

APPLICATION OF MICROSOFT EXCEL FOR GEOPHYSICAL DATA PROCESSING WITHIN INFORMATION-ANALYTICAL SYSTEMS

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Microsoft Excel is employed as a primary platform for constructing an information-analytical environment aimed at geophysical data analysis and interpretation. The approach is exemplified through the analysis of magnetic susceptibility measurements obtained from the Stolyarivska-2 borehole, intended to assess the geostructural characteristics of subsurface formations.

The processing workflow included the import of field data from .XYZ format, depth-based segmentation, generation of graphs and statistical diagrams, as well as the creation of magnetic susceptibility distribution profiles. The tools available in Excel enabled the implementation of preliminary analysis steps without the need for complex specialized GIS platforms.

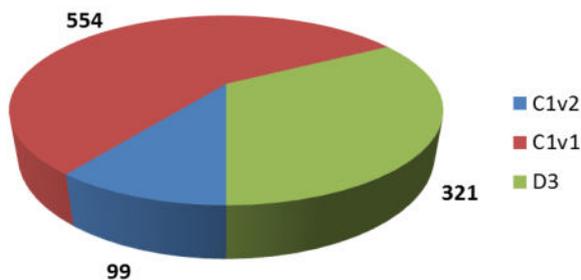


Figure 1 - Histogram of data distribution by age

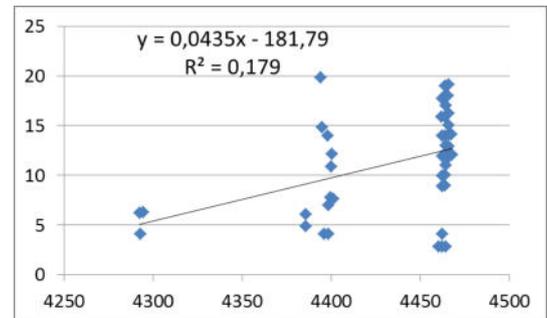


Figure 2 - Depth-dependent magnetic susceptibility profile for the C₁v₁ formation

The results confirm the effectiveness of Microsoft Excel in rapid interpretation of field data and the creation of visually intuitive information models. This approach can be adapted for the development of localized information-analytical systems in geophysics, ecology, energy, and related fields. The accessibility of Excel and the flexibility of its functions make it suitable for basic data analysis even in field conditions or under limited resource availability.

References:

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