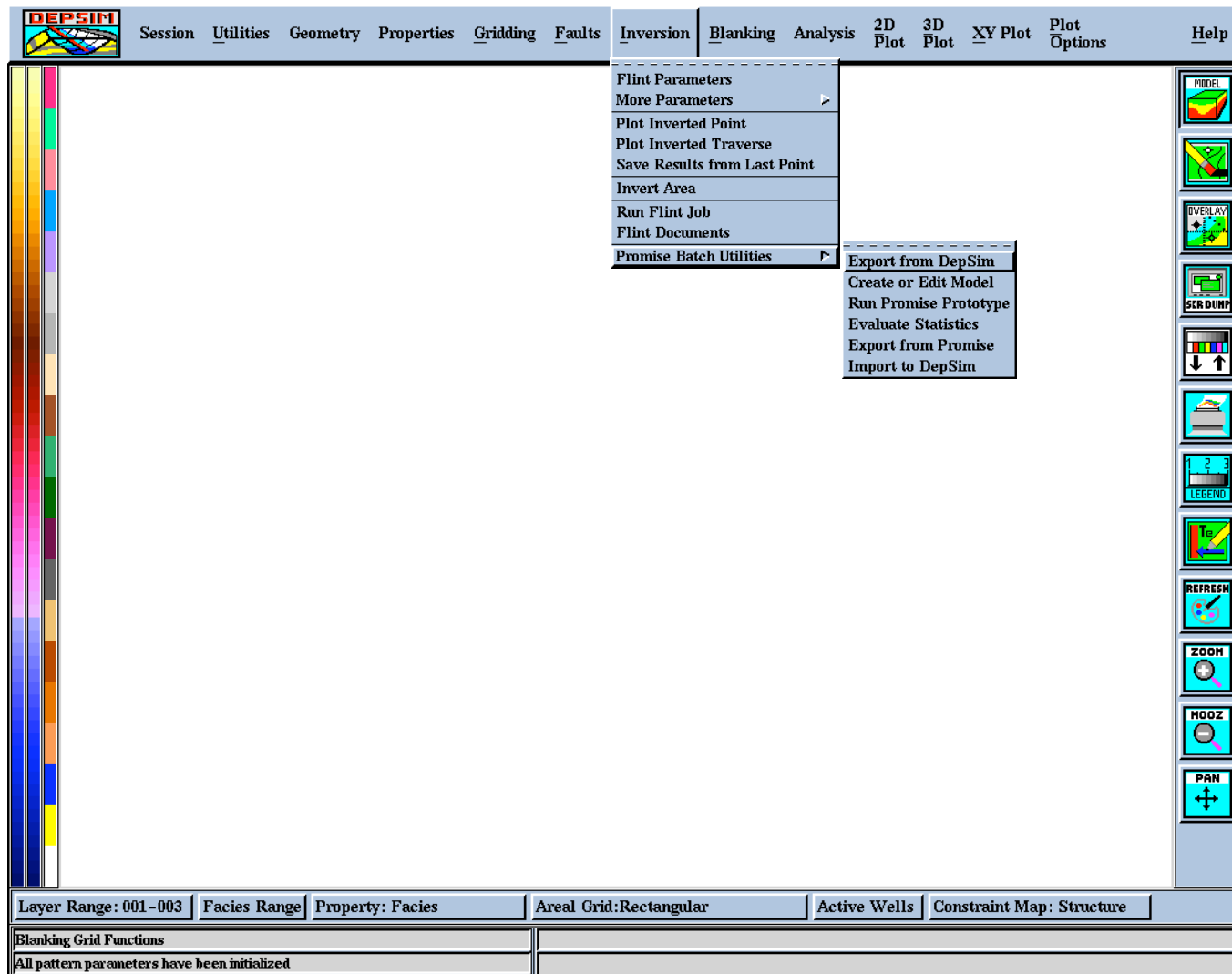




DepSim PROMISE class

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Shell E&P Technology Co.

DepSim /PROMISE integration



D2P menus



main_popup

DEPSIM to PROMISE

DEPSIM Jaap grid file name:

depsim.jgrd

PROMISE model file name:

model.mod

read/create PROMISE model

edit PROMISE model

write PROMISE model

Reset

EXIT

layerEdit_popup

Edit PROMISE model

Wavelet file name:

wavelet.wav

Wavelet error (dB): 0.5

Layer: 003: laminated sand

Litho: 012: SDDI_lam_sand

Fluid: 004: LIPOS_fluid

Error in thickness: 100.0

Horizon time: ☒ constrained ☐ free

Error in horizon time: 100.0

DONE

EDIT LAYER

SDDI_lam_sand menu



litho_popup

Edit lithology

001: Upper_Shale
012: SDDI_lam_sand

Statistical parameters:		Fixed parameters:	
depth_avg	9000.0	vp_mud_zero	6162.0
depth_devia	50.0	vp_mud_slope	0.2828
ntg_avg **** FROM DEPSIM ****	0.5	vp_mud_devia	536.0
ntg_devia	0.2	vs_mud_zero	-3373.0
vp_sand_zero	4988.0	vs_mud_slope	0.801
vp_sand_slope	0.3572	vs_mud_devia	206.0
vp_sand_devia	457.0	density_mud_factor	0.0977
vs_sand_zero	-3996.0	density_mud_exp	0.3467
vs_sand_slope	0.894	density_mud_devia	0.041
vs_sand_devia	226.0		
porosity_zero	0.579		
porosity_slope	-3e-05		
porosity_devia	0.0137		
density_grain		2.65	
vp_grain		19830.0	
vs_grain		13740.0	
density_ref_fluid		1.0	
vp_ref_fluid		5000.0	

