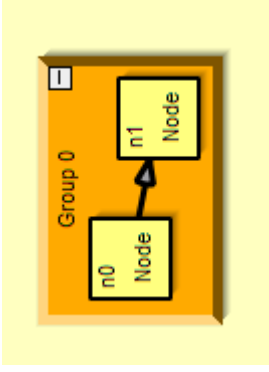


RPM for PowerLog at-a-Glance



Groups

- Ctrl+**G** Add (Define)
- rc+**E** Name
- rc+**L** Color
- rc+**C+O** Calculate
- rc+**R** Delete (Release)

Nodes

- Ctrl+**KeyP(+)** Add
- Ctrl+**F** Find
- rc+**C+N** Calculate
- rc+**D** Delete
- rc+**L** Change Color
- Ctrl+**D**, sel Show Descendants
- Ctrl+**R**, sel Show Ancestors

Workflow

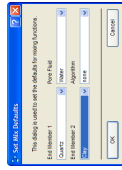
- Ctrl+**P** Print
- F8** Calculate
- Ctrl+**/** Calculation Log
- Ctrl+**V** Node Process Order
- Ctrl+**Z** Undo (last command)
- Ctrl+**Y** Redo (last undo)
- F5** Refresh
- F6** Reconnect
- Ctrl+**E** Erase

RPM Projects

- Ctrl+**N** New
- Ctrl+**O** Open
- Ctrl+**S** Save
- alt+**F+A** Save As
- alt+**F+(1-5)** Recent Project

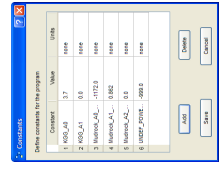
Miscellaneous

- alt+**V+P**, sel Select Path
- rc+**C+P** Calculate Path
- Ctrl+**I** Clear Selection
- sel, rc+**L** Connection Color
- Ctrl+**T** Curve Fitting
- Ctrl+**W** Curve Fit Log

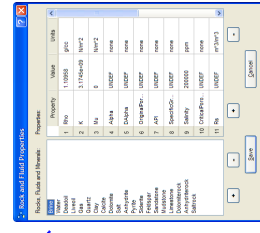


Global Commands

- alt+**E+P** Preferences
- Ctrl+**M** Mix Defaults
- Ctrl+**C** Constants
- Ctrl+**K** Rock & Fluid Properties



Rock & Fluid Properties



Ctrl+**KeyP(-)** Overwrite Messages

alt+**E+W** Set Workspace Size

Ctrl+**L** Curves List

Ctrl+**A** Curve Alias List



Documentation / Help

- F1** User Guide
- alt+**H+R** Functions Help
- alt+**H+F** FAQs
- alt+**H+D+Q** Quick Reference Card
- alt+**H+D+S** Getting Started Guide
- alt+**H+D+R** Function Guide



LEGEND: Ctrl—Control Key alt—Alt Key rc—right click (MB3) mouse sel—click to select ctrl+x—Control and letter key alt+1+2—Alt + other keys KeyP(x)—Numeric keypad key

RPM for PowerLog at-a-Glance

Brine, Gas, Oil

BrineK(P, T, salinity)
 BrineRho(P, T, salinity)
 DeadOilC(P, T, api, vers)
 DeadOilK(P, T, api, vers)
 DeadOilRho(P, T, api, vers)
 GasK(P, T, spec, vers)
 GasRho(P, T, spec, vers)
 LiveOilBPP(P, T, api, R_s, G, P_{BPP}, vers)
 LiveOilC(P, T, api, R_s, G, P_{BPP}, vers)
 LiveOilK(P, T, api, R_s, G, P_{BPP}, vers)
 LiveOilRho(P, T, api, R_s, G, P_{BPP}, vers)
 LiveOilRs(P, T, api, R_s, G, P_{BPP}, vers)

Empirical Velocity

VpEberhardPhillips(P_{Eff}, φ, Vol_{Clay})
 VsEberhardPhillips(P_{Eff}, φ, Vol_{Clay})
 Vp_EP_Modified(Vel_{PEff}, P_{Eff1}, P_{Eff2}, φ₁, φ₂)
 Vs_EP_Modified(Vel_{PEff}, P_{Eff1}, P_{Eff2}, φ₁, φ₂)
 Mudrock(V_p)

Two-phase Media Bounds

K_ModHashinShtrikmanLower(K_f, μ_f, K_s, 1, φ)
 K_ModHashinShtrikmanUpper(K_f, μ_s, K_s, 1, φ)
 G_ModHashinShtrikmanLower(K_f, μ_f, μ_s, 1, φ)
 G_ModHashinShtrikmanUpper(μ_f, K_s, μ_s, 1, φ)
 Reuss2(K₁ or μ₁, K₂ or μ₂, f₂)
 Voigt2(K₁ or μ₁, K₂ or μ₂, f₂)
 VoigtReussHill2(K₁ or μ₁, K₂ or μ₂, f₂)

Three-phase Media Bounds

Reuss3(K₁ or μ₁, K₂ or μ₂, K₃ or μ₃, f₂, f₃)
 Voigt3(K₁ or μ₁, K₂ or μ₂, K₃ or μ₃, f₂, f₃)
 VoigtReussHill3(K₁ or μ₁, K₂ or μ₂, K₃ or μ₃, f₂, f₃)

