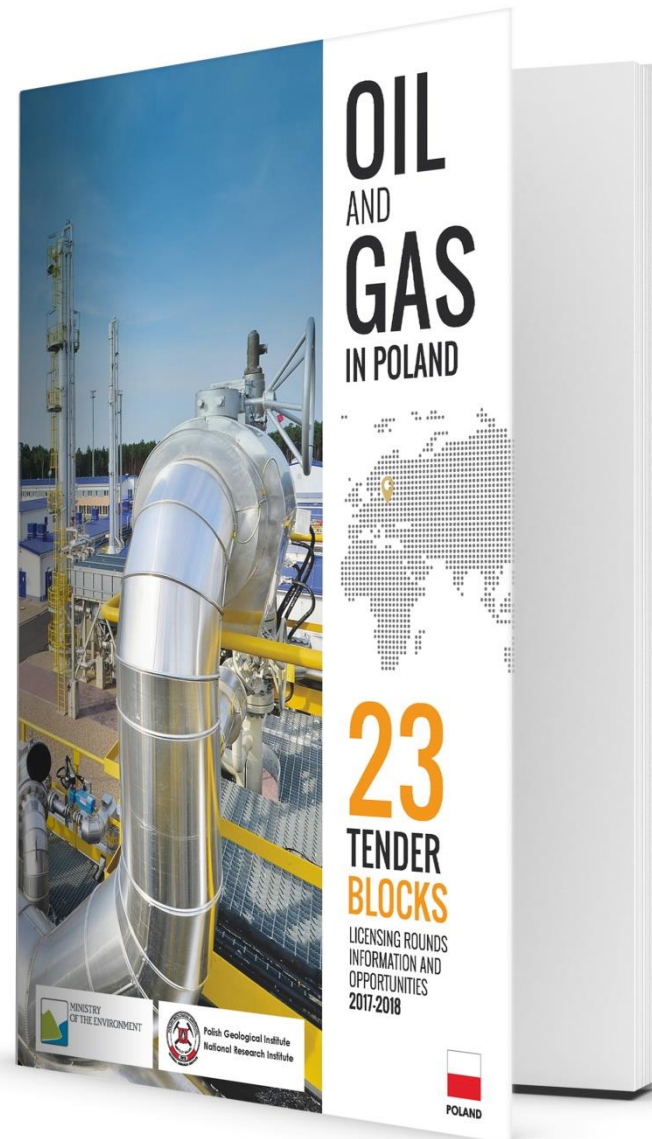


OIL AND GAS IN POLAND:

LICENSING ROUNDS, TENDER BLOCKS, INFORMATION AND OPPORTUNITIES IN 2018

MARCIN **JANAS**
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HUBERT **KIERSNOWSKI**
MARCIN **WESOŁOWSKI**
GRZEGORZ **MAKUCH**



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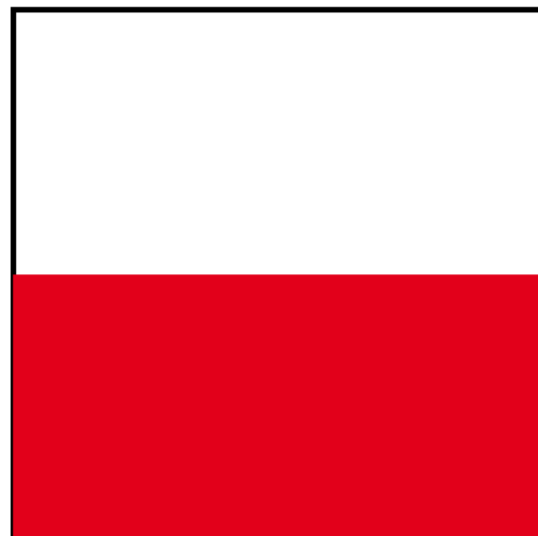
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POLAND

HOW TO GET THE LICENSE IN POLAND?



