CBL Attenuation and Bond Index arithmetic

Bond index is the ratio of measured attenuation to maximum attenuation.

==== Caclulation parameters: ====

fMxAmp: Maximum expected amplitude; should be the same as the free pipe reference value used in calibration.

Obtained from zoned variable MAXAMPL. If the zero is entered then a value is calculated from the casing O.D.

fMnAmp: Minumum expected amplitue; should be the same as the zero signal used in calibration except for one caveat: Zero is not a valid value, even though it is commonly used for calibration. Suggest using a value of one millivolt for both.

Obtained from zoned variable MINAMPL.

fMnAtt: Minumum attenuation. Attenuation value expected to be measured in free pipe.

Obtained from zoned variable MINATTN. SPE papers suggest a value of 0.8 as an overall average for common casing sizes and weights.

fLogValue: Calibrated log amplitude. (each sample). Transmitter/reciever spacing is assumed to be 3 feet.

==== Outputs: ====

fAtt: Calculated output attenuation.

fBI: Caclulated output Bond Index.

==== Processing for each log sample: (math protection not shown) ====

```
fRatio = fLogValue / fMxAmp;

fAtt = 20.0 / 3.0 * log(fRatio) - fMnAtt;

fRatio = fMnAmp / fMxAmp;

fBI = fAtt / (20.0 / 3.0 * log(fRatio) - fMnAtt);
```