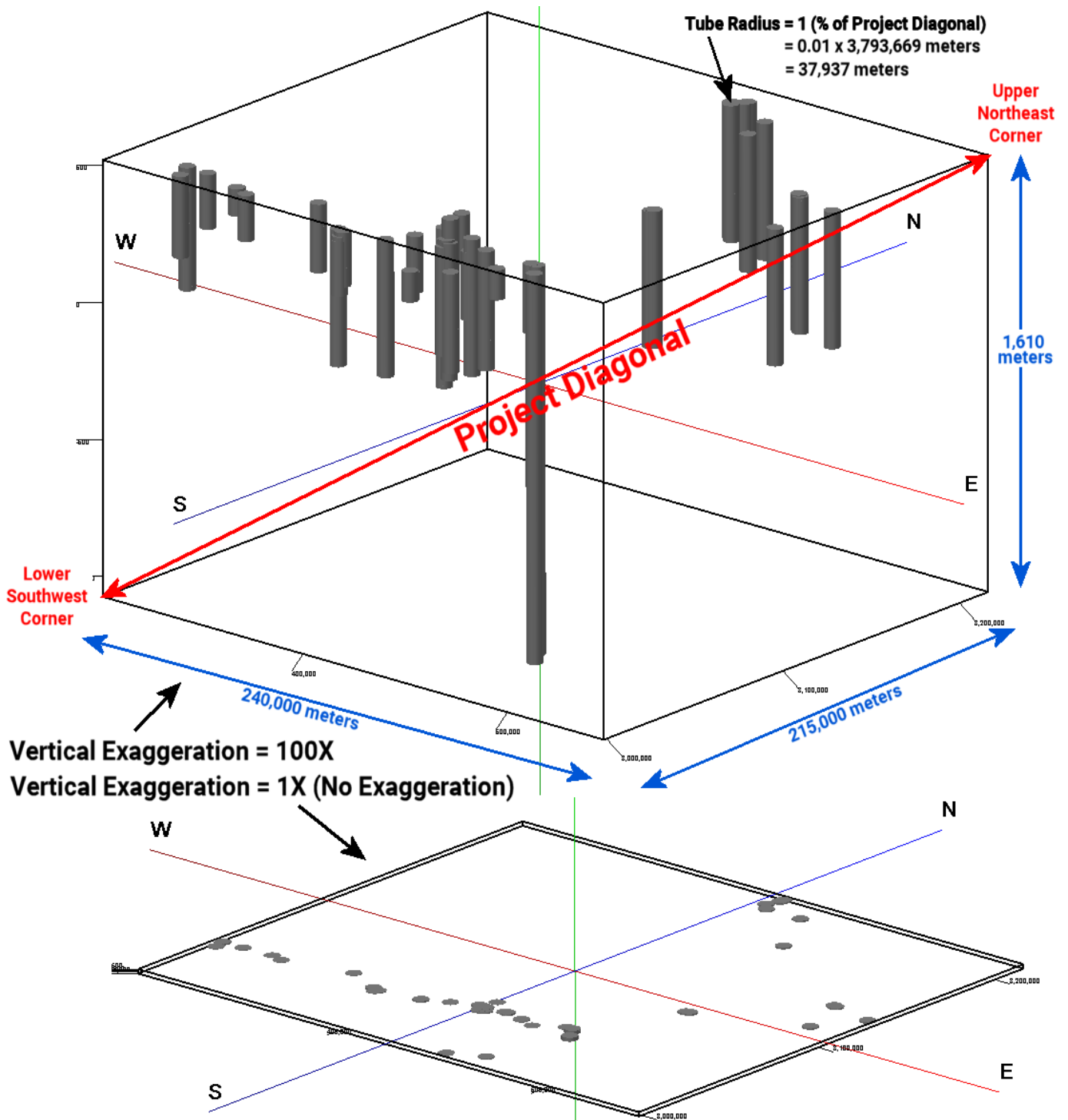


Figure 1

Designing Logs for Cross-Sections

- Consider a cross-section in which the logs are approximately 1,400 meters long while the section is 190,000 meters wide (Figure 2). The challenge with a section such as this is to make the logs wide enough to discriminate features but thin enough to minimize overlap with logs that are close to each other (e.g., less than the log width). The only solution is to experiment with the various log-plotting dimensions and plotting the logs with a suitable vertical exaggeration.