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LICENSING PROCEDURE IN POLAND

- **SELECTION OF TENDER BLOCKS** and announcement of planned licensing rounds dedicated to prospection, exploration and exploitation of hydrocarbons

Polish Geological Survey, Ministry of the Environment
First half of each year

- **Your move – undergo the qualification procedure!**
One time, valid for 5 years (can be extended)

- **CALL FOR TENDER!** Publication of a notice in the Official Journal of EU and publication of the tender blocks information packages on official web page of the Ministry of the Environment

Ministry of the Environment, Polish Geological Survey
Second half of each year
(May 2018 for round 2 and Q4 2018 for round 3)

- **Your move - prepare and submit an offer!**
At least 90 days after call

see: <http://eur-lex.europa.eu/oj/direct-access.html>

<https://bip.mos.gov.pl/koncesje-geologiczne/przetargi-na-koncesje-na-poszukiwanie-rozpoznawanie-i-wydobywanie-weglowodorow/>

<https://www.pgi.gov.pl/obszary-przetargowe/>

**OIL
AND
GAS
IN POLAND**



LICENSING PROCEDURE IN POLAND

→ **COLLECTION OF OFFERS, their evaluation and selection of the most favorable ones** Ministry of the Environment

Bids received will be evaluated on the basis of the following criteria:

(the numbers may change)

- 30 % — **financial** capacities,
(sources and methods of financing the intended activities, including the share of own funds and external financing)
- 25 % — **technical** capacities,
(technical, organisational, logistical and human resources potential)
- 20 % — scope and schedule of the **geological works**,
- 10 % — **experience** in the prospection/exploration/extraction of hydrocarbon deposits,
- 10 % — the proposed **technology** for conducting geological works,
(i.e. innovative elements developed for project)
- 5 % — scope and schedule of the mandatory collection of **samples** (i.e. drill cores).

→ **GRANTING OF LICENSE and the conclusion of the agreement on the establishment of the mining usufruct**
Ministry of the Environment

→ **Your move - explore!**

**OIL
AND
GAS
IN POLAND**



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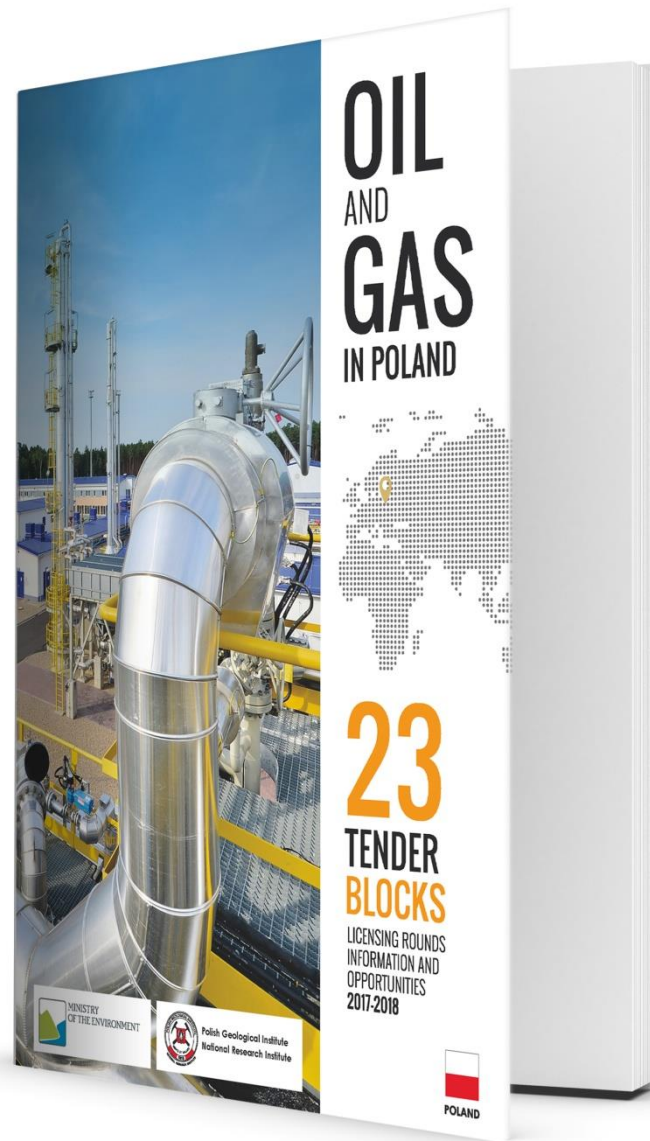


