

# Monitoring of deformation processes in underground gas storage facilities by satellite and ground-based measurement methods

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The need to create a geodynamic landfill at an underground gas storage facility (UGS) is due to various factors. Cyclic impacts on the subsurface, by injection and extraction of gas, lead to a change in the stress-strain state of the earth's crust, which in turn forms the rise and fall of the earth's surface over time, as well as activates super-intense anomalies in fault zones [4; 5; 6].

A properly organized observation system makes it possible to record the current geodynamic situation and take into account the manifestation of geodeformation processes not only at UGS, but at any oil and gas fields [1; 2; 3].

The report will focus on a comparative analysis of the results of observations obtained at various underground gas storage facilities by geometric leveling methods, GPS and satellite radar interferometry. The final results of the four measurement cycles will be shown, as well as the advantages and disadvantages of each method.

## REFERENCES:

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