

Improved Flow Modelling through integrated Sequence Stratigraphic Correlations - Lauren CSG Field, Walloon Subgroup, Surat Basin.

Jeff Copley, Mark Reilly, Stephen Tyson, and Suzanne Hurter. Research Title: Seismo-Sequence Stratigraphy: Towards Improved Flow Modelling Through Integrated Sequence Stratigraphic Correlation for the Surat Basin.

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AIMS OF THE STUDY

Seismic surfaces are inherently chronostratigraphic boundaries. Correlation of significant stratigraphic surfaces within the Bowen and Surat Basin stratigraphy has traditionally been undertaken by well to well studies with rarer “postage stamp” seismic verification of these surfaces. This study intends to bring a better understanding of lateral correlation of significant seismic surfaces throughout the Surat Basin integrated with the sequence stratigraphy surfaces.

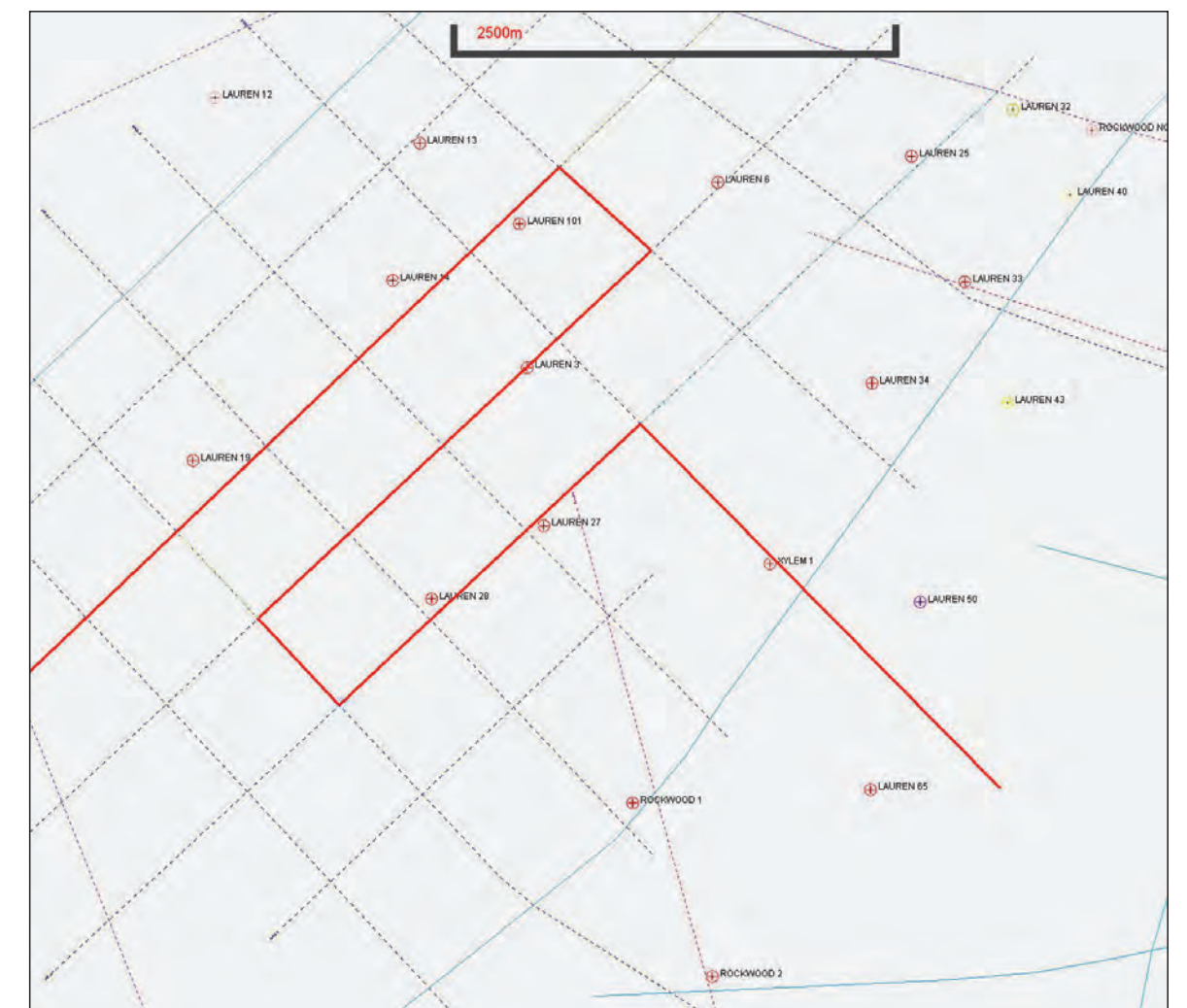
CONCLUSIONS

- Chronostratigraphic or sequence stratigraphic methodologies integrated with seismic data provide the most robust depositional framework.
- The cyclicity within the chronostratigraphic framework will demonstrate the lateral continuity and dis-continuity of depositional settings, i.e. channel, floodplain, coal forming environments.

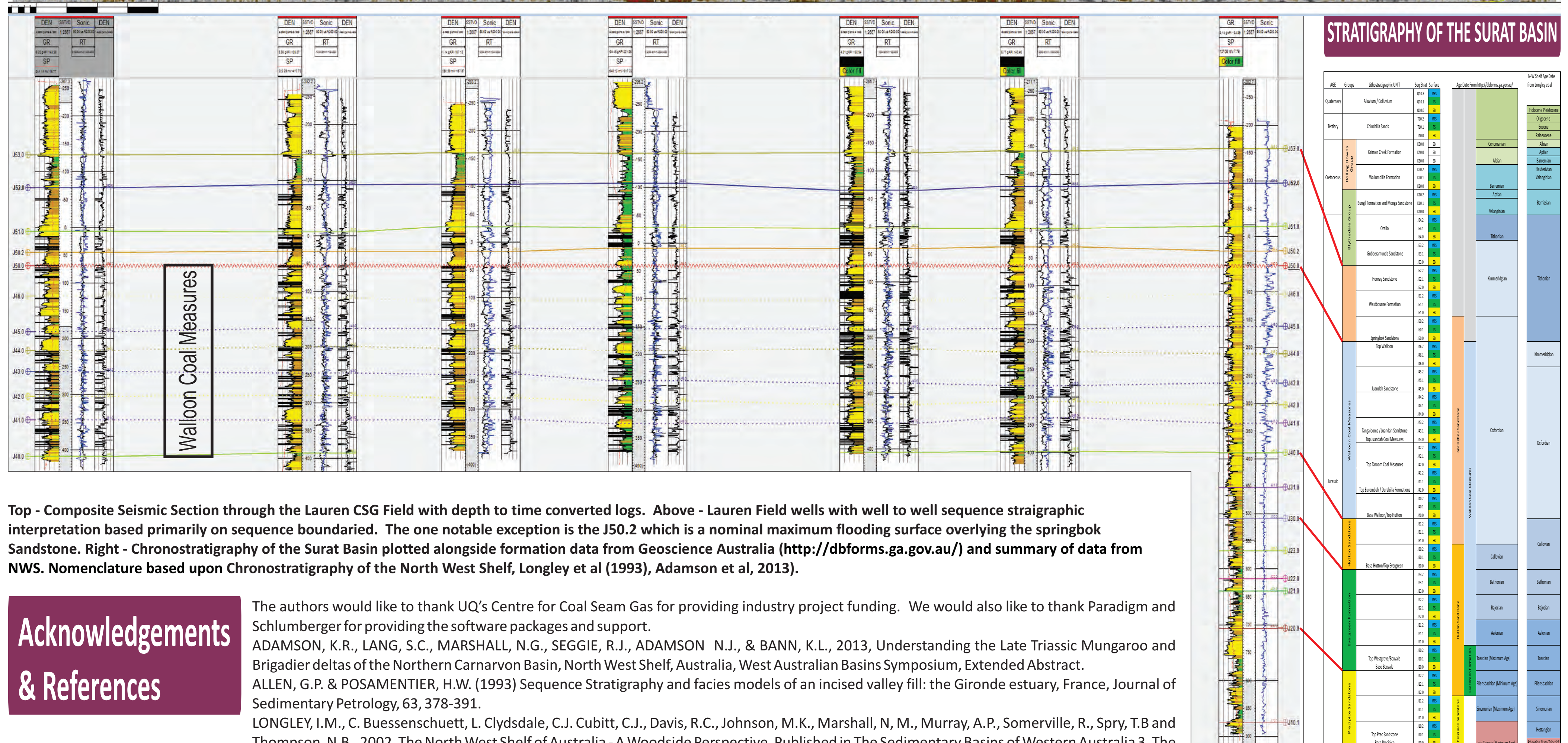
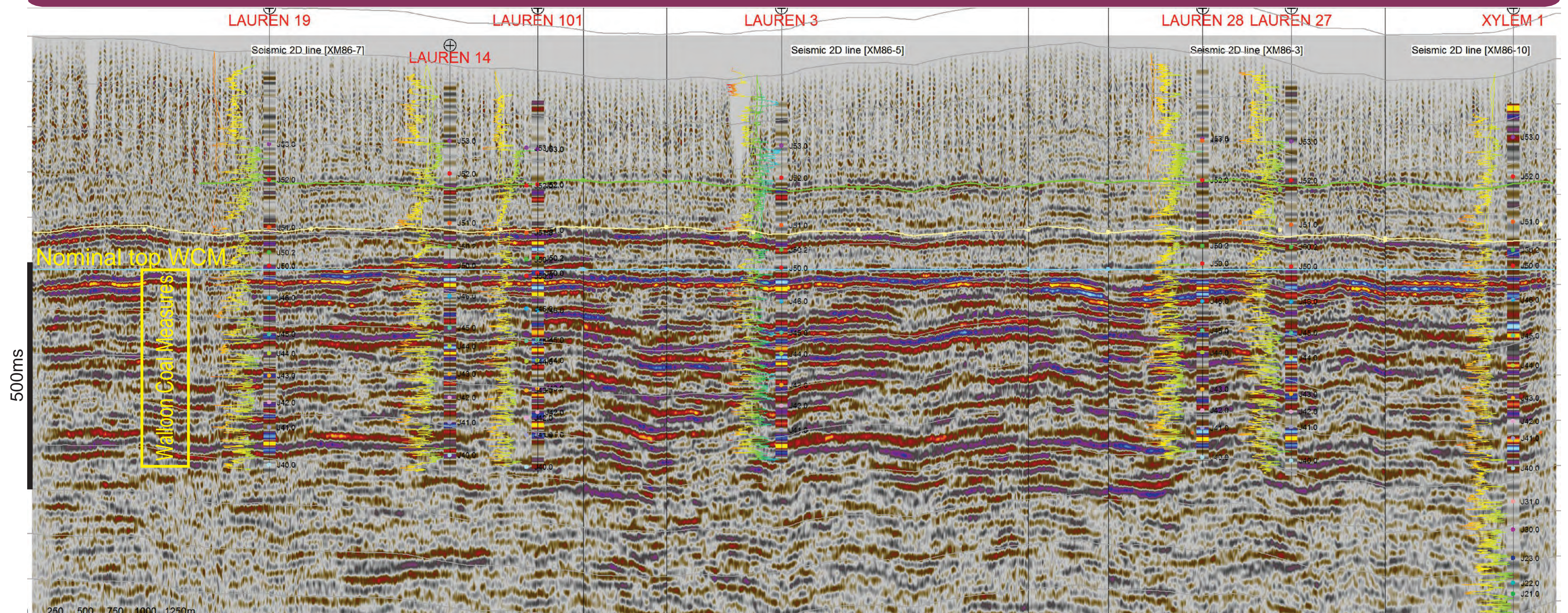
BACKGROUND

The existing geologic framework is based upon arbitrary lithological correlations which are generally not chronostratigraphic boundaries. This study will utilise sequence stratigraphic methods concepts (accepted best practice in basin analysis) together with the substantive seismic data set available throughout the basin. This integrated sequence stratigraphic and seismic method would inherently define both lower and higher order cyclicity basin-wide within the stratigraphy. The sequence stratigraphic methodology and nomenclature is similar to that employed on the North West Shelf (NWS) of Australia (Longley et al, 1993). The NWS study was undertaken to provide a consistency and a common basis between different parties across the area, and it is hoped that ultimately this study will be the catalyst for a similar understanding for the Surat Basin stratigraphy.

LAUREN FIELD SEISMIC LINE MAP



DATA - Composite Seismic Lines and Well-Well Correlation Lines



Acknowledgements & References

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