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CALL FOR TENDER BLOCKS LICENSING ROUND 2

START: 8th of May 2018

DEADLINE: 7th of August 2018



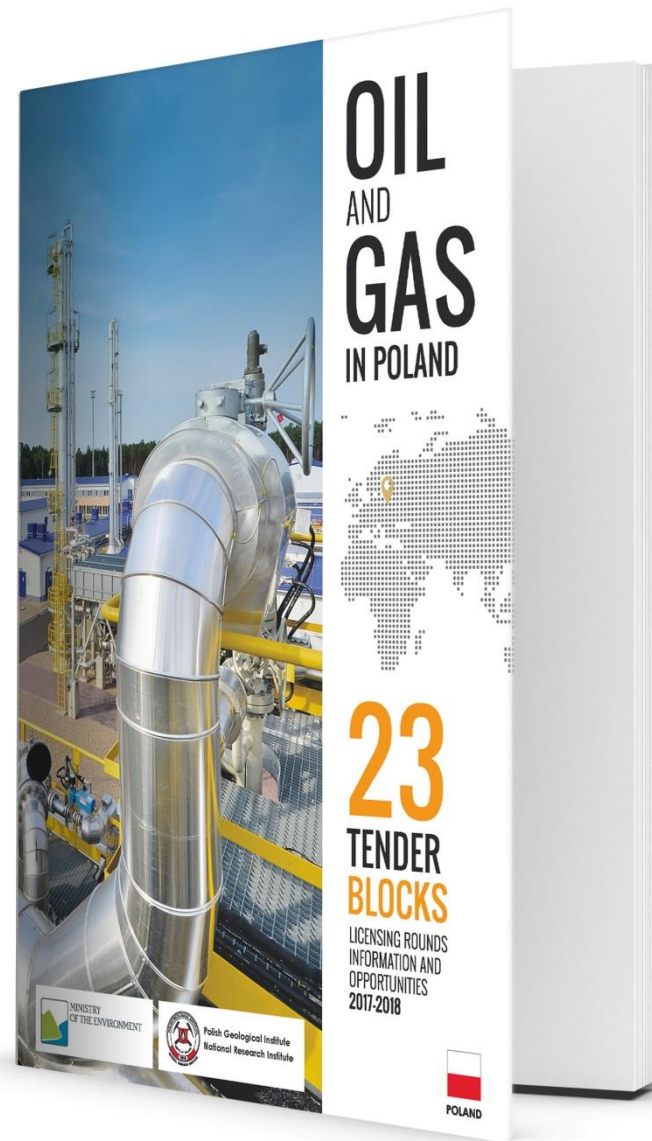
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CALL FOR TENDER BLOCKS LICENSING ROUND 3

START: Q4 2018



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No.	Block name	Licensing rounds time frame	Exploration target
1	Bochnia	May 2018	Conventional: Carpathians, Carpathian Foredeep, Palaeozoic-Mesozoic basement
2	Damnica	May 2018	Conventional: Middle Cambrian; Unconventional: shale oil and gas in Lower Palaeozoic
3	Debrzno-Człuchów	May 2018	Conventional: Devonian, Carboniferous and Permian (Rotliegend and Zechstein/Main Dolomite); Unconventional: tight gas in Permian (Rotliegend)
4	Koszalin-Polanów	May 2018	Conventional: Devonian, Carboniferous and Permian (Rotliegend and Zechstein/Main Dolomite)
5	Sucha Beskidzka-Wiśniowa	May 2018	Conventional: Carpathians, Carpathian Foredeep, Palaeozoic-Mesozoic basement
6	Szamotuły-Poznań Północ	May 2018	Conventional: Carboniferous and Permian (Rotliegend and Zechstein/Main Dolomite); Unconventional: tight gas in Carboniferous and Permian (Rotliegend)
7	Złotów-Zabartowo	May 2018	Conventional: Permian (Rotliegend and Zechstein/Main Dolomite); Unconventional: tight gas in Permian (Rotliegend)
8	Żarnowiec	May 2018	Conventional: Middle Cambrian and Permian (Zechstein/Main Dolomite); Unconventional: shale oil and gas in Lower Palaeozoic

