

## ANDRIYIVSKA BLOCK

#### Mineral: oil, natural gas, condensate.

**Type, period of subsoil use:** geological study of oil and gas subsoil, including exploration and production of fields with further extraction of oil and gas (industrial development of fields), 20 years.

**Location:** Poltava district, Poltava region, 35 km southeast of Poltava, 6 km south of t. Mashivka. Andriyivka, Krasnogirka and Dmytrivka villages are located on the territory of the block.

#### Block area: 46.89 km<sup>2</sup>.

Geological summary: Paleozoic, Mesozoic, and Cenozoic sediments are presented in the geological structure of Andriyivska block. Tectonically, exploration block is located in the central part of the axial zone of the Dnieper-Donetsk basin within the Mashiv-Shebelinsky gas-bearing block, which is characterized by intense manifestations of salt tectogenesis. Andrivivska block is partially located within highly contingent Rudenkivsko-Proletarsky and Mashivsko-Shebelinsky oil-and-gas districts. Sukhodolivske and Rozumivske oil-and-gas condensate fields, as well as Mashivske gas condensate field are located close to Andrivivska block. Hydrocarbon deposits of the Sukhodolivske field are tectonically shielded and lithologically limited, and lie at a depth of 2,440 - 3,754 m. They formed a multilayered field with an oil-and-gas bearing area of more than 1,300 m. The horizons of the Serpukhov and Bashkir tiers are under development. Moscow, Bashkir and Serpukhov tiers are productive on the Rozumiv field. The deposits of Moscow and Serpukhian layers are tectonically shielded and lithologically limited, and the deposits of the Bashkir horizon are tectonically shielded. They are all located in the lower blocks. The main explored reserves are concentrated in the deposits of the Bashkir tier. The deposits of the Mashivske deposit have been explored and estimated in Permian and Upper Coal deposits. Deposits are layered or massive-layered vaults, tectonically shielded and lithologically limited. Gas bearing capacity reaches 1,100 m. Reservoirs are composed of sandstones of the Araucorite deposit of the upper carboniferous (gzhel tier) and the Carthaginian deposit of perm, as well as dolomitized limestones and dolomites of the Slavic deposit of perm. Summarizing all abovementioned together with other available geological-geophysical and geological-industrial materials, productivity of oil-and-gas areas are associated with the lower Bashkir and upper Serpukhov deposits. In addition, the presence of deposits in the sediments of the lower perm, Moscow and lower Serpukhov is not excluded. Available geological information: the main exploration studies on the geological structure of Andriyivska block and adjacent areas were conducted by seismic surveys of reflection method, correlation method of refracted waves and microscale thermophoresis (MST) in 1955 - 1956, 1964 - 1965, 1968 - 1970, 1974 - 1978, 1980, 1983 - 1994 and 2000. As a result, Rozpashnivska, Karlivska, Vesnyanska, Maryanivska, Lannivska folds along the reflective horizons in the Cretaceous, Jurassic, Triassic, upper and lower Perm, upper and middle Carboniferous deposits were identified and studied. Moreover, it should be noted that in 2012 seismic 3D work was started on Andriyivska block that was not completed due to lack of state funding. In order to find oil and gas in coal deposits, several wells were drilled within the Rozumiv uplift in 1963 - 1965. They did not give positive results. In 1970 – 1990, the seismic survey of a common depth point (CDP) method was prepared for searching of hydrocarbons in the lower Carboniferous deposits. In 1989, during a drill testing of the Rozumivska 7 well, a gas inflow was obtained with a flow rate of 0.5 thousand m3/ day. Also, on the exploration block during drilling of Andrivivska #1 parametric well at a depth of 5,201 m from Serpukhov deposits drilling show was observed in degassing of drilling mud.

**Overview** map Dykan'ka 1:500 000 Skorohodove Poltava Karlivk Zachepylivka Mahdalynivka Hubynykh ANDRIYIVSKA AREA

UkraineInvest

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### List of geological reports: 29096, 46454, 50972, 65540

**Resources/reserves assessment:** Hydrocarbon reserves are not accounted within x block.

Minimum work program: Stage I (12 months) - processing and reinterpretation of 2D seismic data, Stage II (12 months) - conducting 2D or 3D seismic on 1/4 of the block area, Stage III (24 months) - drilling of at least one production well.

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