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HISTORY OF TURON PLATE DEVELOPMENT AND OIL PRODUCTIVITY

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Annotation
The article describes the history of tectonic development of the Turan plate region. It also describes the development of geosynclinal (foundation formation period) and platform (sediment formation period) stages. The oil and gas content of the Turan plate, including the oil and gas field of the Bukhara-Khiva oil and gas region, the potential oil and gas content of the Tayura fields are given.

Keywords: Turon, geosynclinal, platform, coledon, gersin, Tyan-Shan, paleozoic, triassic, jurassic.

Introduction

The Turan plate consists of domed rises and internal platform depressions that occupy the western part of Central Asia. The Turan plate is bounded on the south by the Kopetdag foothills and on the east by the epiplatform orogenic system, on the north by the Mangyshlak-Central-Ustyurt uplift system, and on the west by the Caspian Sea [1]. The total area of the Turan plate is 2 million. km^2. The term "Turon Plate" was first coined in 1956 by N.S. Shatsky criticized [2].
The Turanian plateau was part of the Ural-Tianshan geosynclinal region during all periods of the Paleozoic era, and is characterized by the complexity of the geological structure and development history of the various parts of the plateau.
The geosynclinal development period ended in the western part of Central Kazakhstan and the Northern Tien Shan, where the Caledonian deformation took place. There are a number of anticlinoriums and synclinoriums, which have changed their direction from northwest to south to meridional and from northeast to north, forming bubble ridges and moving westward. formed an arched twin with a large radius. All regions of this region have reached the final stage of geosynclinal development from Devonian (for Caledonian regions) [3].
In the Middle Paleozoic, all areas belonging to the Caledonian fold are bounded on the west by meridional East-Ural regional seams and on the south by a system of

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latitudinal and diagonal breaks. In the remaining areas of the Turan plate, geocyclinal development continued behind these breaks.

The southern edges of the Caledonides are partially covered by the Hercynian distortion of geosynclinal development. The Caledonian sites in the Greater Karatau and its northwestern continuation, and between the Karatau (Talass-Fergana) and South-Karatau Ranges, represent intermittent pre-Paleozoic myogeosynclinal dominance. If in the Lower Paleozoic the Great Karatau Duchy merged with the Baikonur Dwarf of Ulutau in a single arc, in the Middle Paleozoic the Karatau delta was separated from the Baikonur Dynasty as a result of the re-formation and continuation in a north-westerly direction. Gradually lightened in a northwesterly direction.

Thus, these caledonide zones are involved in the development of the Hercynian myogeosynclinal. The Hercynian deformation and the magmatism that spread over the Greater Karatau Northwest Phase gradually faded away, stopping completely at 680 western meridians in the direction of the Greater Karatau Disruption System. In the Hercynian geosynclinal region, there were two systems at the beginning of the Paleozoic: the meridional (Ural) and the subcontinent (Tien-Shan). The first is divided into a number of geoanticline and geosynclinal zones, which extend south to the Aral Sea region in terms of geological and geophysical materials. Here they are probably distributed in different latitudes from the Tien Shan geosynclinal system in a series of complex fractures. Some of the eastern zones of the Urals may have formed an arc and gradually shifted to the Tien Shan. A number of structural-facies zones are observed in the exposed part of the Tien-Shan geosynclinal system. As a result of the study of the foundations left in the Kyzylkum and the analysis of geophysical materials, it is possible that these zones have continued and allow the separation of some new Tianshanid burials. In the Mangyshlak, Ustyurt, and southern Aral Sea regions, some of these zones have changed from northwest to meridional.

The area recorded in the late Paleozoic early underwent rapid deformation and orogenic processes. At the same time, peripheral and periclinal twins, as well as internal depressions and twins, began to develop. Along the western edges of the Ural fold, the Urals are bounded, and in the southern basins, a system of Ural periclinal bends is formed. Along the system of large fractures, there is an elongated negative structure (jelob) with a narrow and deep mangrove line in the west-northwest direction. At the same time, a small, deep Tuarqir graben was formed. At the same time, a small, deep Tuarqir graben was formed. In the late Paleozoic, along the East-Ural regional seams, specific twins (Kushmurun and Tyuratam) formed from effusive-terrigenous rocks in the east. Their formation lasted until the early Triassic. These twins can be considered as homologues of Uraloldi marginal twins. They are Caledonian-based to the east of the ascending Ural fold system.

