

SEISMOGRAPH SERVICE

A Raytheon Company

STANDARD SEISMIC SCALE DISPLAYS

DISPLAY VB2 Downgoing Wavefield

This display enables identification of residual multiples in the surface seismic data.

The data shown in Display VA is shifted so that the direct arrivals are aligned in time. A spatial filter is applied to remove random noise and crossing wavefields.

The data is filtered to match the bandwidth of the surface seismic data in the zone of interest.

The data is presented at the scale(s) of the seismic data and at both polarities.

Comparison of the downgoing wavefield with a reflection occurring at the same depth on the seismic section at the well, will reveal any residual multiple activity on the seismic section associated with that particular reflector. For this exercise, the observed polarity of the reflection on the seismic section should be matched with the same polarity first arrival on the VSP downgoing wavefield; white trough matched to white trough or black peak to black peak.

The downgoing wavefield can also be correlated with the upgoing wavefields in Displays VC and VD to establish the presence and origin of multiples within the VSP data.

DISPLAY VG1 Interpreter's Composite (maximum bandwidth)

These displays are designed for use in interpretation and are therefore presented at seismic scale(s) and at both polarities.

All data is filtered using the "maximum bandwidth" filter.

The displays contain:

Enhanced, deconvolved upgoing wavefield,
Transposed, deconvolved upgoing wavefield (see explanation)