



Noise attenuation on 3D seismic project “Juzni Banat I”

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„Juzni Banat I“ is a 3D land seismic survey area which covers more than 700 km². The field is situated in a very complex area of southern Panonian basin. North-eastern part of the field is agricultural and the rest is sands. The thickness of the surface sands goes down to 200m deep which significantly attenuated the frequency of the signal. The dominant frequency varies from below 20Hz in sands to 30Hz in agricultural areas. Also there are urban zones and densely forested protected zone within sands which caused lower fold coverage. Survey is registered with wireless equipment and as a receiver single geophones were used. Every receiver was buried in the ground in order to decrease environmental noise. Due to all these field conditions followed with strong wind which is common in this area, the acquisition data have very strong noise, especially ground roll type of noise. It was the great effort to attenuate strong ground roll noise and to preserve and enhance the signal. This presentation shows how LIFT (Leading Intelligent Filter Technology) technology with different types of signal processing tools (amplitude scaling, time-variant band-limited suppression, frequency filtering, header manipulation...) suppresses noise on this very demanding survey.