



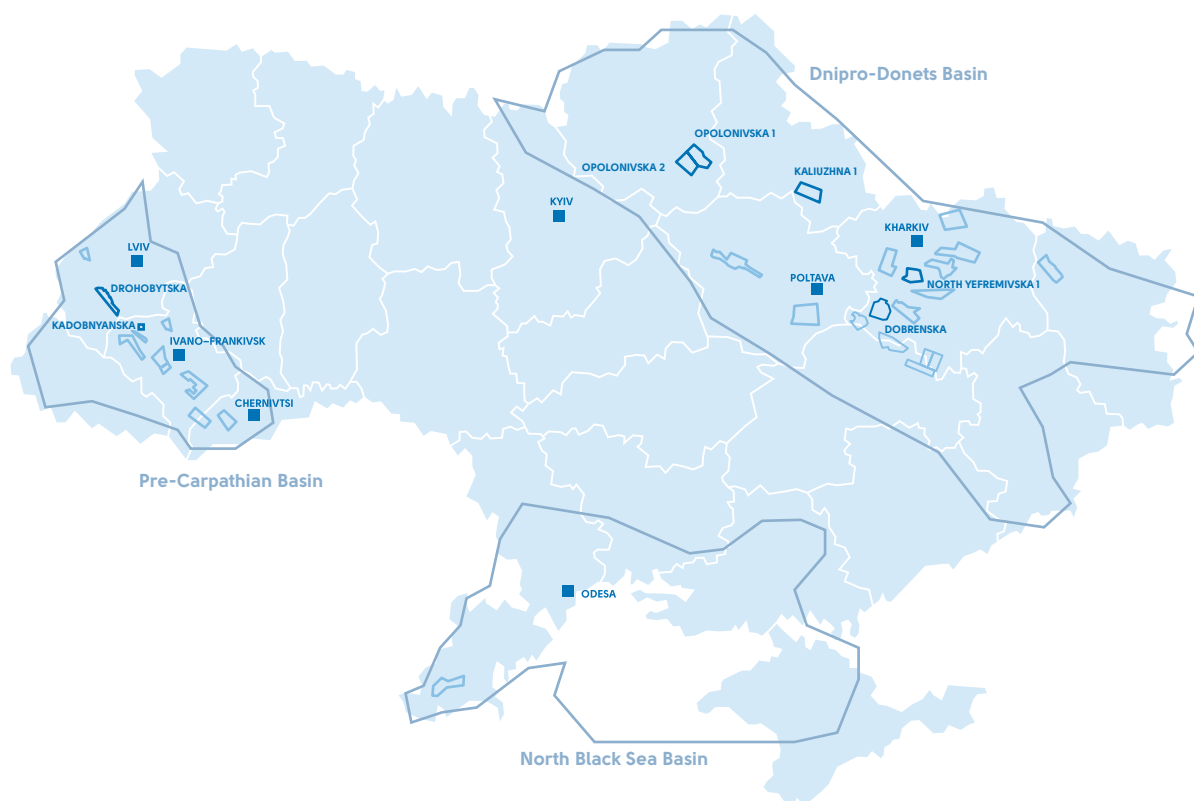
**Ukraine  
NOW**






# ROUND 2

# 30

# AUCTION BLOCKS FOR LICENSING ROUNDS



**Round 2 (January - April 2019)**

-  Blocks for round 2
-  Blocks for further rounds
-  Main oil and gas basins



BLOCK 16

DROHOBYTSKA LICENSE

LOCATION

Drohobytzka block has an area of 140.9 km<sup>2</sup> and is located in Mostyska, Sambir and Drohobych districts of Lviv region between the settlements of Stare Selo, Bolechivtsi, Nezhukhiv, Zaluzhany.

