

Geochemical exploration for oil

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Oil companies, engaged in oil exploration, are recommended to apply the cheap and reliable soil-gas geochemical method of oil field detection. The method separates the seismic structures into the oil-bearing and barren ones and identifies nonstructural traps for oil.

The method is based on the detection and appropriate interpretation of geochemically anomalous hydrocarbon gases rising to the surface from oil sources located at depth and being absorbed by surfacial deposits. The method involves soil gas sampling, the analysis of the absorbed gases and the plotting and interpretation of gas-geochemical fields.

The development and test application of this new soil-gas geochemical method for oil field and mineral deposit exploration was financially supported by the Kazakhstan State Committee on Geology and Western Mining Corporation.

Conditions of application. The method is appropriate for all surface deposits up to quartz sands, which are characterized by their minimal gas absorption ability. Intensive pollution and contamination of the exploration area is detrimental to the method.

The methods effectiveness is enhanced by the surveying of existing oil fields with known gas-geochemical fields, which can then be used as the appropriate standards to ascertain anomalism in the exploration area.