

Table 1. Azov–Kuban Basin Province assessment results (technically recoverable, conventional undiscovered resources).

[MMB, million barrels; BCF, billion cubic feet. Results shown are fully risked estimates. For gas fields, all liquids are included under the natural gas liquids (NGL) category. F95 denotes a 95-percent chance of at least the amount tabulated. Other fractiles are defined similarly. Fractiles are additive under the assumption of perfect positive correlation. TPS, total petroleum system; AU, assessment unit. Gray shading indicates not applicable]

Total petroleum systems (TPS) and assessment units (AU)	Field type	Mean (expected) largest field size (MMB or BCF)	Total undiscovered resources											
			Oil (MMB)				Gas (BCF)				NGL (MMB)			
			F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean
Azov–Kuban Basin Province, Mesozoic-Cenozoic Composite TPS														
Foredeep and Foreland Slope AU	Oil	35	97	204	391	218	114	263	556	290	2	4	9	4
	Gas	574					1,666	3,534	6,866	3,803	38	83	167	90
Total undiscovered petroleum resources						218				4,093				94

well as tar in shallow accumulations. Identified traps are formed by structures associated with (1) mud diapirs, (2) compressional structures (faults and anticlines), (3) basement-related anticlines, and (4) drapes over basement highs and inverted Triassic rifts. Jurassic and Cretaceous reef facies also provide traps.

The future potential for undiscovered conventional oil and gas accumulations is in structures associated with mud diapirs, deep (>3.5 km) compressional and basement-related structural traps, and stratigraphic traps, which previously have not been fully exploited. Potential stratigraphic traps include upper Paleogene–Neogene slope and basin gravity-flow deposits, upper Neogene fluvial deposits, and reefs and reef facies in Cretaceous–lower Paleogene and Upper Jurassic subsalt intervals. Offshore areas are less explored than onshore, and therefore have greater potential for undiscovered accumulations.

Assessment Results

Estimates of volumes of technically recoverable, conventional, and undiscovered oil and gas resources are shown in table 1. No attempt was made to estimate economically recoverable resources because it is beyond the scope of this study. The mean volumes of undiscovered petroleum are approximately 218 million barrels (MMB) of crude oil, 4,093 billion cubic feet (BCF) of natural gas (290 BCF of associated and dissolved natural gas and 3,803 BCF of nonassociated natural gas), and 94 MMB of natural gas liquids.

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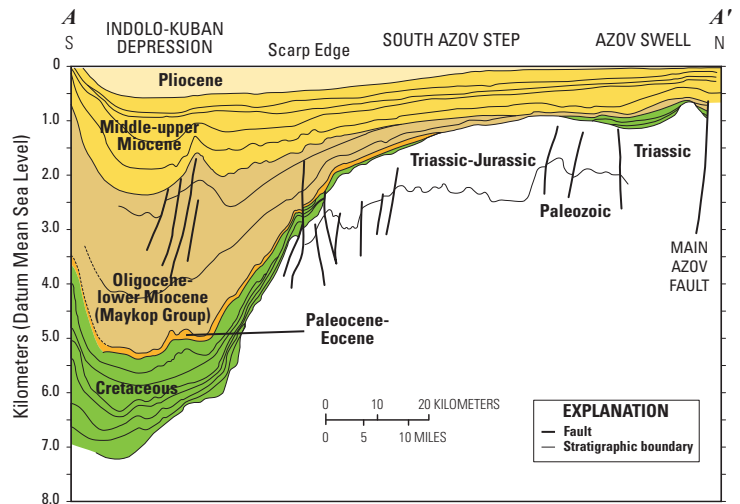


Figure 2. Geologic cross section for the Azov-Kuban Basin. See figure 1 for location. Modified from Gajuk and others (2008).

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For Further Information

Publications detailing the geology and the methodology for the Azov-Kuban Basin Province and assessment results are available at the USGS Central Energy Resources Science Center web site, <http://energy.cr.usgs.gov/oilgas/>.

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