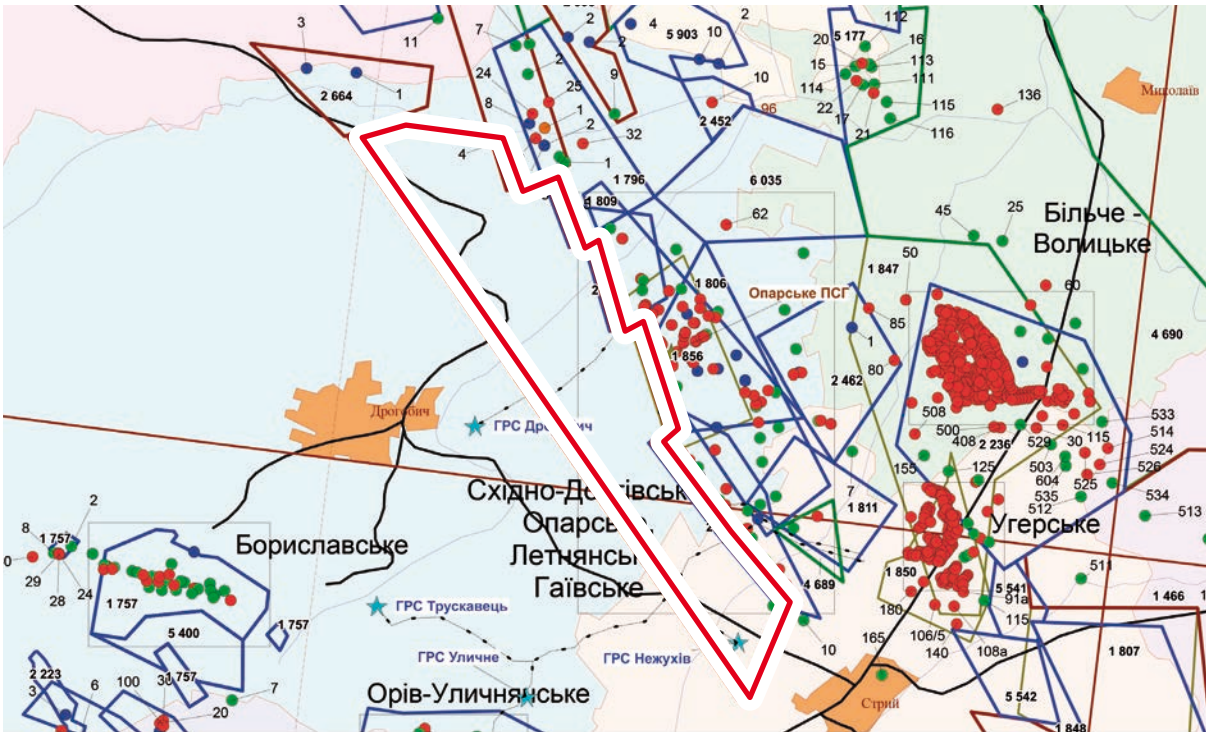
CONCESSION TYPE

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

DEPOSITS DISCOVERED IN THE AREA

Oparske gas, Haivske gas condensate, Hrushivske gas condensate, Letnianske gas condensate and East-Dovhivske gas fields.

Map of Drohobytska 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	28	60.00	49	28	00.00	23	29	6.34	49	28	1.07
2	23	30	37.00	49	28	27.00	23	30	43.34	49	28	28.07
3	23	34	24.00	49	28	26.00	23	34	30.34	49	28	27.06
4	23	35	25.00	49	27	10.00	23	35	31.34	49	27	11.06
5	23	36	42.00	49	27	38.00	23	36	48.34	49	27	39.06
6	23	38	4.00	49	25	57.00	23	38	10.34	49	25	58.06
7	23	38	33.00	49	26	11.00	23	38	39.34	49	26	12.06
8	23	40	0.00	49	23	60.00	23	40	6.33	49	24	1.06
9	23	40	39.00	49	24	18.00	23	40	45.33	49	24	19.06
10	23	42	30.00	49	21	44.00	23	42	36.32	49	21	45.06
11	23	41	60.00	49	21	22.00	23	42	6.32	49	21	23.06
12	23	45	0.00	49	19	20.00	23	45	6.32	49	19	21.06
13	23	47	35.00	49	17	45.00	23	47	41.31	49	17	46.06
14	23	46	30.00	49	15	15.00	23	46	36.31	49	15	16.06

- well
- gas-distribution plant
- gas pipeline
- DROHOBYTSKA BLOCK

## GEOLOGICAL CHARACTERISTICS

The block is located within the Bilche-Volytska zone of the Pre-Carpathian Foredeep and the Kosiv-Uhersk subzone. The geological structures of the block involve Paleozoic, Mesozoic and Cenozoic sediments. Commercial pools of gas on the deposits in the vicinity associated with the sandy-siltstone rocks of the horizons of the Lower Dashavska Sub-Suite. Reservoir rock in Sarmatian, Carpathian parts of the section are terrigenous sandy siltstone rock.

