



**METNODYSIS SOLIDARITES OF THE LAND-SHAFT-INDICATIOUSIS  
OF INVESTIGATIONS OF THE OIL-GAS DISTRIBUTION  
STRUCTURES IN UZBEKISTAN**

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**Annotation:** The article describes the methods and methods of exploration of landscape-indicative studies in the determination of landscape anomalies. Also, the landscape abnormalities associated with tectonic structures are shown

**Key words:** Indication, PTK, landscape anomaly, oil azonic structure, aerofotosync

The landscape-indicator method of searching for oil and gas-bearing structures includes the solution of the following problems: first, the appearance of landscape anomalies and, secondly, their interpretation in order to establish the causes of anomalies and the identification among them of indicators associated with oil and gas-bearing structures.

Now the basis of landscape mapping is sufficiently developed, during which PTCs of different rank are identified. For the purpose of searching for oil and gas-bearing structures, it becomes practical to select anomalous physiognomic combinations of PTC components that differ qualitatively and quantitatively from analogous components of neighboring sites. Physiognomic appearance, typical for any indicator of the landscape is considered as a background.

Morphological, genetic and age-specific features of the landscape and landscape-forming processes of the local site, distinguishing this site from the surrounding background and contrasting with it, are considered a landscape anomaly. Obviously, landscape anomalies can not be viewed outside the background on which they exist. Thus, the study of the landscape in most cases



rests on the problem of space-time relations "typically-atypical". The concepts of "landscape anomaly" and "background" serve to differentiate the territory in terms of appearance, form, quantity and other features of the manifestation of a particular "quality" of the landscape.

Features of the landscape, the basis for the allocation of anomalies, causally due to the inherent structural and physical-geographical situation, these features are natural, typical for a given territory. They are anomalous only because they indicate a deviation from the "standard", the most common conditions, indicators, characteristics of the landscape. The notion of "landscape anomaly" in terms of volume is not strictly synonymous with any PTC of a certain rank. In this respect, the use of the term "landscape anomaly" is more free: it can be divided within the landscape, terrain, boundary, facies depending on the manifestation in the landscape of oil and gas-bearing structures.

In geo-diagnostic studies, it is important to develop anomalies of tectonic origin. To landscape anomalies of tectonic origin, we refer to such areas of the territory, the physiognomic features of the landscape that differ from the backgrounds and are associated with the local effect of endogenous factors.

Local effects of endogenous factors that cause the occurrence of a landscape anomaly can be both passive, manifested through selective denudation of rocks that are heterogeneous in strength, and are active if they are caused by the manifestation of differentiated tectonic movements-the formation and activation of local structural forms, including those that are erupted.

According to the indicative features of manifestation in landscape appearance, landscape anomalies can be divided into flat and linear anomalies. Reflecting the morphology of the privative structural forms, flat anomalies have a different form. Linear terrain anomalies are mostly associated with disruptions.

The reliability of the interpretation of the landscape anomaly is determined primarily by the degree of our knowledge of the process that led to the formation of an anomaly. With a poor knowledge of this process, it is impossible to explain whether the landscape anomaly is a consequence of the influence of the oil and gas bearing structure or is caused only by exogenous processes. Therefore, the development of issues related to the creation of landscape anomalies and their



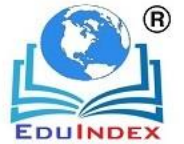
correct geological interpretation is of great importance, since it ultimately leads to an improvement in the effectiveness of landscape-indicator studies. Landscape-indicator studies for the detection of oil and gas-bearing structures should be carried out in the following sequence.

Preparatory period. In order to show the relationship between the external appearance of the PTC and the geological and tectonic conditions, it is necessary first of all to analyze literary and fund materials on this issue for the given region. Due to the fact that special indicator studies for oil and gas in the Ferghana Dalina were almost not carried out, we used geological, geomorphologic, geobotanical and soil data on the basis of which a preliminary indicator scheme was compiled with disparate information of varying degrees of detail.

After this, a complete indicative interpretation was made based on the deciphering characteristics, which were established as a result of a comprehensive comparison of the studied aerial photographs with the topographic, geological, geomorphologic, soil, geobotanical, hydro geological and landscape maps available for the given territory. Its essence lies in the division of the territory into a typical landscape and the allocation on their background of anomalous areas that are different in physiognomic features.

For regions of intensive economic development, to which the Ferghana Valley belongs, the use of physiognomic elements of the "cultural" landscape as indicators is of the utmost importance. These include the location and nature of agricultural land, rural settlements, the road network and some features of dirt roads, which are closely associated with relief elements and geological features. In addition, in the selection of key areas, it is important to analyze the origin of the names of populated areas and other natural terms, since the geographical names often reflect the natural features of the territory.

The process of cameral indicative interpretation decays into two stages. During the first, preliminary stage, an overall analysis of aerial photographs is conducted throughout the study area, allowing for a relatively short time to familiarize with the overall features of the morphology of the PTC and to provide pre-interesting areas characterized by the most typical and sharply expressed signs of the structure.



