

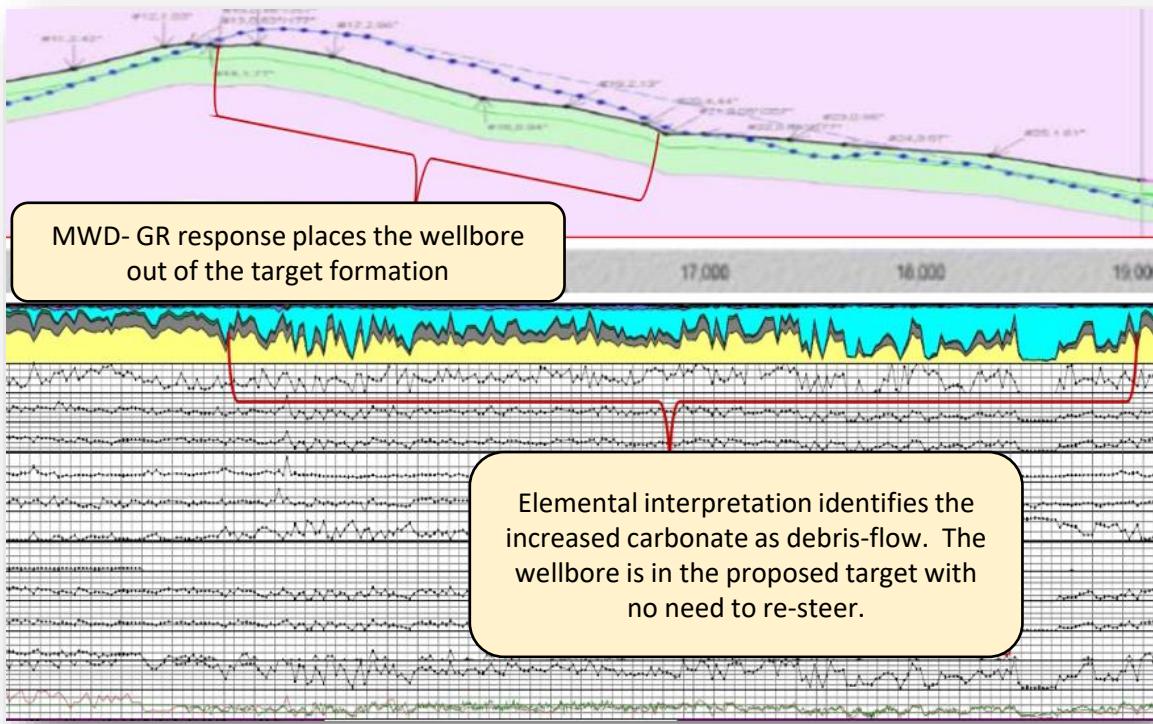


# Enhanced Geopositioning

## Elemental Steering Case History

### Issue Summary

Drilling in the Delaware Basin near the flank of the Central Basin Platform, an operator faced the possibility of having to spend time and resources to re-steer due to the MWD-GR indicating that an increase in the carbonate response had placed the wellbore outside of the target formation. This could have added several days to the project with uncertain results.



### Issue Solution

With DWL delivering its Hybrid Mud Logging service along with the geosteering, our elemental analysis indicated that the carbonate was from debris-flow, presumably into the basin from the platform. With this knowledge we confirmed that the wellbore was in fact still in the target zone and that there was no need to re-steer. Additionally, the elemental information managed to stop a deviation that could have put the wellbore completely out of the target.





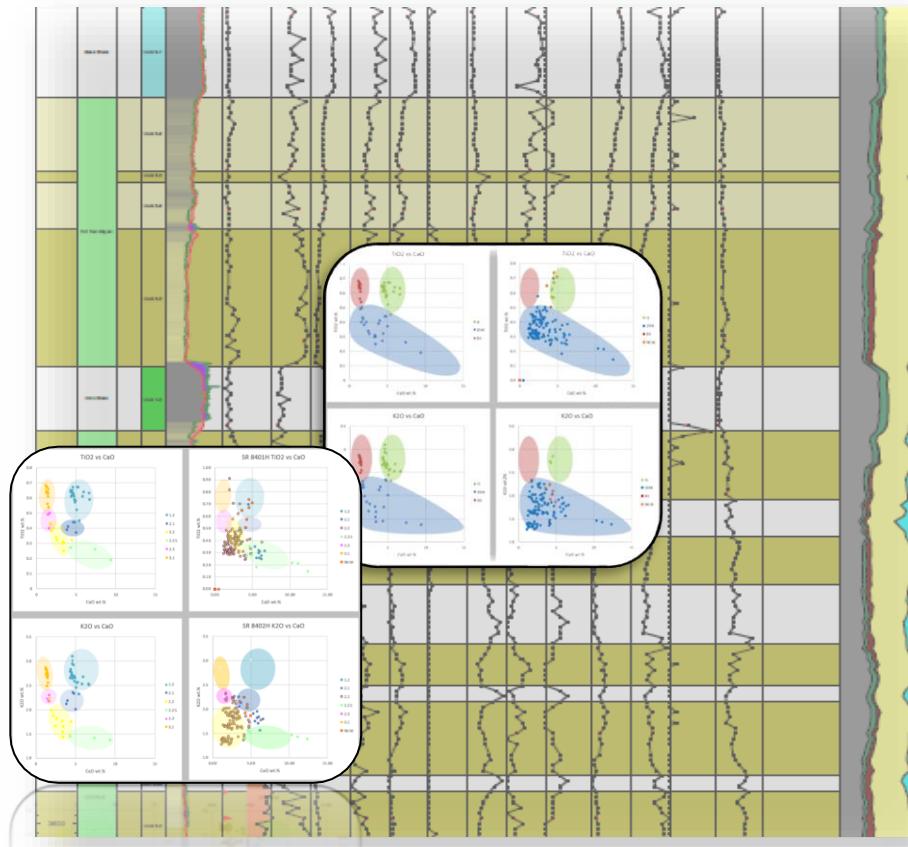
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### Hybrid Mud Logging & Elemental Steering

Greatly increased geocertainty while steering the well is just one benefit of combining realtime elemental cuttings analysis with DWL's geosteering expertise. Other benefits beside the case example already described involve fault identification, TD confirmation, and geostopping.

Using chemostratigraphic techniques to identify type formations, our geosteering team can respond rapidly to changing elemental trends. All done economically in realtime.



Contact DWL for more information

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