Experimental data shows that the clay cap rocks on the neighboring Letnyanske deposit, even in the presence of microcracks, can contain gas condensate deposits with reservoir pressure of 2,4-12 MPa. The good sealing properties of the clay cap rocks is due to the presence of clay of minerals, which are capable of swelling and "healing" cracks in the rock.

Interpretation of existing seismic data shows that the northwest part of the block up for auction contains the northeast wing of the Dobrovlyanska structure.

## SURVEY INFORMATION AVAILABLE

### Assessment of hydrocarbon resources (Ukrainian classification)

not estimated.

### Well data

Within Drohobyska block, 11 wells have been drilled. None of these resulting in commercial production. Most of the wells showed gas with water.

### Seismic surveys

Within Drohobyska block 2D seismic has been conducted during 1981-1993 (85/52, 57/89, 52/91 57/91, 57/93).

Seismic surveys

Year of surveys	Number of lines	Number of linear km	Fold
1985	14	114,3	12-24
1989	16	140,258	12-24
1991	14	166,373	12-24
1993	3	19,186	12

## EXPLORATION WORK PROGRAM REQUIREMENTS

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

Stage II (12 months) – acquisition of 2D or 3D seismic data on 1/4 of the block's area;

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

## REPORTS

The search and preparation of oil and gas prospecting objects in the Bilko-Volytsky zone of the PreCarpathian Foredeep. "Report on the results of the seismic surveys of the common depth point shooting in Turynska (team No.52/89), Khymchinska and Putylska (team No.53/89), Dobrotovsky (team No./89), Grynivska (No.56/89), Tvirzhska and Dobrylyanska (team No.57/89) areas and vertical seismic profiling in deep wells (team No. 60/89), carried out in 1989-1991 by Yanyshyn Y.I., 1991. Report on the results of seismic exploration works on the Dobryansko-Chernivtsi-Kiblyarska area of the Carpathian region carried out in 1993-1995 by the teams 51/93, 52/93, 53/93, 54/93, 56/93, 57/93, 59/93, 60/93. Borsuk V.A., Charnosh M.M. 1995.

BLOCK 16

DROHOBYTSKA LICENSE

Map of geophysical surveys and seismic lines



MAP SYMBOLS

- 1:25 000

1:50 000

1:100 000

geophysical survey

seismic lines
- DROHOBYTSKA BLOCK

survey with no mapping
- 51238 report number

Павлюк В.А. author of the report

1988 year of the report

### Data on wells drilled within Drohobyska block

Name and No. of the well	Altitude, m	Depression, m (horizon)	Testing result
1-Dorozhiv	284,2	4310 (N1stb)	-
1-Roliv	293,5	4611(ГA)	3734-3513 m (HД-16) reservoir water with clay solution
13-Hrushiv	268,8	2377 (J)	2240-2215 m (N1s) gas and water 2005-1980 m (N1s) water
14-Hrushiv	272,2	3882 (N1s)	3100-2820 м (N1s) – water
1-Mykhaylevychi	275,6	3050	-
2-East Dovhivska	269,1	2054 (N1s HД-13)	1863-1896 m (HPД-12) water with the release of combustible gas 1914-1950 m (HД-12) Qr – 6,4 ths.m <sup>3</sup> /d, aerated water; 1945-2000 м (HД-12,13) Qr- 4,08 ths.m <sup>3</sup> /d; 2016-2024 m (HД-12,13) water
4-East Dovhivska	282,7	1950 (N1s)	1718-1766 m (HД-13) Qr – 1,3 ths.m <sup>3</sup> /d, 1558-1530 m (HД-12) Qr – 1,76 ths.m <sup>3</sup> /d, 1456-1453 m (HД-11) Qв – 37,2 m <sup>3</sup> /d
6-East Dovhivska	279,0	1950 (N1s)	1733-1781 m (HД-12) water with gas 1795-1848 m (HД-12) gas flare 1896-1911 m (HД-13) water with gas
2-South Opary	282,2	3137 (J)	3040-3014 m (J) dry 2450-2415 m (N1s) gas was released 2380-2307 m (N1s) water with gas 2252-2242 m (N1s) water with gas 2220-2180 m (N1s)water 2190-2180 m (N1s) water with gas
3- South Opary	312,8	3229 (N1s HД-16)	well is flooded
1- Nezhukhivska prospecting well	310,4	2080 (J3)	2042,5-2080 m (J3) reservoir water