OIL AND GAS IN POLAND



23 TENDER BLOCKS IN 2018

8 BLOCKS 2nd ROUND



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No.	Block name	Licensing round time frame	Exploration target
9	Błazowa	in preparation	Conventional: Carpathians, Carpathian Foredeep, Palaeozoic-Mesozoic basement
10	Braniewo-Miłakowo	in preparation	Conventional: Middle Cambrian; Unconventional: shale oil and tight oil in Lower Palaeozoic
11	Bytów	in preparation	Conventional: Lower and Middle Cambrian; Unconventional: shale gas in Lower Palaeozoic
12	Chełmno	in preparation	Conventional: Devonian, Carboniferous and Permian (Rotliegend and Zechstein/Main Dolomite)
13	Chodzież	in preparation	Conventional: Permian (Rotliegend); Unconventional: tight gas in Permian (Rotliegend)
14	Konin	in preparation	Conventional: Jurassic and Lower Cretaceous
15	Leszno	in preparation	Conventional: Carboniferous and Permian (Rotliegend and Zechstein/Main Dolomite)
16	Orle	in preparation	Conventional: Carboniferous and Permian (Rotliegend and Zechstein/Main Dolomite)
17	Piła	in preparation	Conventional: Permian (Rotliegend); Unconventional: tight gas in Permian (Rotliegend)
18	Proszowice W	in preparation	Conventional: Upper Jurassic and Lower Cretaceous
19	Rudnik-Lipiny	in preparation	Conventional: Carpathian Foredeep
20	Ryki	in preparation	Conventional: Upper Devonian and Carboniferous; Unconventional: tight gas in Upper Devonian
21	Sierpowo	in preparation	Conventional: Devonian, Carboniferous and Permian (Rotliegend and Zechstein/Main Dolomite)
22	Wejherowo	in preparation	Conventional: Middle Cambrian; Unconventional: shale oil, shale gas and tight gas in Lower Palaeozoic
23	Wetlina	in preparation	Conventional: Carpathians

23 TENDER BLOCKS IN 2018

15 BLOCKS 3rd ROUND

OIL AND GAS IN POLAND



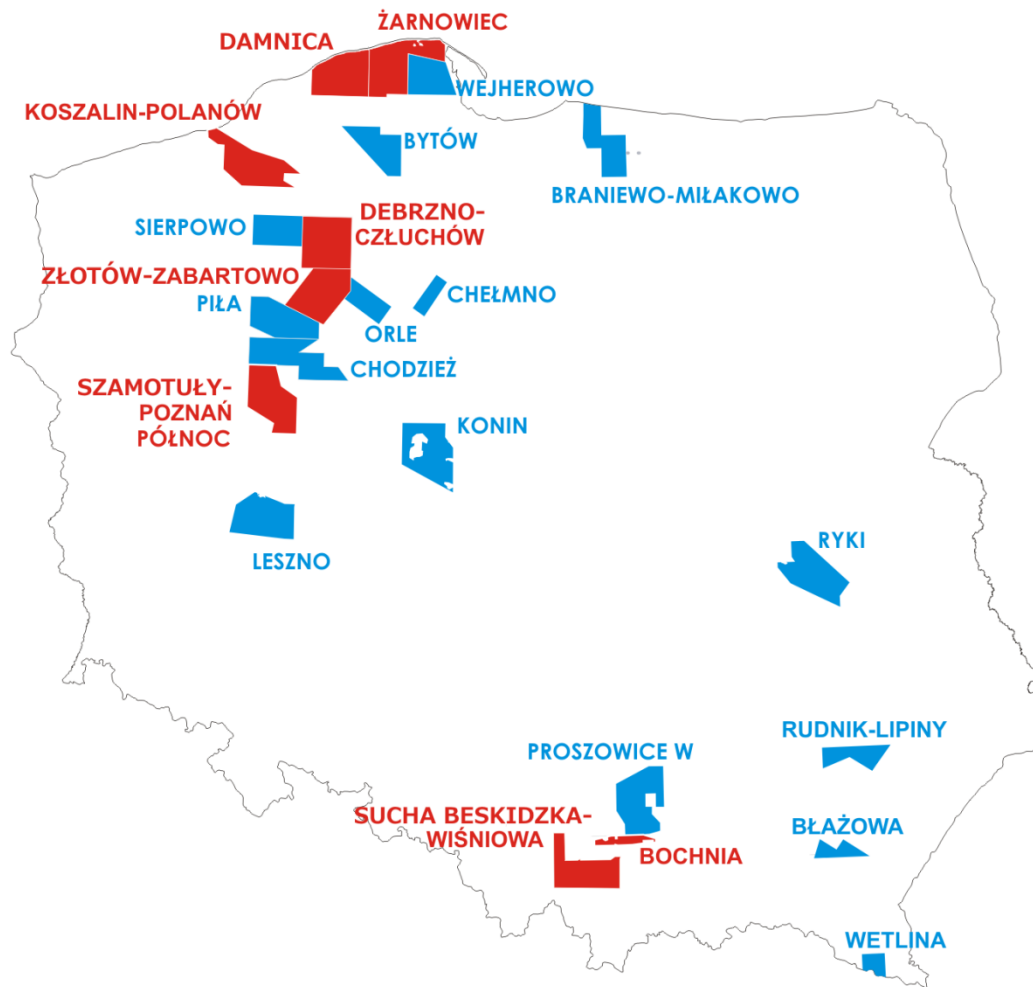
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WHERE TO PROSPECT AND EXPLORE HYDROCARBONS IN POLAND?





