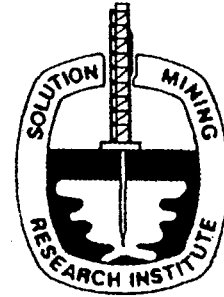


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**MEETING
PAPER**



**Application of Seismic
Transmission Method to Projecting
Localization of Gas Storage
Caverns in Salt Domes.**

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ABSTRACT

In the paper the algorithm and computer program for salt dome shape interpretation has been presented. To define dome shape the method of transmission between surface and salt well is used. The proposed method is based on ray tracing and takes into account refraction of seismic rays on the intermediate boundaries in the dome overburden as well as the velocity gradient in dome's surroundings. The program makes it possible to choose one of three variants of interpretation: the variant with constant velocity in overburden, the variant with constant velocities in layered overburden, the variant with shallow refraction boundaries and gradient medium in dome surroundings. The program has been tested on the model and field data. The effect of seismogeological model parameters and processing parameters on the results of dome shape interpretation has been evaluated. Usefulness of each variant of interpretation has been determined as well as the role of prior velocity information from well measurements and from interpretation of surface seismics. The analysis of program effectiveness on model data included three models of salt dome: model with small dip of dome slope, model with strong dip of dome slope and model with salt overhang. Analysis of the effect of different parameters on the results of interpretation confirmed that interactive analysis of interpretation results on the monitor screen makes it possible to evaluate correctness of parameter selection and correctness of interpretation.

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