

ABSTRACT OF THE DISCLOSURE

GEOPHYSICAL INVERSION USING SPARSE MODELING

Methods of geophysical modeling and inversion are disclosed. A sparse domain is defined for a geophysical model, over which a sparse model result is computed. A full model result is then resolved by interpolation over the sparse domain. The full model result may be used as the forward modeling result in a geophysical inversion process. Reconstruction error, or model error, or both may be used to adjust the sparse domain, the model, or the geophysical basis of the model.

FIG. 4