OIL AND GAS IN POLAND



23 TENDER BLOCKS IN 2018

8 BLOCKS 2nd ROUND

15 BLOCKS 3rd ROUND



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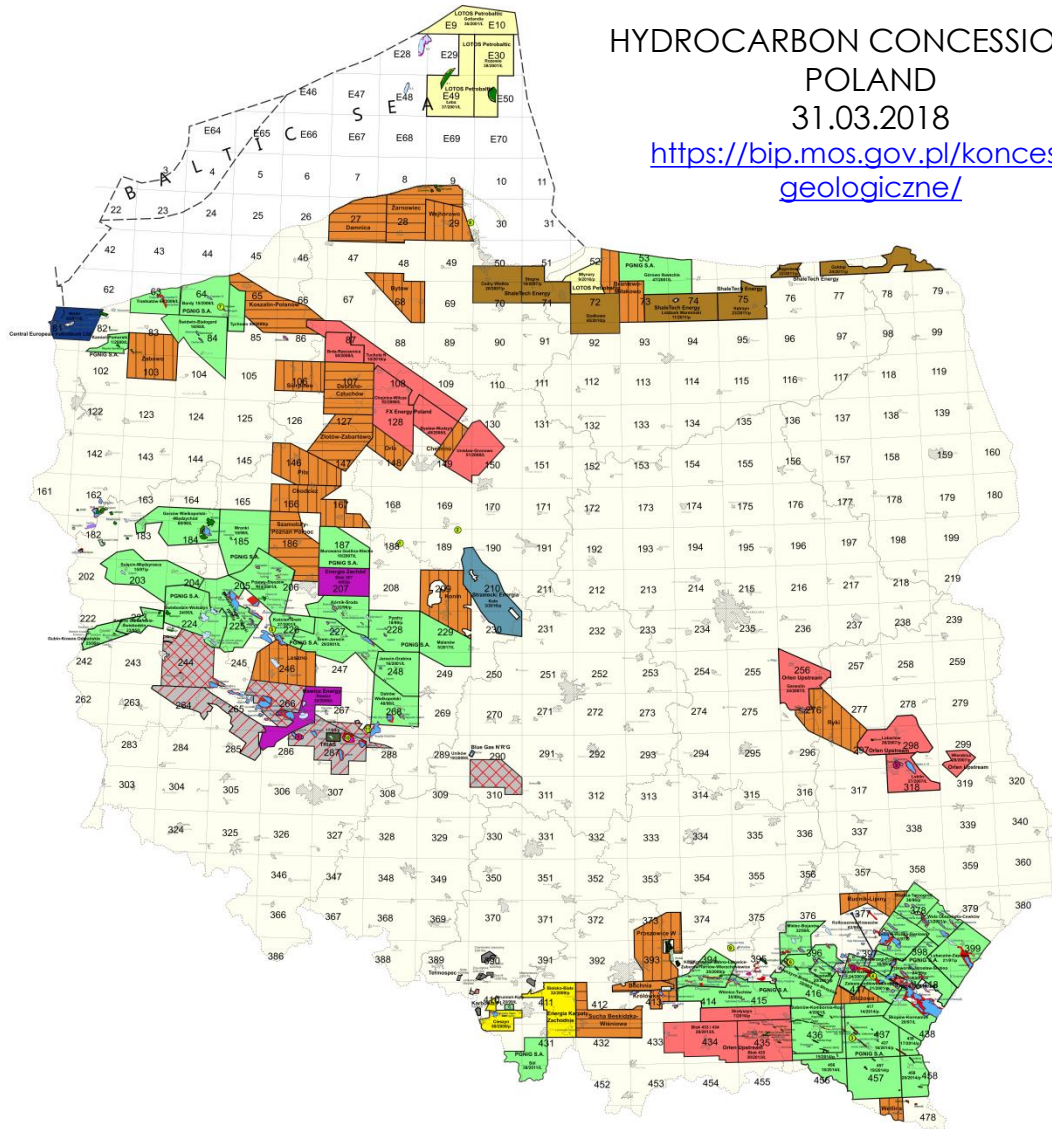