## **GEOLOGICAL CHARACTERISTICS**

Kadobnianske deposit belongs to the central part of Kosiv-Uhersk subzone of the Bilche-Volytska zone of the Precarpathian depression. Gas bearing capacity of the sandy deposits of the lower Sarmatian stage (3 horizons) and the upper Tortonian stage (8 horizons) has been discovered by the exploration works conducted in the period from 1946 to 1956. The horizons of the lower Sarmatian stage are embedded at a depth of 158-420 meters, and the upper Tortonian stage at 454-1075 meters.

Trial exploitation of the deposit began in late 1955 from the Sarmatian and the Baden deposits and ended with the elimination of wells due to their depletion during 1956-1983. 1013,205 million m<sup>3</sup> of natural gas was extracted in the field from the beginning of the commercial development.

In 1983, for the purpose of creating the underground gas storage, natural gas has been injected to the Baden deposits of the field. In the underground storage mode, the gas deposit with a small amount of gas injection and run worked during 1984-2001.

The target at Kadobnianska field is the exploration of natural gas deposits in Tortonian (N1t) and Sarmatian (N1s) sediments.

## **SURVEY INFORMATION AVAILABLE**

### **Assessment of hydrocarbon resources (Ukrainian classification)**

During 2003-2011, JSC "Ukrgezvydobuvannya", which possessed the license for this deposit expanded contingent resources of the natural gas in the field to 107 million m<sup>3</sup> (subcategory C 2). Also the field includes inferred resources with density 10-20 billion m<sup>3</sup> per 1 sq. km.

### **Well data**

The total exploration drilling footage at Kadobnianska block is 23,846 linear meter.

### **Seismic surveys**

Year of surveys	Number of lines	Number of linear km	Fold
1989	1	9,5	12
1991	1	5,0	12
1992	9	67,1	12-24
2002	7	42,5	24
2014	1	7,0	40