Gasman Fluid Substitution

Gassmann(K_{bulk}, K_{min}, φ, K_{F_new}, K_{F_old})
 GassmannFull(V_p, V_s, ρ, φ, K_{F_new}, ρ_{F_new}, K_{min}, K_{F_old}, ρ_{F_old})
 GassmannApprox(V_p, ρ, φ, K_{F_new}, ρ_{F_new}, K_{min}, μ_{min}, K_{F_old}, ρ_{F_old})

Mix Velocity Synthesis

MixVelocityRho(φ, vol₂, ρ₁, ρ₂, ρ_F)
 MixVelocityVp(φ, vol₂, K₁, K₂, μ₁, μ₂, ρ₁, ρ₂, α₁, α₂, Δα₁, Δα₂, φ_{Orig_1}, φ_{Crit_1}, φ_{Crit_2}, KGG_A₀, KGG_A₁, K_F, ρ_F, method)
 MixVelocityVs(φ, vol₂, K₁, K₂, μ₁, μ₂, ρ₁, ρ₂, α₁, α₂, Δα₁, Δα₂, φ_{Orig_1}, φ_{Crit_1}, φ_{Crit_2}, KGG_A₀, KGG_A₁, K_F, ρ_F, method)

Velocities for Bounds

HSLowerBound_Vp(φ, vol₂, K_{min}, μ_{min}, ρ_{min}, φ_{max_1}, φ_{max_2}, μ_{φ_max_1}, μ_{φ_max_2}, μ_{φ_max_1}, μ_{φ_max_2}, K_{F_sat}, ρ_{F_sat})
 HSUpperBound_Vp(φ, vol₂, K_{min}, μ_{min}, ρ_{min}, φ_{max_1}, φ_{max_2}, μ_{φ_max_1}, μ_{φ_max_2}, μ_{φ_max_1}, μ_{φ_max_2}, K_{F_sat}, ρ_{F_sat})
 HSLowerBound_Vs(φ, vol₂, K_{min}, μ_{min}, ρ_{min}, φ_{max_1}, φ_{max_2}, μ_{φ_max_1}, μ_{φ_max_2}, μ_{φ_max_1}, μ_{φ_max_2}, K_{F_sat}, ρ_{F_sat})
 HSUpperBound_Vs(φ, vol₂, K_{min}, μ_{min}, ρ_{min}, φ_{max_1}, φ_{max_2}, μ_{φ_max_1}, μ_{φ_max_2}, μ_{φ_max_1}, μ_{φ_max_2}, K_{F_sat}, ρ_{F_sat})

Greenberg-Castagna

GreenCastVptoVsSimple(V_p, GCA₀-min₁, GCA₁-min₁, GCA₂-min₁, GCA₀-min₂, GCA₁-min₂, GCA₂-min₂, vol₂)
 GreenCastVptoVs(V_p, GCA₀-min₁, GCA₁-min₁, GCA₂-min₁, K_F, ρ_F, K_{F_cor}, ρ_{F_cor}, K_{min}, vol₂, K_{min_2}, ρ, φ)
 GreenCastSubVp(V_p, K_{F_new}, ρ_{F_new}, phi, GCA₀-min₁, GCA₁-min₁, GCA₂-min₁, K_F, ρ_F, K_{F_cor}, ρ_{F_cor}, K_{min}, ρ, vol₂, K_{min_2})
 GreenCastSubVs(V_p, K_{F_new}, ρ_{F_new}, phi, GCA₀-min₁, GCA₁-min₁, GCA₂-min₁, K_F, ρ_F, K_{F_cor}, ρ_{F_cor}, K_{min}, ρ, vol₂, K_{min_2})

LEGEND: V_p—compressional velocity Vs—shear velocity ρ—Density φ—Porosity K—bulk modulus μ—shear modulus vol, f—fraction 1—mineral one property
 2—mineral two property F, f—Fluid (old, new-substituted, cor-correlation) method—mixing function algorithm vers—K_{method} F_{sat}—fluid saturation
 T—Temperature P—Pressure Eff—Effective api—oil density G—gas specific gravity P_{BPP}—Bubble point pressure R_s—Gas-oil ratio
 α—pore aspect ratio Δα—pore aspect variation with porosity φ_{orig}—original porosity φ_{crit}—critical porosity φ_{max_n}—maximum (critical) porosity of mineral n
 Δt_p—compressional sonic Δt_s—shear sonic min—mineral grains s—solid phase K_n or μ_n—Bulk or shear modulus phase n
 coefficients --> KGG A_n—Kief-Gurevich-Goldberg n GCA_n-min_m—Greenberg-Castagna n, mineral m GardA, GardB—Gardner
 blue - mandatory no default for parameter red—mixing function dependent parameter ~~strike-through~~—Untested parameter

Gardner's Functions

GardnerRhoS(ρ, GardA, GardB)
 GardnerRhoV(ρ, GardA, GardB)
 GardnerStoRho(Δt_p, GardA, GardB)
 GardnerVtoRho(V_p, GardA, GardB)

Simple Modulus

KFromVel(V_p, V_s, ρ)
 LambdaFromMod(K, μ)
 LambdaFromVel(V_p, V_s, ρ)
 MuFromVel(V_s, ρ)
 Poisson(V_p, V_s)