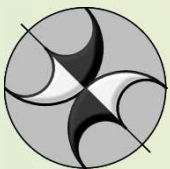


QC of Velocity Model –example-

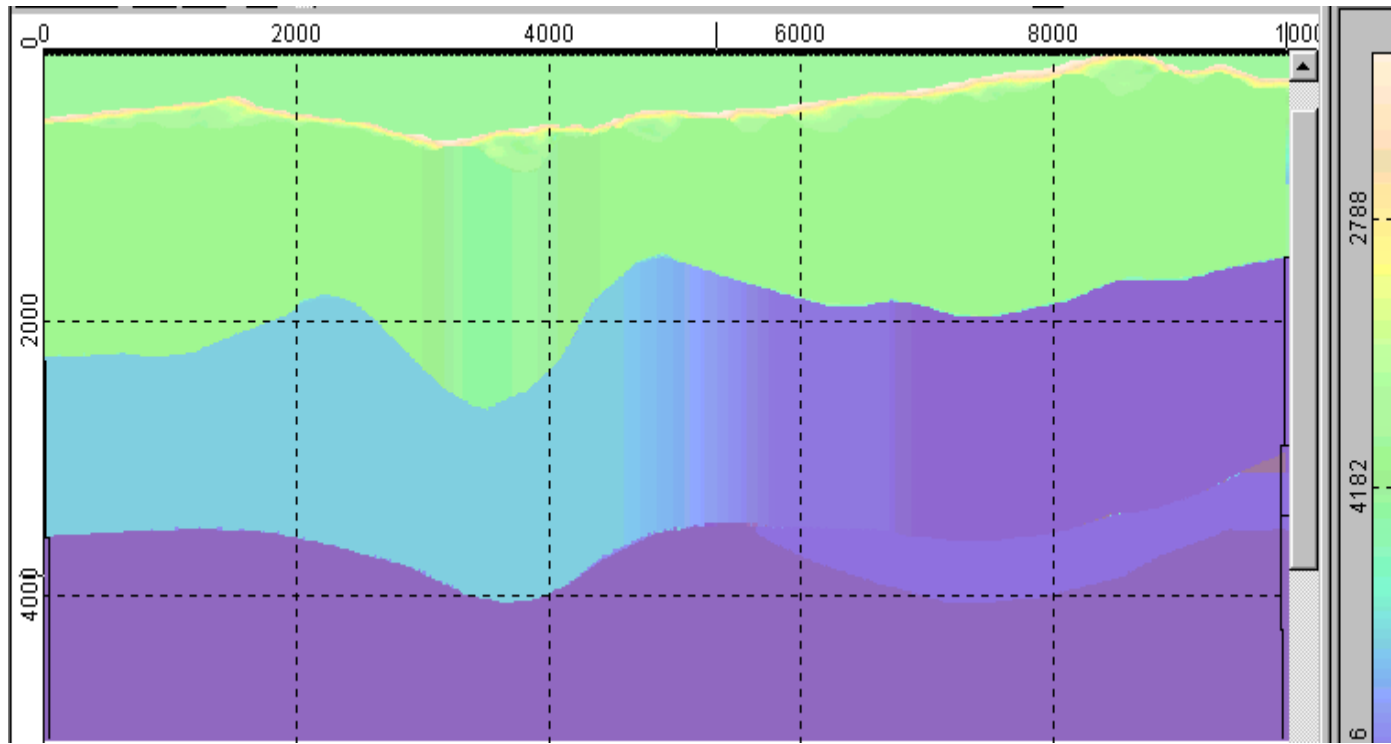
Depth migration requires velocity model. Formation of velocity model is an essential part of any migration and implies considerable processing expenses. From quality of velocity model basically depends effectiveness of migration procedure. Question of velocity model QC is quite substantial at estimation of reliability of migration results.

Proposed is following technology of velocity model quality control:

- Velocity model in SEG-Y format is input into Tesseral 2-D package.
- Using real survey geometry are generated synthetic shotgathers.
- Using synthetic shotgathers pre-stack (time or depth) migration (Tesseral 2-D or other processing package) is done.
- Using real seismic data pre-stack (time or depth) migration (Tesseral 2-D or already existing) is done.
- Result of pre-stack migration by synthetic data is compared with real migration cross-section.
- If synthetic cross-section is close to one built by real data, than, because velocity model was formed by real data, it should be estimated as of good quality. In case of considerable inconsistency of compared cross-sections – quality of model should be estimated as inadequate.



