

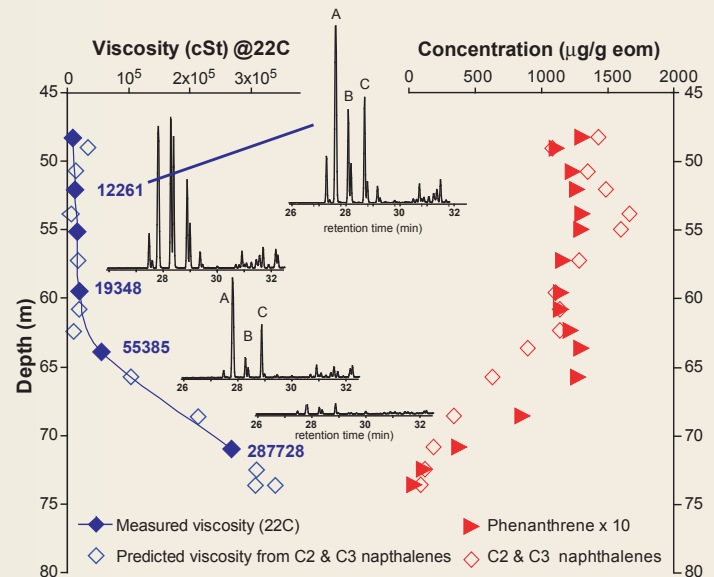
# ProxVisc™

Estimate viscosity from old or public core!

## ProxVisc™

ProxVisc™ utilizes molecular geochemistry to predict bitumen viscosity and/or API gravity from analysis of hydrocarbon concentrations. The method is especially useful for viscosity determination from samples from which bitumen cannot be recovered or do not produce representative in-reservoir oil. For optimal use a data set of chemical measurements and physical property data for a suite of calibration oils related to the test samples are used to provide an appropriate relationship between viscosity and chemical composition.

- **ProxVisc™ effectively estimates viscosity for samples that yield no mechanically extracted oil:**
- Small, low porosity, or low oil saturation samples
- Highly viscous oil, outcrop samples, or cuttings
- Drilling mud contaminated samples
- Old core stored at room or frozen temperatures i.e. volatiles have been lost during storage
- Cuttings which do not yield adequate oil



## Benefits

- Land sales oil quality surveys from public core
- Viscosity from low oil yield cuttings
- Profiling in carbonates and other low oil saturation rocks
- Partially-contaminated cutting samples

### Suitable Samples

Old, thawed core and cutting samples.  
1 g of core or cuttings, or 200 mg of bitumen.

## Typical Results

Analysis of a suite of calibration oils provides a multivariate transform that converts geochemical results to viscosities using multivariate statistics or neural network analysis. In the analysis cycle, core or cuttings samples are analyzed geochemically and the result is converted via the multivariate transform function to a ProxVisc™ viscosity estimate.

## Technical Summary

By analyzing a standard suite of aromatic and saturated hydrocarbons by gas chromatography-mass spectrometry (GC-MS) and correlating against a calibrated viscosity or API gravity data set, we can assess the level of biodegradation and oil quality for samples for which fluid properties cannot be determined conventionally to develop geochemical proxies for viscosity prediction.

## Accuracy

With good calibration data sets, the viscosities obtained from ProxVisc™ can approach within 10% of conventionally measured viscosities. Even without calibration data viscosity estimates are better than order of magnitude in accuracy.

## Gushor Technology Summary

Unit #15, 3535 Research Road NW . Calgary, Alberta . T2L 2K8  
(ph.) 403.210.7594      www.gushor.com      (fax) 403.210.7996