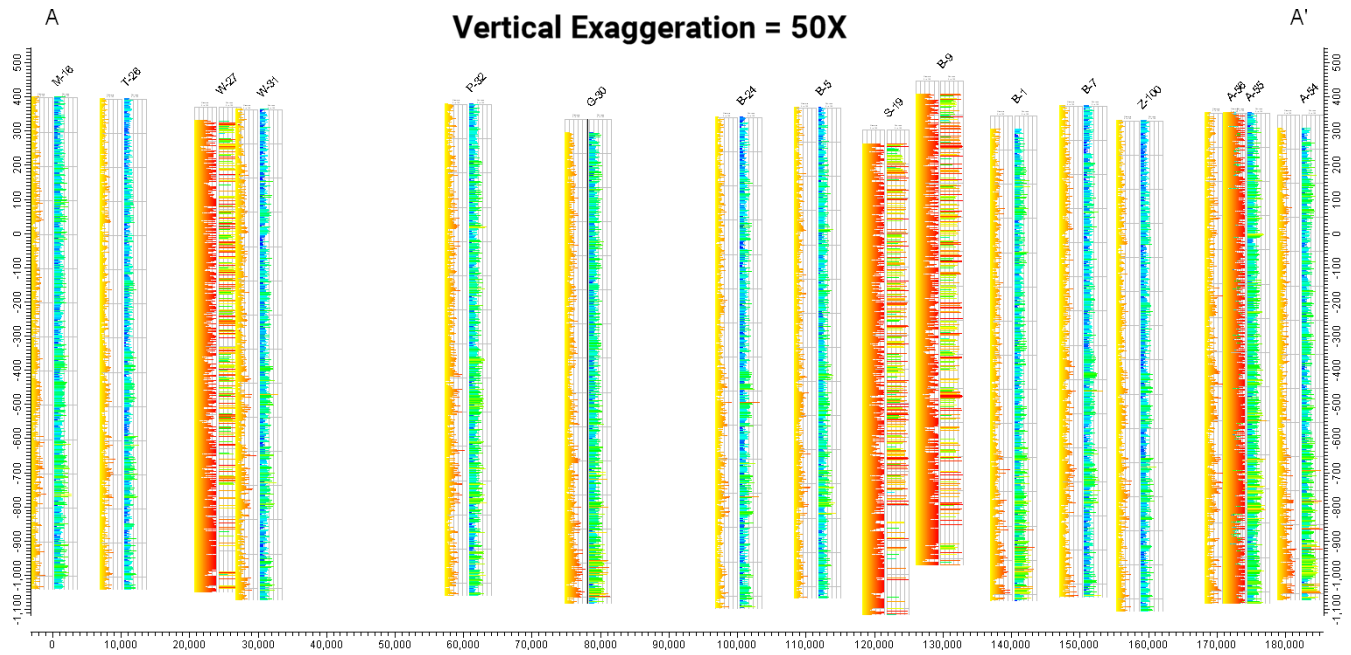


Figure 2

- The settings that are used for cross-section logs that minimize overlap but allow for discrimination of details may, however, not be suitable for plotting individual striplogs (Figure 3). For example, depth bars are redundant within cross-sections and the e-log columns are very thin. Decreasing the vertical exaggeration will “fatten” the diagram so that the e-log columns are wider but there are other considerations such as adding depth bars and lithology which may be otherwise unnecessary or not-desired within cross-sections.

