

BLOCK 24

BOLEKHIVSKO-SMOLIANSKA LICENSE

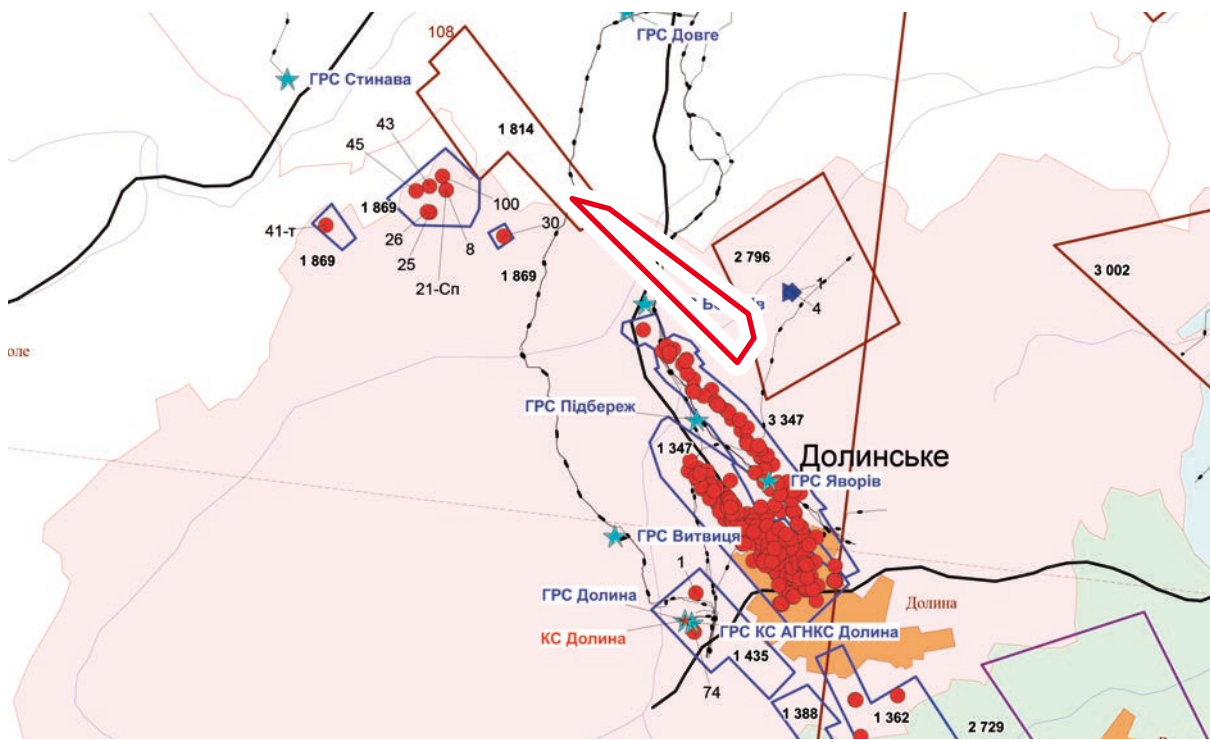
LOCATION	CONCESSION TYPE	DEPOSITS DISCOVERED IN THE AREA
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Bolekhivsko-Smolianska block is located in Dolyna district of Ivano-Frankivsk region, 2 km northeast of Bolechiv. Acreage of the block is 10.39 sq. km.

Combined license for geological exploration with pilot and commercial development, and production of hydrocarbons. Duration - 20 years.

North Dolynske, Tanyavske, Vygodo-Vytyvske fields.

Map of Bolekhivsko-Smolianska block



MAP SYMBOLS

Point Number	USK 2000, E			USK 2000, N			SK-42, E			SK-42, N		
	deg.	min.	sec.	deg.	min.	sec.	deg.	min.	sec.	deg.	min.	sec.
1	23	50	54.06	49	6	37.14	23	51	0.35	49	6	38.20
2	23	55	52.07	49	4	44.14	23	55	58.35	49	4	45.20
3	23	56	9.07	49	4	14.14	23	56	15.35	49	4	15.20
4	23	55	42.07	49	3	40.14	23	55	48.35	49	3	41.20
5	23	49	39.07	49	6	44.14	23	49	45.35	49	6	45.20

well

gas-distribution plant

gas pipeline

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GEOLOGICAL CHARACTERISTICS

Bolekhivsko-Smolianska license is located in the first stage of the faults of the central part of the Boryslav-Pokutska zone and belongs to the North-Dolynska fault of the Bolechivsky block.

The North-Dolynska fault is a narrow, linearly elongated anticline of northwest strike of 14.0 km long, 2.0- 2.5 km wide and 600 m high. It includes the Yakubivska structure, which is divided into 8 parts, conventionally merged into two blocks: Bolechivsky and Dolynsky.

Commercial oil and gas formation of the structure is associated with the Menilite, Bistritsia and Vyhodska suites. Reservoirs are sandstones and siltstones among clayey rocks. The thickness of oil and gas-saturated formations varies from a few meters to 47 meters.

Middle and lower Menilite formations contain accumulations of oil with a common oil-water contact (OWC). For the Menilite suite, there are four levels of OWC occurrence: -2027, -2075, -2418 and -2646 m. The oil deposit of the Yakubivska structure is much lower; Its OWC is located at an absolute depth of -3816.6 m. At one of the part of the Dolynsky block in the sandstones of the lower Menilite sub-suite, deposits of gas with condensate are also explored.

