

ABSTRACT

DEVICE AND METHOD FOR DEGHOSTING

VARIABLE DEPTH STREAMER DATA

Computing device, computer instructions and method for deghosting seismic data related to a subsurface of a body of water. The method may include receiving input seismic data recorded by seismic receivers that located at different depths (z_r), generating migration data (du) and mirror migration data (dd) from the input seismic data, deriving a ghost free model (m) based on simultaneously using the migration data (du) and mirror migration data (dd), generating primary (p) and ghost (g) datasets based on the ghost free model (m), simultaneously adaptively subtracting the primary (p) and ghost (g) datasets from the migration data (du) to provide adapted primary (p'^1 and p'^2) and adapted residual (r'^1 and r'^2) datasets and generating a final image (f) of the subsurface based on the adapted primary (p'^1 and p'^2) and the adapted residual (r'^1 and r'^2) datasets.

Fig. 4