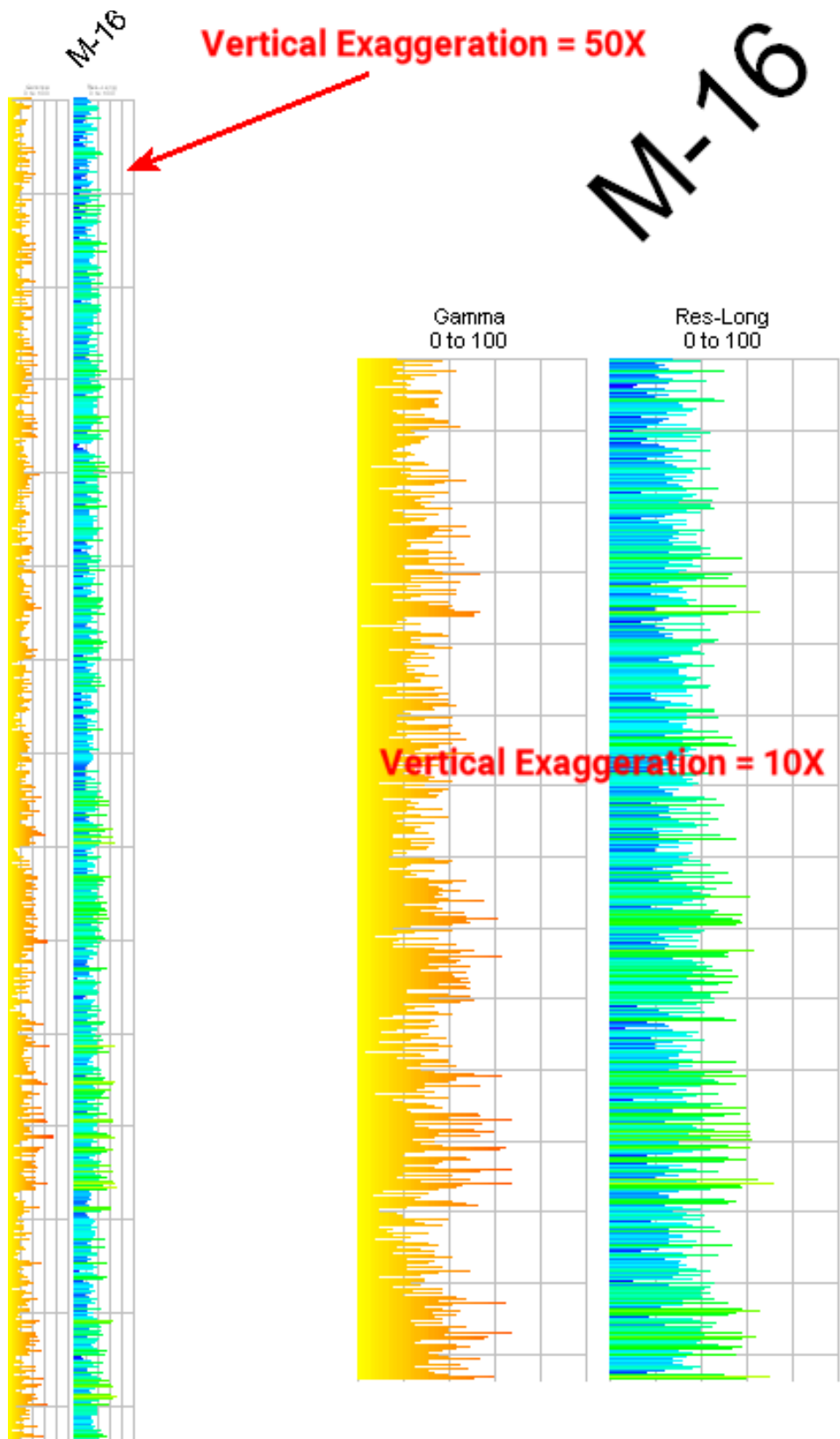


Figure 3

- The solution is to use the *Save Layout* and *Load Layout* options within the *2D Log Design* tab (Figure 4).



Figure 4

For example, the log design for the logs within cross-sections would be saved as “Cross-Section Log Design.Rw2DLogLayout) while the log design for plotting individual logs (Figure 5) for reports, including additional information (e.g., depth bar and lithology), would be saved as “Single Log Design.Rw2DLogLayout (Figure 4).