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HYDROCARBON CONCESSIONS IN POLAND

31.03.2018

<https://bip.mos.gov.pl/koncesje-geologiczne/>



OIL AND GAS IN POLAND



23 TENDER BLOCKS IN 2018
8 BLOCKS 2nd ROUND
15 BLOCKS 3rd ROUND



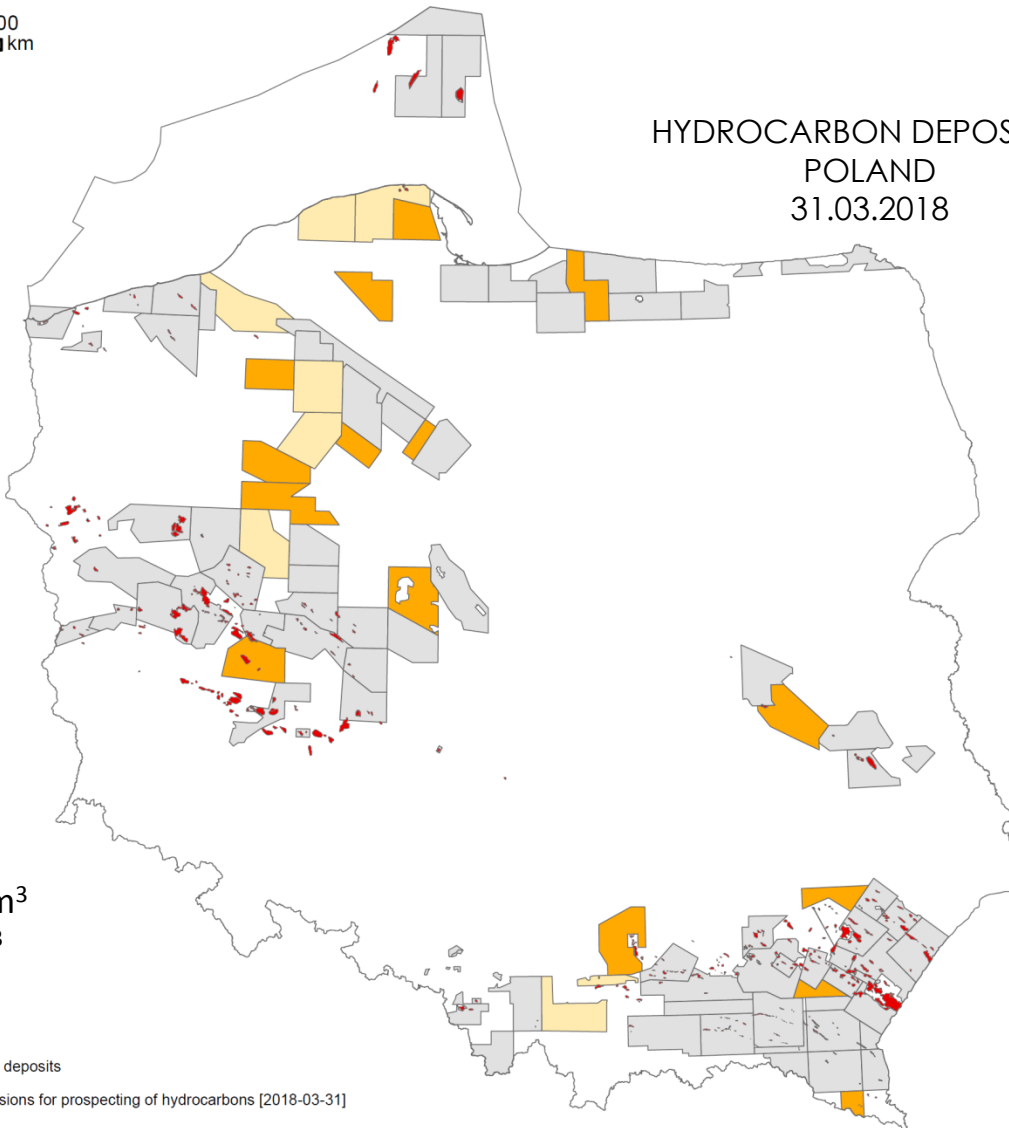
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0 50 100 km