In the Upper Paleozoic-Triassic, no sedimentation occurred in much of the Turanian plate. Up to the Upper Paleozoic, the rocks are uplifted and flattened, and are a source of material for the surrounding estuaries and depressions. In the second half of the Triassic, the Upper Paleozoic-Triassic rocks, which filled the deep estuaries (Mangyshlak, South Urals, Urals, etc.), underwent rapid deformation and were compressed in a linear fold system. Along the fractures that define the Mangyshlak jelob and the Tuarkir graben, the rapid Upper Triassic fold not only encompasses the rocks in these twins, but also the pre-Paleozoic rocks in the uplift adjacent to the ridges. This is evidenced by the absolute age of the minerals containing potassium vutigen (180-200 million years). These minerals have been isolated from Upper Paleozoic rocks in Central Ustyurt through Jurassic deposits. The formation of these minerals was due to regional metamorphism. The aforementioned twins (as well as the uplifts) have been transformed into twisted-rocky mountain structures as a result of the Upper Triassic deformation. Upper Paleozoic-Triassic deposits are weakly located in northern and southern Ustyurt, southern Mangyshlak, Karakum and southeastern Turkmenistan. These areas are much more bent than the upper Paleozoic-Triassic depression of the upper Triassic fold.

In the last stages of the late Triassic, the Turanian plate gradually developed into a platform. At the end of the nori and ret tiers, the bent parts of the large upper Paleozoic-Triassic depression were less covered by the upper Triassic folds and no orogenic movements occurred, and a layer of gray argillite platform cover began to accumulate. These strata are significantly distributed in the North and South Ustyurt, South Mangistau, Karakum and South-Eastern Turkmenistan.

Thus, at the beginning of the platform development, there were ridges (Northern Ustyurt, Borsakelmes, Khorezm-Izmail and others) and uplifts (Mangyshlak, Tuarqir, Central Karakum, etc.). During the next Morning Epoch, analogous layers continued to accumulate in the southern and western parts of the plateau. The thickness of ret-layer deposits reaches 1.5-2.5 km in the deepest parts of the highlands. Ret-layer deposits formed the first structural layer of the platform cover.

During the Middle Jurassic, ret-leyas twins continued to develop, and by this time the twins had almost completely covered the southern and western parts of the Turanian plate. In the central parts of the Aegean, the Middle Jurassic deposits lie on top of the Ret-Leyas rocks, respectively, while in the periphery, there is a mismatch between the Middle Jurassic and Ret-Leyas deposits. In the south-east of the Turan plate, there is no significant discrepancy between them. In the highest parts of the plate, the Middle

Jurassic deposits lie above the bedrock beyond the distribution boundary of the ret-layer deposits. In the Turgay and Chui plains, the accumulation of Middle Jurassic deposits continued in grabens. The formation of the platform cover continued in the late Jurassic, Cretaceous and Paleogene. Middle Jurassic-Lower Miocene deposits form the second structural layer of the platform cover.

During the accumulation of rocks of the second structural stratum, the development and differentiation of the above-mentioned basic structural elements continued. The Middle Jurassic-Early Miocene epoch was marked by a period of stratification. The most prominent of these are the Cretaceous and Jurassic (in some areas, the upper Jurassic). This is due to the acceleration of differential tectonic movements, which are important for the formation of structural elements.

There was a general rise in the Lower and Middle Miocene boundaries, mainly in the western and southern parts of the Turanian plate. Early accumulated deposits are significantly washed away. Around this time, the marginal foothills of the alpine fold region and the epipaltform orogenic processes in the Tien Shan began to take shape. In the late Middle Miocene, uneven subsidence began in the western and southern regions of the Turanian plate and continued until the Lower Pliocene. During this time, relatively small rocks were formed that formed the third structural layer of the platform cover. Only in the southern margins of the plate, adjacent to the alpine margins and the epiplatform orogenic regions, are there thick single-phase deposits.

