

Chart Toppers 2: Electric Boogaloo

Recent Boomers in the Duvernay, Charlie Lake and Spirit River

Simon Wong

Canadian Discovery Ltd.

Summary

This presentation will be a summary of the top-producing wells drilled in the WCSB in 2023-2024 from three notable formations: the Duvernay, Charlie Lake and Spirit River (figure 1). The best Montney, Cardium and Clearwater/Grand Rapids wells were presented last year.

A detailed geological summary, along with available technical information (including drilling and completion details) will be used to illustrate what sets these top wells apart from their less prolific counterparts.

Duvernay

The highest rate wells in the Duvernay have been found in the over-pressured Simonette and Kaybob South areas of the West Shale Basin. Here, the Duvernay C-Shale is the target reservoir, reaching up to 50m in thickness. Most production comes from the volatile oil and NGL phase windows, with the highest IP90 gas rates exceeding 7 mmcf/day. Kiwetinohk, PetroChina and Whitecap boast the top performing wells in recent years.

Charlie Lake

The top Charlie Lake wells in the play's relatively short horizontal development history hail from Mirage and Wembley in northwestern Alberta (figure 1). Triassic sediments deposited in shallow marine to nearshore environments constitute the target reservoir, which produce light oil and gas (figure 2). Traps are formed by stratigraphic pinch-out, truncation by unconformities, or encasement by evaporites. Tourmaline, Longshore, Tamarack Valley and Archer claim IP90 rates of over 1,000 boepd from their horizontal wells.

Spirit River

The list of top Spirit River producers is dominated by wells from the Wapiti area, where the Falher Member is targeted by operators CNRL and Cenovus. Top gas wells produce over 14 mmcf/day from a sandy interval near the base of zone (figure 3). Top tier wells may have benefitted from a greater number of frac stages.

Figure 1: Duvernay, Charlie Lake and Spirit River IP90 bubble map (boepd)