HYDROCARBON DEPOSITS IN POLAND 31.03.2018



86 oil fields
Resources: 22 mln t
Production: 1 mln t
293 gas fields
Resources: 120 bn m³
Production: 5 bn m³

 hydrocarbon deposits
 valid concessions for prospecting of hydrocarbons [2018-03-31]

OIL AND GAS IN POLAND



23 TENDER BLOCKS IN 2018

8 BLOCKS 2nd ROUND

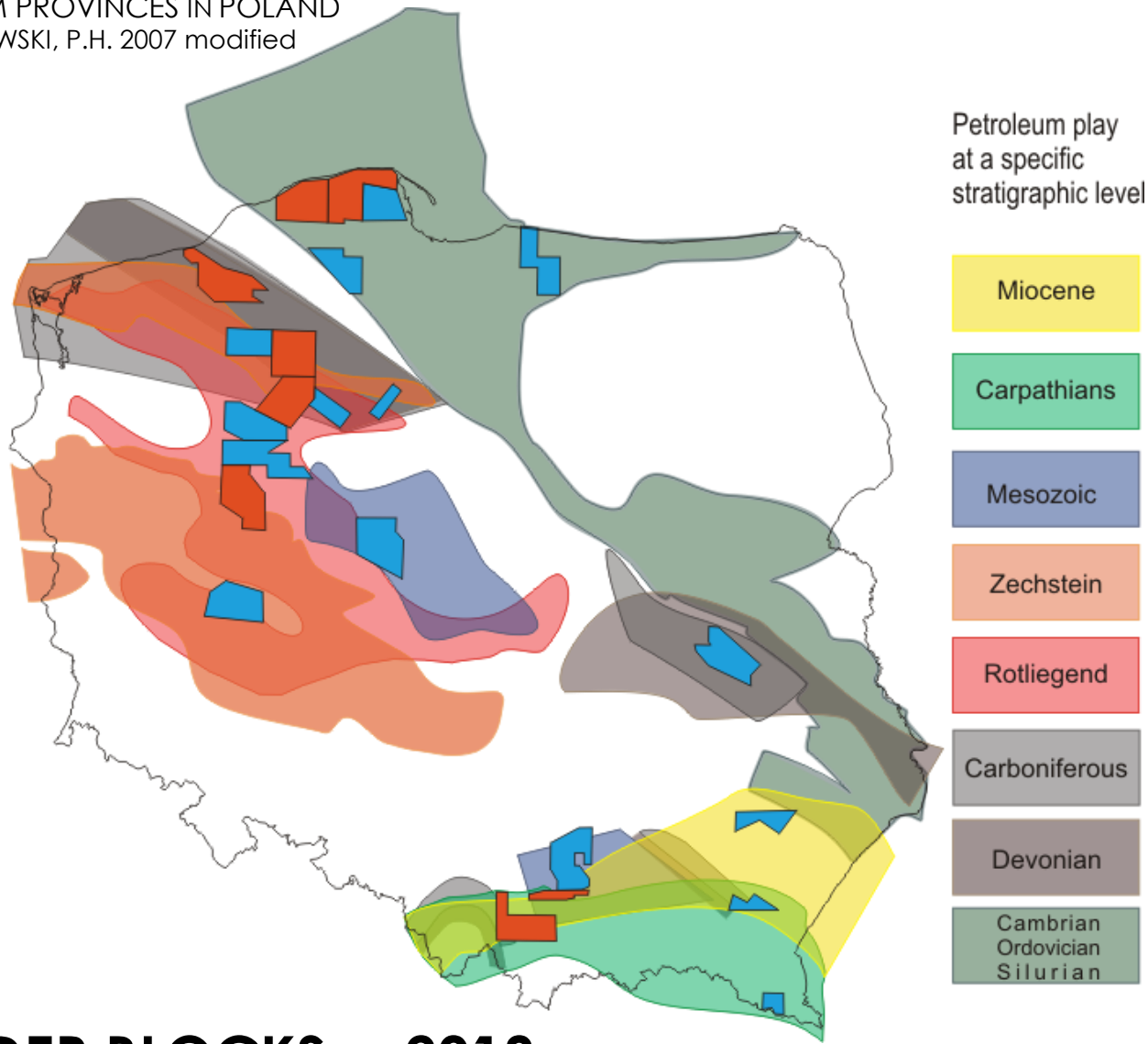
15 BLOCKS 3rd ROUND



