



GEO·X

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5D INTERPOLATION

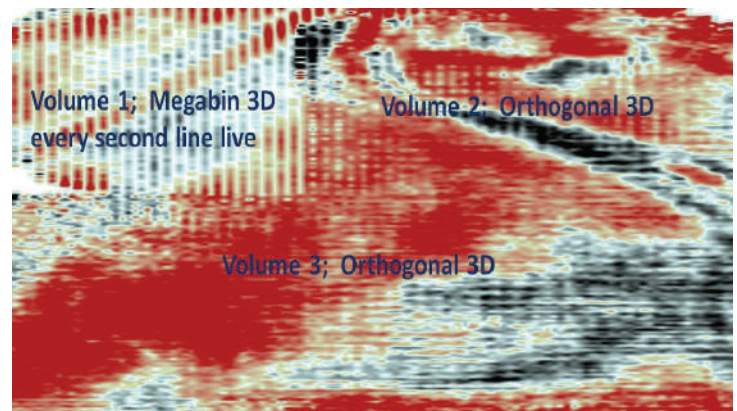
ARBITRARILY SAMPLED FOURIER TRANSFORM (ASFT)

Geo-X's world leading proprietary 5D interpolation is ASFT (Arbitrarily Sampled Fourier Transform), which regularizes seismic data to satisfy the requirements of processing algorithms, such as PSDM. It works in the corresponding frequency/wave number domains of inline, x-line, offset, azimuth and time, or inline, x-line, offset_x, offset_y and time.

ASFT algorithm attempts to reconstruct the wave field at the locations where seismic data was not recorded by solving Fourier coefficients in wave number domain. Unlike other methods, ASFT does not snap the input traces into the bin centres of a regular grid and does not restrict the wave numbers in a grid system. Therefore, it doesn't smear the geological structure, and does not alter the pre-existing AVO trends in the data.

The advantage of doing interpolation in CMP (inline/xline) domain, not in shot/receiver domain, is that it allows Geo-X to localize the interpolation operator to preserve rapid changes of geological structures. It also helps to preserve small scale lithology anomalies.

BEFORE 5D INTERPOLATION



AFTER 5D INTERPOLATION