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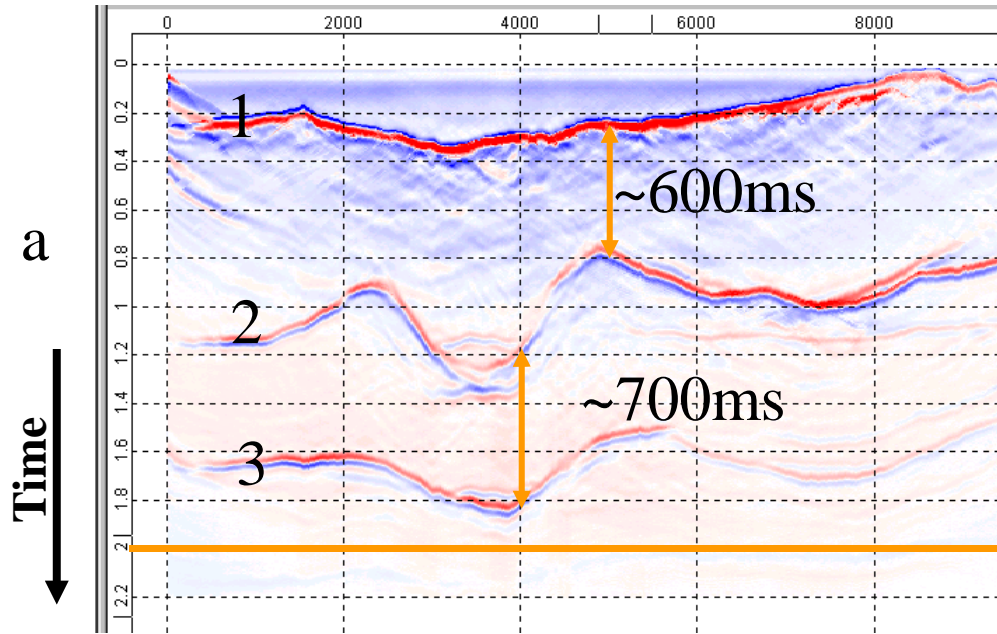


Model built and used by
processor for real data PSDM

Tesseral 2D PSDM

Synthetic data PSDM time cross-section

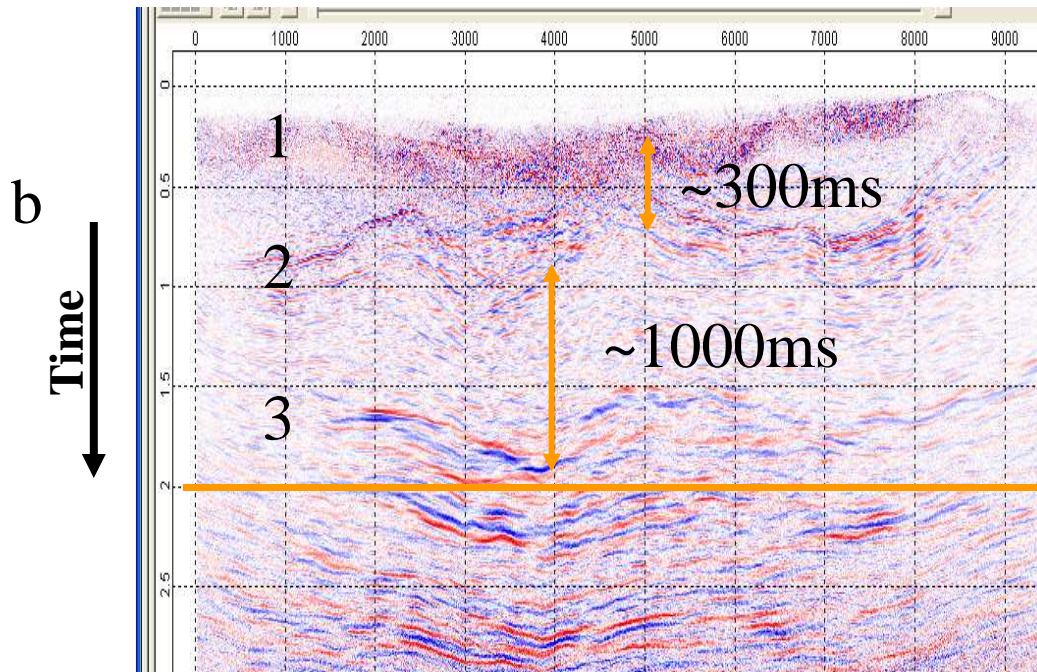
- in full correspondence with supplied velocity model



2000ms

Real data PSDM time cross-section

- considerable differences with supplied velocity model



2000ms