The Alberta Energy Regulator / Alberta Geological Survey is continuing work to quantify the hydrocarbon resources in shale and dolomite units. This work includes many formattings, members, and units. The initial assessments look at all hydrocarbons initially in place but will eventually include cutoffs to quantify technically recoverable resources.

Recent but as-yet-unannounced assessments include:

- the middle Colorado shale from the top of the Second White Specks Formation in the basin of the Fish River Zone and
- the lower Duvernay Member, which is equivalent to the upper Montney Formation in British Columbia.

Assessments of these units take into account uncertainty at every step and produce estimates of gas, oil, and natural gas liquids in place.

**Why Consider Uncertainty**

To illustrate why uncertainty is important, consider the following:

- The prospective area (Rot-RG) of the Duvernay Formation is about 60,000 km^2.
- The average shale thickness (80-150 m) in the Duvernay is about 110 m.
- Shale thickness and porosity area of the Duvernay = 360 km^2.
- The average bulk density of the Duvernay is about 2.55 g/l.

**Resource Maps**

- The mean isochore is included uncertainty at every step and produce estimates of gas, oil, and natural gas liquids in place.
- The AGS shale assessment project team collected about 10 kg of core samples from the Duvernay.
- Therefore, 10 kg/3.3 T = 0.00030000000394 of the entire Duvernay.