The structure of the Southeastern part of the Yano-Kolyma Fold Belt by the results of interpretation of various scale magnetic data

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The wide range of anomalies caused by different geological structures from local to regional are studied by the heterogeneous datasets. They usually include the surveys of highly variable scales, resolution and quality. These parameters determine the methodology and technique used in further interpretation. The absence of detail and high quality surveys of geomagnetic field for large areas does not allow the implementation of the system analysis approach to full spectra of anomalies of magnetic field. The possibilities of system analysis using for various scale magnetic surveys to clarify of the tectonic settings and geological structure of the southeastern part of the Yano-Kolyma fold belt are considered. The geological structure of this area was studied earlier by the seismic and magnetotelluric investigations along 2DV regional profile. The tectonic settings are represented by several folded areas and cratons which are covered and knit together by Late Mesozoic bends and volcanic belt. The system interpretation of various scale magnetic surveys allowed us to obtain the geological and tectonic models of this area that include the following principal components: the deep structure of joint zones of different tectonic blocks; the structure and thickness of Paleozoic – Mesozoic deposits of sedimentary cover, crystalline basement and bends; the structure of volcanic belt deposits.