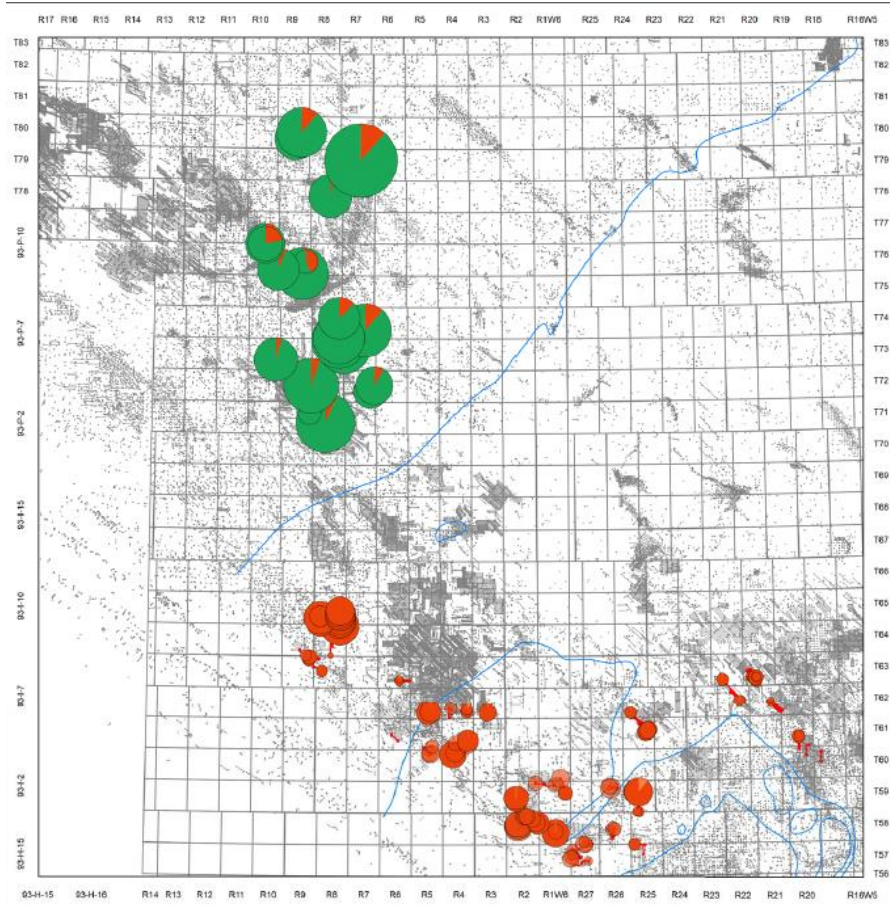


Figure 2: Mirage 6-15-79-7W6 Charlie Lake Log Suite

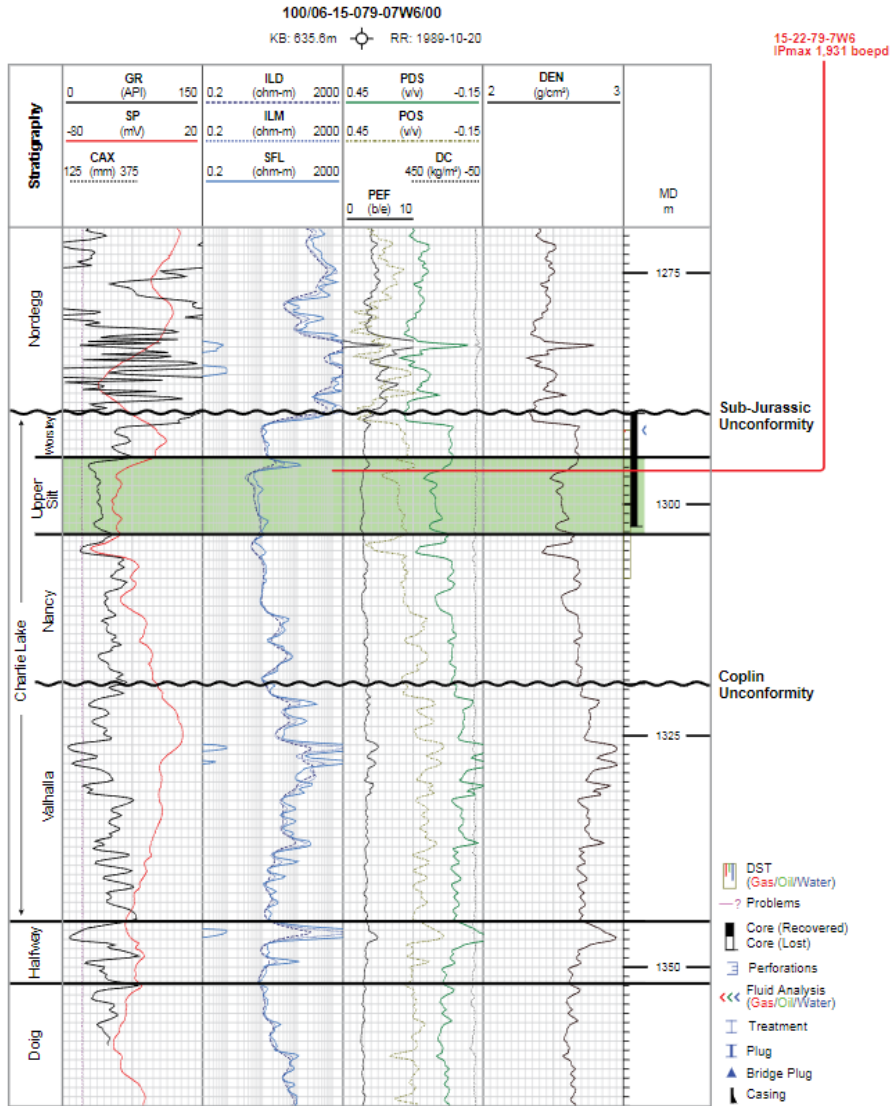


Figure 3: Wapiti 1-26-64-8W6 Spirit River Log Suite

