Complex depth model ?   Use RTM update !

Kirchhoff (ray-based)
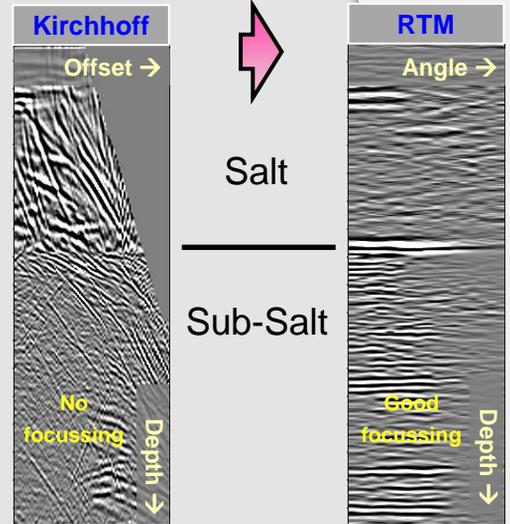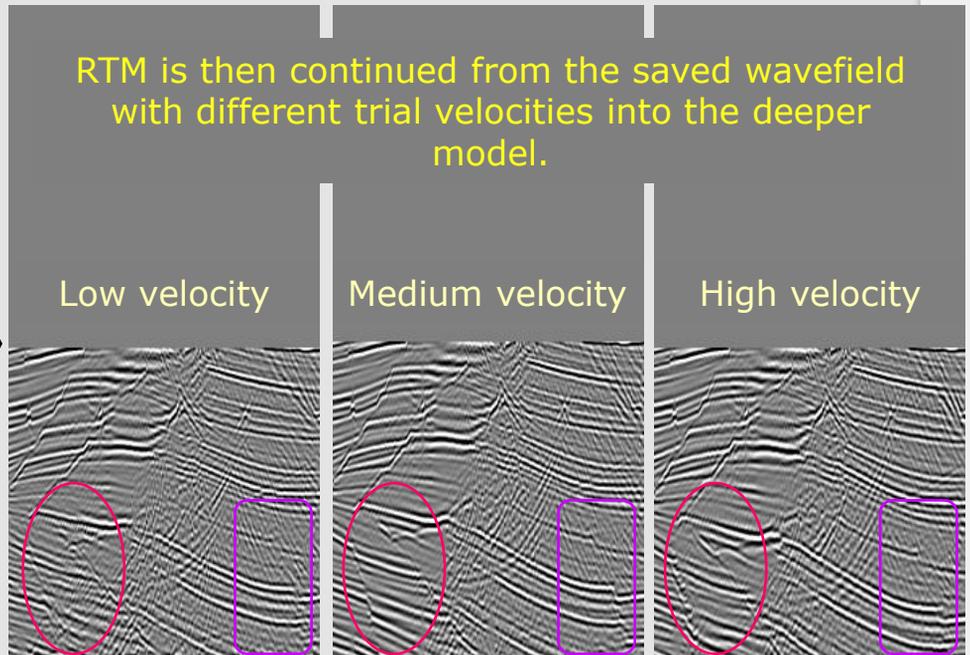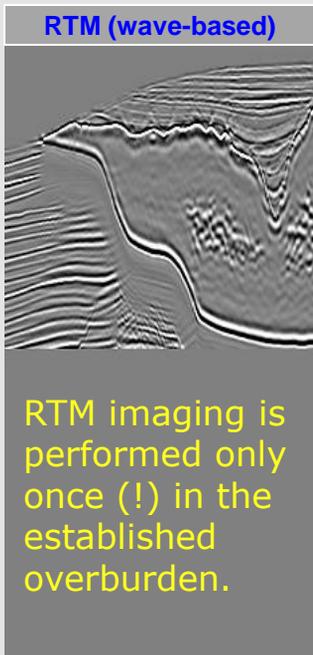
CMP →
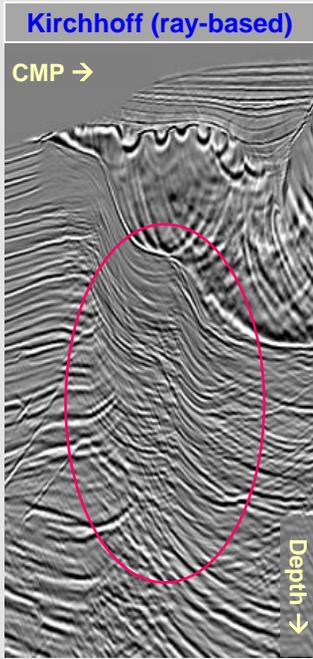
Depth →

How to update a depth model in complex geology, e.g. sub-salt where ray-based imaging fails?

Common-Reflection-Point (CRP) gathers from wave-based RTM well reveal model accuracy where raybased Kirchhoff CRP gathers fail (left).

We offer a fast automatic update workflow based on RTM CRP gathers & image

Kirchhoff

Offset →

Salt

Sub-Salt

No focussing

Depth →

RTM

Angle →

Good focussing

Depth →

Fast top-down model building using **RTM layer stripping**:

RTM (wave-based)

RTM imaging is performed only once (!) in the established overburden.

RTM is then continued from the saved wavefield with different trial velocities into the deeper model.

Low velocity

Medium velocity

High velocity

In the RTM trial zone, the best structural focussing and CRP gather flatness is picked at selected locations and at the corresponding trial velocities.
These locally accepted trial velocities are evaluated by a velocity update algorithm.

TEEC *Geophysics*

Burgwedeler Str. 89, 30916 Isernhagen, Germany +49 (0)511 7240452   www.teec.de