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OPTIMIZING RESOURCES

Image Log and Core Analysis: Increasing Interpretation Accuracy with Descriptions in Concert

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Summary

The widespread utilization of image logs in oil sands has led to much success, but improvements can be made in regards to the workflow we utilize to interpret the data. There are typically two entirely separate groups working on interpreting image log data and rock core data. Maxxam Analytic's in-house core logging software, Visual Logger, now allows the user to interpret image logs while describing core and review these interpretations along-side each other.

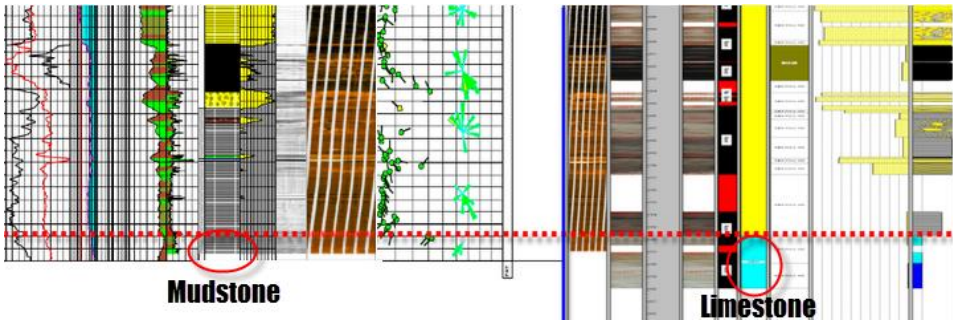
Introduction

In the past, treating image logs and core description data as separate interpretations has led to contradictions and inconsistencies between interpretations that are only revealed when both data sets are viewed side-by-side. Having a tool that enables the user to make these interpretations simultaneously results in higher quality descriptions, faster data delivery times, and less time spent reviewing and rectifying interpretation errors.

Theory and/or Method

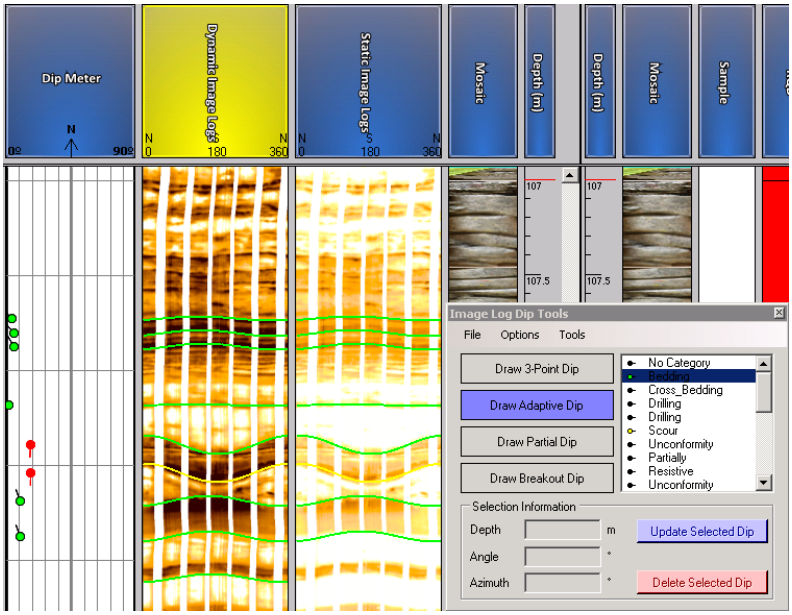
Visual Logger's built-in image log interpretation tool enables the ability to draw sinusoidal dip curves across the image log while also allowing the user to describe the core. While the user generates the sinusoids, the software automatically adds the appropriate tadpoles to the dip table. Dips can also be imported as an LAS file and displayed/reviewed/edited within the software itself.

Examples



In the image on the left, we see an example where an image log facies interpretation has marked an area as being mudstone while the core description has marked it as limestone. If these interpretations had been made simultaneously, an error such as this would not occur.

To the right we can see an example of the dip interpretation tool in Visual Logger. The tool is embedded directly in the software to allow user to view the core images and core description data.



Conclusions

Simultaneous descriptions provide a significant number of cross-checks. This eliminates description inconsistencies and provides more information to the interpreting geologist to make more accurate interpretations. The image log interpretation tool represents yet another form of added value found within Visual Logger.

Acknowledgements

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