The process of cameral decoding ends with a repeated analysis of aerial photographs throughout the surface in order to generalize the results of detailed interpretation. At the same time, in a number of cases it is possible to distinguish new areas that are more interesting in structural terms and to establish the overall nature of the development of the landscape throughout the entire territory.

When working with aerial photographs for the purpose of preliminary interpretation, priority is given to a set of features associated with landscape features of areas of known oil and gas-bearing structures. A similar feature of the landscape is then located within the study area. Here, a significant help is shown by comparison with the deciphered neighboring areas, which have similar geological and physic-geographical conditions.

The result of the preparatory stage is the division of the territory into a landscape, the allocation on their background of anomalous areas, different in physiological features. After for the investigated territory indicated above by way of all the abnormal features of the landscapes, the field stage of the work begins, concluding in the settlement of each of them and the appearance of the conditions to which it is timed.

The field period. During this period, verification and reinforcement are carried out by the actual data of the results of the indicative interpretation, the correctness of the pre-planned deciphering characteristics. This work is carried out by comparing aerial photographs with nature and the appearance of features of mapping on them the entire diversity of natural objects under investigation in their interrelation and development. At the beginning of the field period, it is advisable to carry out reconnaissance aero visual observations in the study area. Their tasks are:

- 1) initial reconnaissance acquaintance with the territory; these observations will help in determining the rational complex of methods of the indicator method of studying the area;
- 2) obtaining information on geological and geographic features of the territory;
- 3) the general familiarization with the morphological structure of the PTC;



4) clarification of issues that arose in the preliminary interpretation of aerial photographs;

5) drawing up of the final plan of routes of ground-based research.

To enter into the field of landscape indicators, the key areas characterizing the main features, the boundary or the landscape, subjected to indicator research, are selected. In the process of studying key areas, the general acceptance of the indicator method is used: reference or detailed-route descriptions of landscapes, landscape profiling, combined with extensive use of aerial photographs.

Analysis of landscape profiles and descriptions of key areas allows: to check the applicability of the preliminary indication circuit; refine it and replenish some of the missing information about the relationship of natural complexes with certain geological and tectonic conditions; to show a characteristic feature of the image of the landscape on aerial photographs.

I am completing my camera stage. The task of this stage of indicator work is to check the correctness of the established regularities and to compile the final documentation. After the completion of field work, the final detailed interpretation of aerial photographs is made, the main tasks of which are the generalization of the field material for the development of landscape indicators of oil and gas-bearing structures; extrapolation of established landscape indicators to the entire territory of work; compilation of the final summary of the deciphering characteristics of the geological features of the study area.

After completing fieldwork and desk studies, a comprehensive interpretation of the results obtained and the compilation of texts and cartographic documents are carried out. For a more substantiated and error-free allocation of landscape indicators of local elevations, it is necessary to use all the primary geological and geophysical material available for this section of the territory both for comparison and in terms of critical consideration of the inherent structural structures.

An approximate forecast estimate of the presence of tectonic structures in the study area according to landscape indicators is carried out using indicator tables (charts) and maps, compiled on the basis of verified data on the confinement of landscape indicators to certain geological and tectonic conditions.



Indicative table, show the correlation between certain natural complexes on one side and the objects of indication, on the other. They are the basis for making legends to indicator cards. For an overall representation of the indicative regularities of a particular territory, an indicator table can be useful, accompanied by typical aerial images of the indicators under consideration.

On the landscape-indicator map, the main final document of the indicator studies, the local structures in different landscapes are shown. The legend of the indicator maps is divided into two parts: the landscape, reflecting genetic groups of natural complexes, and the indicator, showing a different indicator of local uplifts and faults. Indicative maps are not strictly landscape maps, since they represent a taxonomically different unit of PTC, which has a similar indicator value; on the other hand, it is permissible, the designation of small taxonomic units of especially important indicators. Unlike landscape maps, on the map under consideration, the landscape load must be purposeful, sometimes to some extent generalized, in order to better reflect the influence of the newest structures on the formation of a modern landscape. Thus, the entire complex of cameral and field-based landscape indicator studies for the search for tectonic structures consists of a number of successively completed and mutually complementary stages of work, from which a very significant role belongs to the predefined indicative interpretation of aerial photographs. The concentration of fieldwork in key areas and the widespread use of aerial methods in the dissemination (extrapolation) of indicator indicators throughout the survey area affect effectiveness.

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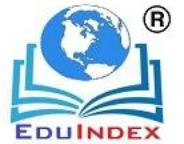
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## International Journal of Research

ISSN: 2348-6848 Vol-5, Special Issue-18

**2nd EduIndex® International Conference on Science Changes  
the World** held on 28-29th June 2018 at **Edupedia Publications Pvt Ltd**,  
New Delhi in Association with [www.tadqiqot.uz](http://www.tadqiqot.uz) of the Republic of  
Uzbekistan



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