



# geoconvention

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## Geology Meets the Finance World

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### Summary

When RS Energy Group (RSEG), formerly Ross Smith Energy Group, started in 1998, the focus was on providing equity analysis to institutional investors. The subsurface prior to 2015 was interpreted by engineers and financial analysts using public company presentations, academic papers and, in some cases, outsourcing to third-party geologists. Since then, the in-house geological analyst team grew from a two-person operation to six full-time employees and two contract interns. RSEG's growth amid an industry downturn shows the value of bringing in-depth subsurface analysis to the financial sector. RSEG intends to expand the geology team to enhance our ability to have more technical conversations and technically focused research and to attract more corporate clients.

### Introduction

The industry is shifting towards multivariate and statistical analysis to develop predictive models to maximize production. Geological complexities are often a big driver and input parameter to determine EURs and production. When breaking down a play's economics and acreage viability, models rely heavily on subsurface components. Geological analysis has become a foundational pillar that flows directly into production and well performance analysis.

### Theory and/or Method and/or Examples

RSEG combines geological data with completions, production and economics to create a platform for all further analysis. Our sources include public databases, academic resources and company disclosures. Communication with other industry and academic professionals helps drive our topics and research.

In less delineated areas, understanding how many zones are available to each operator and what formations are being targeted is valuable from a net asset value analysis and M&A perspective. Zone allocation gets better and more accurate as we tighten our well control over our regional map areas. We previously relied on state data and operator disclosures to gain insight into which zones were being targeted, which were often incorrect and vague.

A recent study using multivariate statistical analysis in the DJ Basin indicated several geological parameters have a significant impact on recoveries, including lithology, hydrocarbon pore volume, thickness, etc. Previously, our major input variable was limited to completions data.

### Conclusions

Going forward, we are moving from creating our base basinal framework and shifting away from top picking and data infill to more advanced petrophysics and integrating our work into a 3D geocellular model. As our knowledge base grows, we can determine which subsurface factors provide the greatest impact on well results and focus our analysis on topics that matter.

### Acknowledgements

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