COPY PASTE

Ok Reset Cancel

LIPOS_fluid menu



fluid_popup

Edit fluid

003: laminated sand
004: LIPOS_fluid

Statistical parameters:		Fixed parameters:	
oil_prior	▼ 0.09 ▲	oil_density	▼ 0.7 ▲
gas_prior **** FROM DEPSIM ****	▼ 0.03 ▲	brine_density	▼ 0.95 ▲
residual_oil_prior	▼ 0.03 ▲	gas_density	▼ 0.3 ▲
residual_gas_prior	▼ 0.01 ▲	oil_vp	▼ 4000.0 ▲
lowsat_gas_prior	▼ 0.02 ▲	brine_vp	▼ 5000.0 ▲
		gas_vp	▼ 3000.0 ▲
		oil_fraction	▼ 0.85 ▲
		gas_fraction	▼ 0.85 ▲
		residual_oil_fraction	▼ 0.15 ▲
		residual_gas_fraction	▼ 0.15 ▲
		lowsat_gas_fraction	▼ 0.05 ▲

COPY PASTE

Ok Reset Cancel

PROMISE, EVALUATE and P2D menus



main_popup

PROMISE

Input PROMISE parameter deck:

model.deck

Ok Reset EXIT

main_popup

EVALUATE

Input PROMISE diag file:

model.diag

Input statistic requisition file:

model.prg

Output PROMISE eval file:

model.eval

Ok Reset EXIT

main_popup

PROMISE to DEPSIM

Input PROMISE model file:

model.mod

Input PROMISE eval file:

model.eval

Input DEPSIM Jaap grid file:

depsim.jgrd

Output PROMISE Jaap grid file:

promise.jgrd

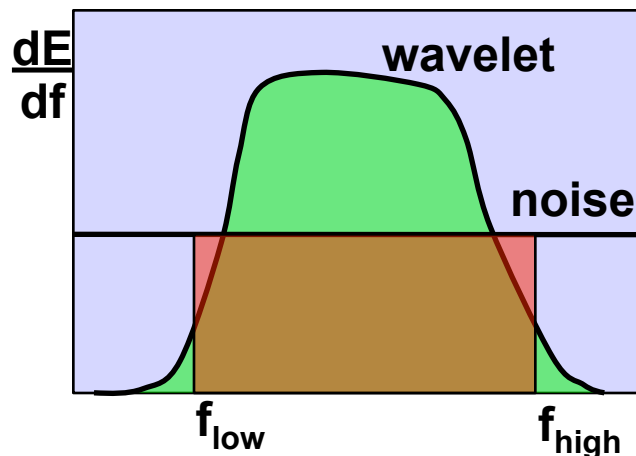
Output non-layer quantities: yes

Ok Apply Reset EXIT

White noise specification



- **seismic wavelet**
- **bandwidth of information content of seismic wavelet**
 - f_{low} and f_{high} (Hz)
- **average reflection coefficient**
- **SNR (dB)**
 - parameter to vary (others set initial scale, use 10 dB)

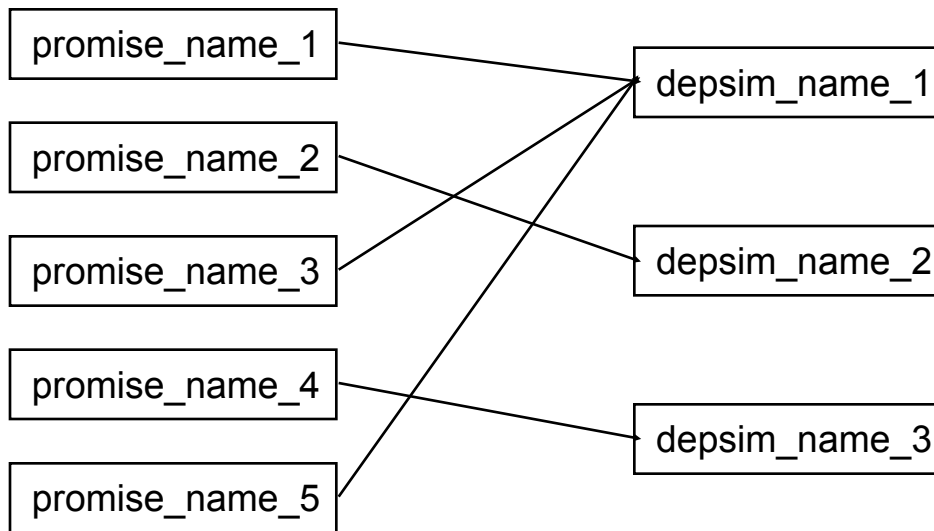


SNR = green / red

PROMISE to DepSim translator



- **finds DepSim equivalent of PROMISE parameters**
 - import to PROMISE
 - export from PROMISE
- **uses ASCII file dictionary (depsim_promise_dictionary)**
- **default is no translation**



Error output