The Bistritsia and Vyhodska sub-suites contain deposits of oil with a gas cap at three levels of OWC: -2782, -2548, -2539 m, and two levels of gas-oil contact: -2421.5 and -2404 m.

SURVEY INFORMATION AVAILABLE

Assessment of hydrocarbon resources (Ukrainian classification)

Inferred resources (category C3+D) 30-50 thousand tons of oil equivalent per sq.km.

Well data

In total, 55 exploration and pioneer wells were drilled in the block. Wells of Bolechivsky block are exploited by deep-pumping method. The current reservoir pressure is 27.0 MPa. Exploration and periodic exploitation of well No.152-PnD in the period from 1998 to 2015 proves the promise of the Bolekhivsky block of this license.

Seismic surveys

Year of surveys	Number of lines	Number of linear km	Fold
1985	3	11,0	12-24
1989	4	17,0	12
1991	1	2,5	12
1993	3	15,5	24
1994	2	8,0	24
1995	1	6,0	24

EXPLORATION WORK PROGRAM REQUIREMENTS

Stage I (12 months) - processing and reinterpretation of 2D seismic data;

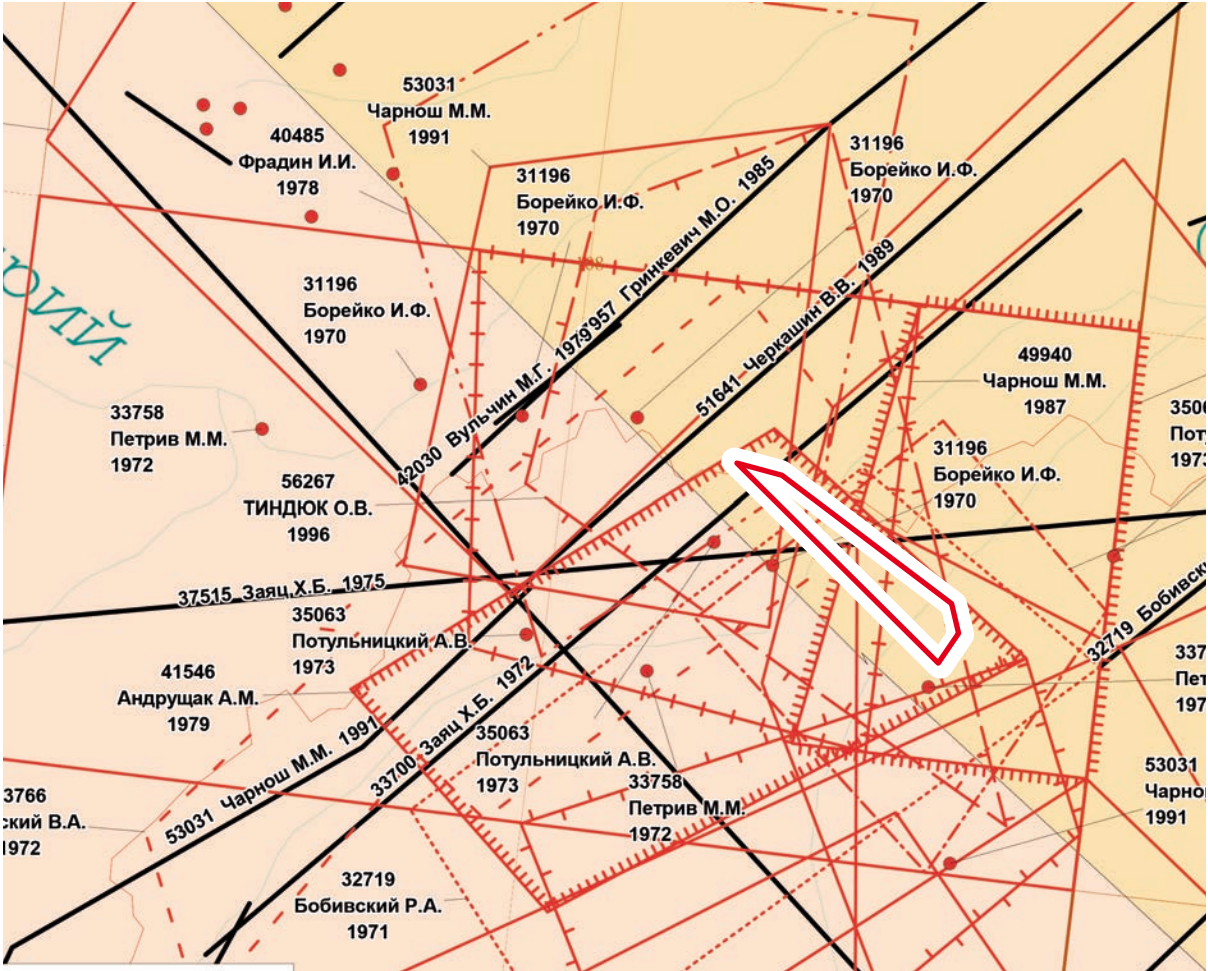
Stage II (12 months) – acquisition of 2D or 3D seismic data on ¼ of the block's area;

Stage III (24 months) – one productive well drilling.

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Map of geophysical surveys and seismic lines



MAP SYMBOLS

	1:25 000		BOLEKHIVSKO-SMOLIANSKA BLOCK	51238	report number
	1:50 000			Павлюк В.А.	author of the report
	1:100 000			1988	year of the report
	geophysical survey		survey with no mapping		
	seismic lines				