## **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 1/4 of the block's area;

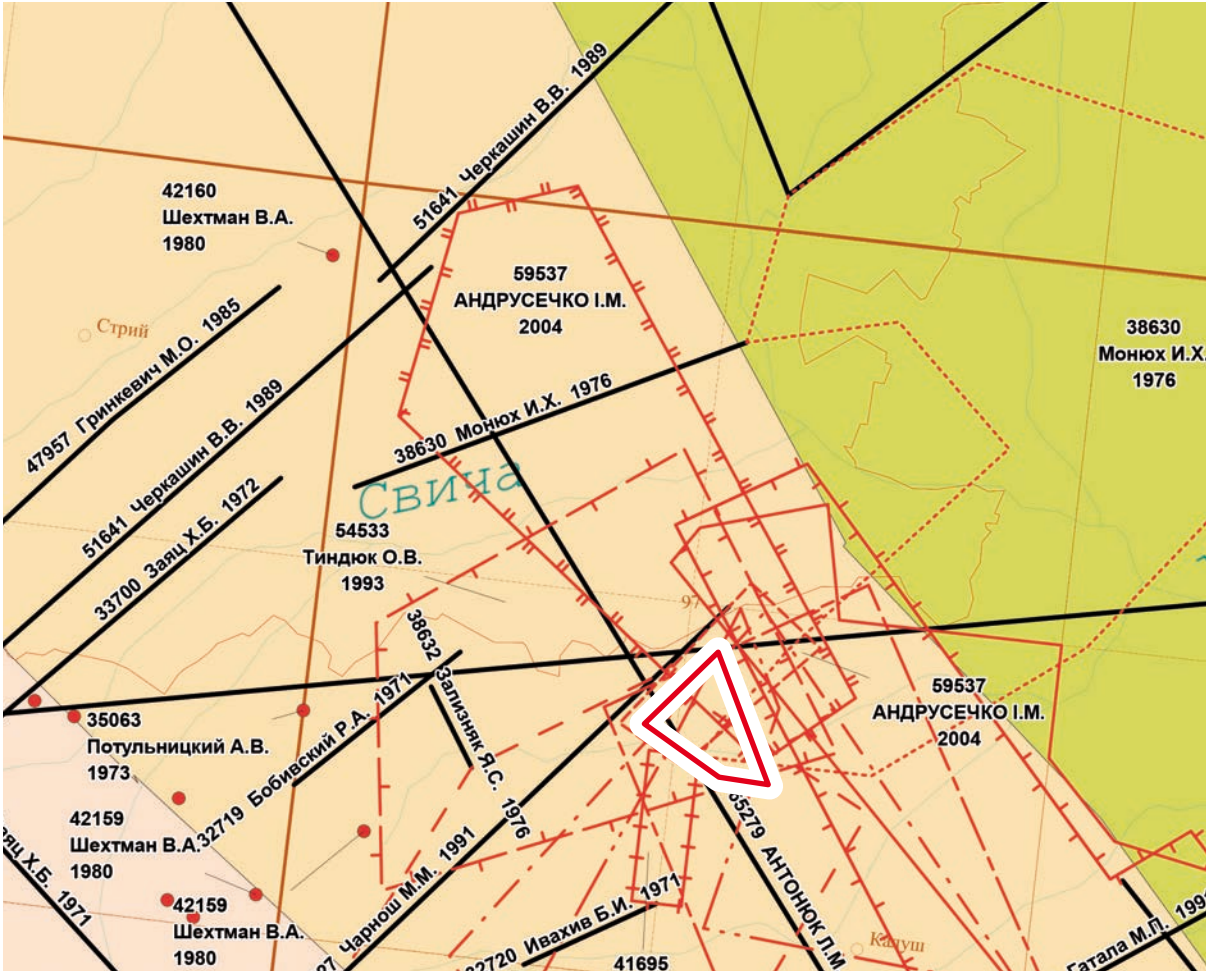
Stage III (24 months) – one productive well drilling.



BLOCK 17

KADOBNIANSKA LICENSE

Map of geophysical surveys and seismic lines



MAP SYMBOLS

- 1:25 000

1:50 000

1:100 000

geophysical survey

seismic lines
- KADOBNIANSKA BLOCK

survey with no mapping
- 51238 report number

Павлюк В.А. author of the report

1988 year of the report

# LICENSING PROCEDURE IN PROZORRO.SALE ONLINE SYSTEM

## STAGE I

Announcement of the auction and opening of acceptance of applications

90  
days

- The announcement is published by the State Geological Service of Ukraine on the official website ([www.geo.gov.ua](http://www.geo.gov.ua)) and by state enterprise ProZorro.Sale online system on its website ([www.zakupki.prom.ua](http://www.zakupki.prom.ua)).
- The auction data packages are posted on various electronic trading platforms, accredited by ProZorro.Sale – as the Ukrainian Energy Exchange (<https://sale.ueex.com.ua>).
- The trading platforms provide information publicly for free about the auction procedure and blocks.
- The description includes type of license, block location, reserves and resources evaluation, starting price of the bid, price of the geological data and auction documentation, which has to be paid only by the winner of the auction.

## STAGE II

Closing of acceptance of applications

1  
day

- The participant should be a resident company (Ukrainian legal entity) and is mandated to pay the guarantee fee at 20% of the starting price of the bid.
- Applicants have to submit an offer in one of electronic trading platforms, accredited by ProZorro.Sale. The names of the applicants are kept in the confidence till the end of the auction.

