Modernized Royalty Framework: Formulas – C*
For new wells spud on or after January 1, 2017

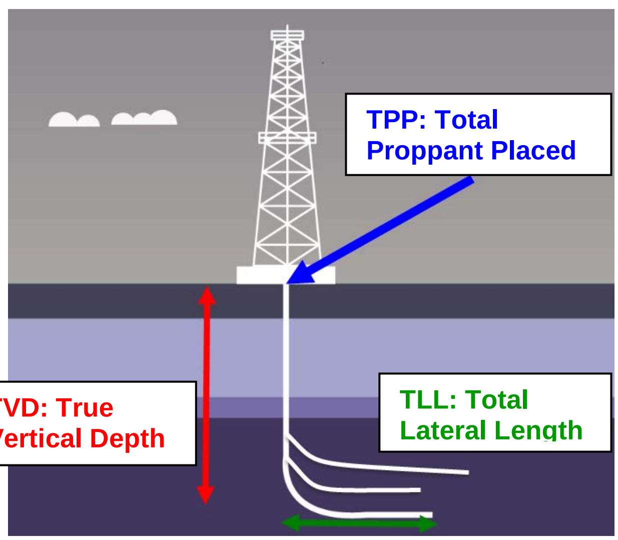
C* is a proxy for a well's drilling and completion costs. For re-entries, please see the re-entered document.
C* is defined by a well's parameters (TVD, TLL, TPP):

For wells with TVD_{MAX} shallower than or equal to 2,000 metres
C* ($) = ACCI*((1,170*($TVD_{MAX}$-249)) + (Y*800*TLL) + (0.6*TVD_{AVG}*TPPe))

For wells with TVD_{MAX} deeper than 2,000 metres
C* ($) = ACCI*((1,170*($TVD_{MAX}$-249)) + (3,120*($TVD_{MAX}$-2,000)) + (Y*800*TLL) + (0.6*TVD_{AVG}*TPPe))

Where: ACCI = Alberta Capital Cost Index
- TVD_{MAX} = The deepest True Vertical Depth (m)
- TVD_{AVG} = The average True Vertical Depth (m) for all legs (non-reported legs included as zero).
- TLL = Total Lateral Length (m)
- TPP = Total Equivalent Proppant Placed (tonnes);
- TMD = Total Measured Depth (m) (i.e. Combined total length for all legs)
- Y = a cost adjustment for multi-leg wells to better reflect actual costs
  - Y = 1 if the ratio of TMD/TVD_{AVG} < 10
  - otherwise Y equals the greater of 0.24 and [1.39 - 0.04*(TMD/TVD_{AVG})]

A well will pay 5% royalty rate until revenue equals C*($).



Notes

- Revenue from the well will be determined by multiplying volumes of the various hydrocarbons by their respective par prices. For conventional oil this is produced volumes and for natural gas and by-products this is allocated volumes.

- MRF will apply to all crude oil and natural gas wells outside the designated oil sands areas. It will also apply to non-project oil sands wells that pay royalties based on crude oil formulas.