Towards the end of the Middle Pliocene, regional ups and downs occurred in some areas of the Turanian plateau. Outside of the plateau, large-scale sedimentation occurred in late Turkmenistan and the Middle Pliocene in Western Turkmenistan, the South Caspian, and the Absheron Peninsula. The Middle Pliocene basin is much lower than the ascending Turanian plate (Yanshin, 1953; Luppov, 1963; Milanovsky, 1963). This has led to rapid erosion in the area. In the late Pliocene and Quaternary, the middle Pliocene relief is partially covered by marine and continental sediments, only the southern edge of the plate adjacent to the alpine margins and epiplatform orogenic regions the accumulation continued uninterrupted and the rapid bends were compensated. Thus, the distribution of Upper Pliocene and anthropogenic deposits in a large part of the Turanian plate is significantly related to the Middle Pliocene relief. These deposits formed the fourth structural layer of the platform cover.

The first structural tier deposits are formed by the deepest latitudes of the base plate surface of the Turan plate. The territory of the Chui and Turgay plains is formed by separate grabens. In the wing of the twins, and mainly in the grabens, the angle of inclination is considerably larger than that of the second structural tier deposits above them, covering the base of the Turanian plate. The structure of the platform cover on

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the third-tier deposits is much simpler. If the amplitude of the main structural elements in the first and second tier deposits is measured in thousands of meters, the bearing angle is measured in degrees and the first ten degrees, the third structural tier deposits are significantly reduced to one hundred meters, and the bearing angle is measured in minutes. and measured in tens of minutes, the magnitude of the deformation of the third-structured tier deposits is about 10 times smaller than that of the subsurface horizons. Quaternary tier deposits are largely dislocated over most of the Turanian plate. Thus, when comparing structural maps across different horizons of the platform cover, the structures from the smallest layers to the highest layers became simpler, and sharpening occurred at the boundaries of the structural layers [3].

Various minerals are associated with the platform cover and foundation rocks of the Turan plate. Slab contraction joints should intersect at the openings for columns and should intersect at the openings for columns.

Oil and gas are mainly associated with the Turan plate platform. Their largest collections are found in the Jurassic and Cretaceous deposits of the Turanian plate. Rare gas fields such as gas and Shurtan are known in the Bukhara-Khiva zone, large oil and gas fields are known in the uplift of the central Karakum dome, and large oil and gas fields such as Uzen, Jetibay and Tenga are known in the northern part of the South-Mangyshlak basin.

There are signs of oil and gas in almost all areas of the Turan plate and it is an area with oil and gas potential. However, zones with industrial-scale oil and gas deposits are associated with areas with high sedimentary thicknesses and deep crustal inclinations. Therefore, the depth of the bent foundation (the thickness of the associated platform cover), the law of change, the main tectonic elements of the plate are important to determine the prospects of this or that part of the plate area for oil and gas [4].

Bukhara-Khiva oil and gas region with other oil and gas regions is the widest rigion in the world is a northeastern wing and has the shape of a right riangle The upper part belongs to the Pitnyak structure group. To his territory large gas and gas condensate fields have been identified.

In the Bukhara-Khiva region of the Amudarya sedimentation basin to consider the toyura complex as a little-studied complex on a complete basis possible. However, in the Bukhara-Khiva region there are 463 Paleozoic rocks opened with wells. In Paleozoic rocks, resource prediction is limited to intermediate-structured strata, which are structurally the floor includes upper Devonian carbonate deposits, lower Carboniferous terrigenous deposits with limestone and pure limestone layers, as well as medium Carboniferous limestones. The upper part of the middle carbon is composed of terrigenous sediments such as high carbon.In the Bukhara-Khiva region of the Amudarya sedimentation basin, the toyura complex can be considered as a little-studied complex. However, in the Bukhara-Khiva region, Paleozoic rocks were discovered with 463 wells. In Paleozoic rocks, resource forecasting is limited to intermediate structural strata, which include upper Devonian carbonate formations, lower carbon terrigenous deposits with limestone and pure limestone strata, as well as medium carbonaceous limestones. The upper part of the middle carbon is composed of terrigenous sediments such as high carbon [5].

Estimates of forecast resources were made based on the stratigraphic complex section, the rate of rock accumulation, and the condition of the affected areas in the sedimentary basin.

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