## STAGE III

Conducting the auction and selection of the winner

8  
days

- The auction procedure consists of one close and three open rounds. Everyone sees the results of close round only after all participants called out. A participant who gave the highest price has the right to make offer last in next open round.
- During the open rounds every participant has three minutes to make a decision one by one.
- A participant, who gave the lowest offer in previous round, has to make a decision first. A participant, who gave the highest offer in previous round, has to make a decision last.
- The participant with the highest price offer (cash bonus) wins the auction. If the winner refuses to pay, the participant that takes the second place in the auction is considered the winner.

## STAGE IV

Protocol signing

30  
days

- The auction protocol is signed by the winner, ProZorro.Sale, trading platform and the State Geological Service of Ukraine and further publishing online, while other participants have their guarantee fees returned.

## STAGE V

Granting a license

- Within 30 business days after the auction, the winner signs an agreement with the State Geological Service of Ukraine, pays the difference between the guarantee fee and final offer, price of geological data and auction documentation.

**Within 40 business days the winner has to contact the State Geological Service to obtain the license.**

### Contacts for obtaining information

Type of Data	Description	Contacts
<b>Coordination</b>	Organization of the auctions and coordination of state geological data disposal	<b>State Geological Service of Ukraine</b> Head of Permitting and International Relations Department +38 044 536-13-20 dozvilnadra@ukr.net Head of the Auction Department +38 044 456-60-56 auction@geo.gov.ua
<b>Seismic surveys</b>	Review of the reports is free of charge at the state enterprise Ukrgeofizyka.  Acquisition of the right to use of data is possible upon request to the State Geological Service of Ukraine. Cost shall be determined after evaluating the amount of data requested.	<b>Ukrgeofizyka</b> Chief geologist +38 044 453-38-02 info@ukrgeofizika.com.ua
<b>Well data</b>	Review of the reports is free of charge at the state enterprise Geoinform of Ukraine.  Public register of oil and gas wells is at the link below: <a href="http://geoinf.kiev.ua/wp/sverdlovini.php">http://geoinf.kiev.ua/wp/sverdlovini.php</a>  Logging data is provided by the Ukrainian State Geological Prospecting Institute upon the request. Acquisition of the right to use of data is possible upon request to the State Geological Service of Ukraine. Cost shall be determined after evaluating the amount of data requested.	<b>Geoinform of Ukraine</b> Chief geologist +38 044 456-21-84 geoinf@geomail.kiev.ua  <b>Ukrainian State Geological Prospecting Institute</b> Deputy director +38 044 430-70-26 gv@ukrdgri.gov.ua
<b>Geological reports</b>	Review of the reports is free of charge at the state enterprise Geoinform of Ukraine.	<b>Geoinform of Ukraine</b> Chief geologist +38 044 456-21-84 geoinf@geomail.kiev.ua
<b>Licensed blocks data</b>	Public map of licensed blocks is on the links below: <a href="http://www.geoinf.kiev.ua/wp/interaktyvni-karty-spetsdozvoliv.htm">www.geoinf.kiev.ua/wp/interaktyvni-karty-spetsdozvoliv.htm</a> <a href="http://www.minerals-ua.info/mapviewer/goruchi.php">www.minerals-ua.info/mapviewer/goruchi.php</a>	<b>Geoinform of Ukraine</b> Chief geologist +38 044 456-21-84 geoinf@geomail.kiev.ua
<b>Land tracts</b>	Public land tracts map is on the link below: <a href="http://www.map.land.gov.ua/kadastrova-karta">www.map.land.gov.ua/kadastrova-karta</a>	<b>State Service of Ukraine for Geodesy, Cartography and Cadastre</b> +38 044 244-82-47 land@land.gov.ua
<b>Environmental Impact Assessment</b>	It is necessary to conduct an EIA within a year after awarding a petroleum license	<b>Ministry of Ecology, EIA Department</b> +38 044 206-20-89 m.shimkus@menr.gov.ua



