The Full Montney: Exposing key geological characteristics of the Montney and bringing them together with spatial analysis to find the sweetest spots

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Summary

Identifying commercially robust sweet-spots in unconventional plays has never been more important. Using the Montney as an example we’ll look at how spatial analysis has been used to quantify resource potential and high grade areas for new venture land acquisition across the play in NE British Columbia.

Resource potential of the play has been characterised using calibrated reservoir characteristics and production performance from key wells, multi-attribute cross-plot analysis, and mapping of the key geological characteristics. Stepping out from individual wellbores we will look at the key characteristics of the producing zones and then map them spatially to identify areas of interpreted common potential or productivity.

The Common ‘Recovery’ Segment Mapping approach takes principals from Common Risk Segment Mapping but applies them in estimating recovery potential, rather than risk, in the pervasive hydrocarbon system. The approach has resulted in an interpretation of Estimated Ultimate Recovery for the Montney zones across the play fairway.

The exceptional open-file database of British Columbia and Alberta provides an excellent example of how Common Recovery Segment Mapping can help characterise and quantify the potential of pervasive unconventional resource plays. The approach can be applied in the evaluation of other pervasive unconventional petroleum systems either in North America or worldwide.
Figure 1 – Example of a Common Recovery Segment Map for the Lower Montney together with input mapping on the interpreted geological drivers for recovery, NE British Columbia.

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