

Reflection seismic 1 script

Educational Material

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Post processing

Elimination of effects by

Filtering

Stacking

Migration

Adjust amplitudes for plotting

Improve coherency of reflections

Frequently used operations

- Time dependent frequency filter
- Coherence filter
- AGC

Time dependent frequency filter

Reason for filtering after stacking:

- By using different filters, additional noise is generated
- Frequency content of data is changed due to different processing steps (NMO stretching)
- Time dependent frequency filter is often not used before the stacking procedure

Coherency filter

Aim:

Suppression of noise

Elimination of artefacts (extreme dips)

Improve amplitudes and continuity of reflections

Filters:

fk-Filter

fx-deconvolution (Wiener-Levingson-Filter)

Korhunen-Loeve-Filter (Eigenvector-Filter)

Adjustment of amplitudes

Amplify reflections

=> Depending on aim of interpretation:

Clear Structures

Preserve Reflection characteristics

Adapt amplitudes for Printing

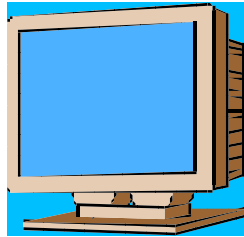
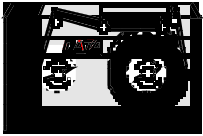
Usually: AGC

Archiving data

Stacking / Migration



Digital Storage

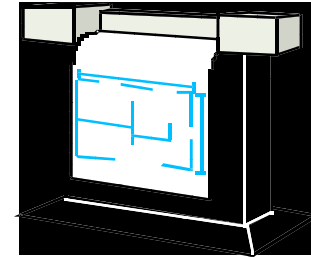


(e.g. SEG-Y-Format)

Archive

**Visualisation and
Interpretation with
a workstation**

Printing on Paper



Safe archive

Interpretation

**Improved view for
long profiles**

A paper print

Data

Sidelabel

**extra information:
("Header plots")**

Velocity funktion

Fold

Point of intersection with other profiles

Location of borehole loggings

Topography

Shotnumber (additive to CMP)

etc.

<u>Operator</u>		Company logos
Acquisition contractor	Processing contractor	
Line no.		Line identifier
SP's		Line SP range
4200%, DAS, DBS, TVF		Key processing stages
W ←		Shooting direction
Generalized index map	Generalised location map	Index map — shows survey area relative to other significant features
Shot by Date		
Processed by Date		
Contract no.		
<u>Recording data</u>		Lists recording parameters
		Diagrammatic representation of shooting and recording arrangement. Shows location of SP as marked on section
<u>Processing sequence</u>		List processing sequence in correct order
Display parameters		Includes statement of section polarity
Legend		Symbols use for section annotation
Section scales		Horizontal and vertical scales

(maximum 19 cm width—to allow for folding to A4)