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Seismic Multi-attribute Optimization Technology and The Application In The Reservoir Prediction Of Carbonate Fracture

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The types of carbonate reservoir spaces are mainly dissolution fracture and cavity reservoir, strong heterogeneity, lateral variety of reservoir quickly, bring great difficult in prediction reservoir.

Use a single seismic attribute to predict reservoir accuracy is not high, and many kinds of seismic attribute cannot at the same time to participate in production. From the single attribute, we screen 45 kinds seismic attributes which react time, amplitude, frequency and attenuation, sensory screen the seismic attribute which have good corresponding with the reservoir. select the attributes and do the correlation analysis and intersection, reserve the high correlation attributes, to reduce the redundancy.do cluster analysis between the reservoir and attributes, correlation analysis and grey correlation analysis, optimize the high correlation and grey correlation degree of arc length, amplitude variation, RMS amplitude, and effective bandwidth. Then do 3D cross-plot analysis and neural network analysis to identify and predict reservoir(Figure 1).

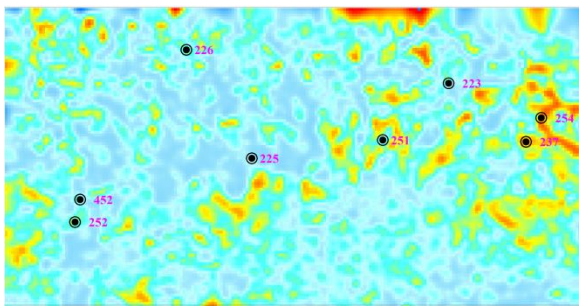


Figure 1 The Neural network reservoir prediction

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