There are no limitations to the number of Log Layout files.

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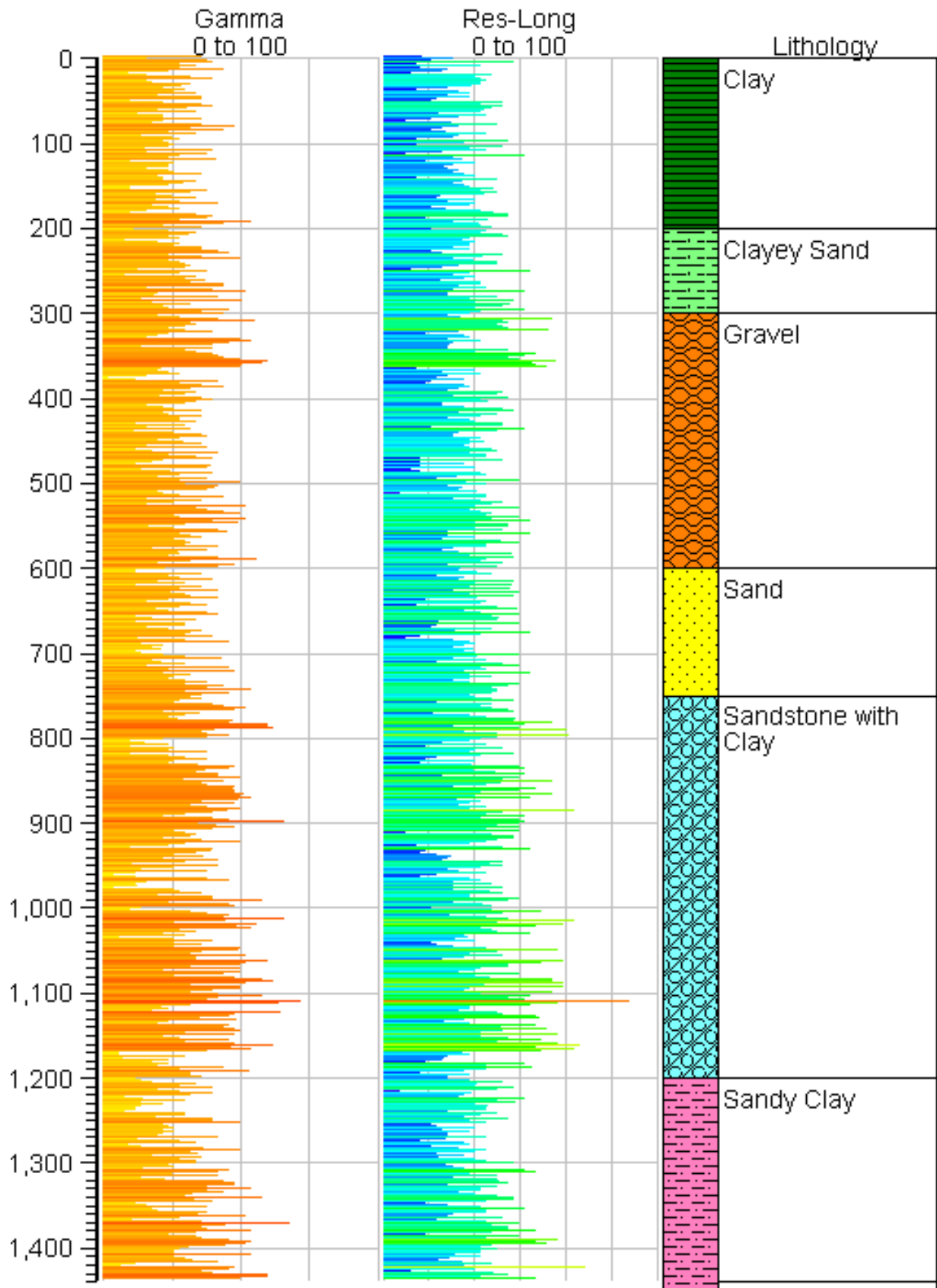


Figure 5

Please note that the data within the preceding examples was randomly generated.