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OIL AND GAS IN POLAND



23 TENDER BLOCKS IN 2018

8 BLOCKS 2nd ROUND

15 BLOCKS 3rd ROUND

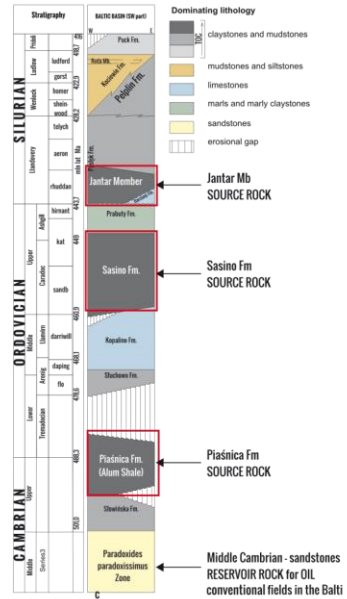


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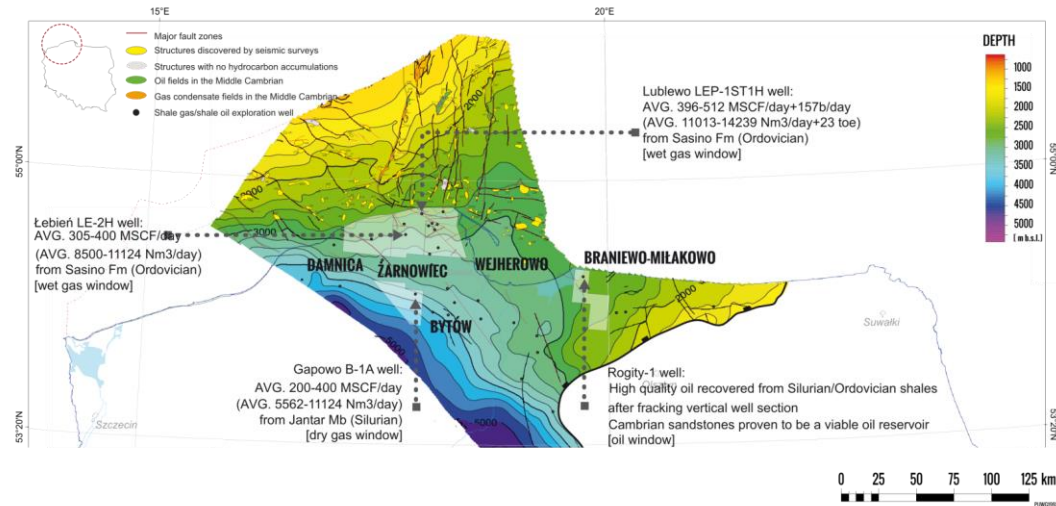
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EXPLORATION TARGETS IN THE POLISH PART OF THE BALTIC BASIN



STRUCTURAL MAP OF THE BOTTOM OF SASINO FM
GŁUSZYŃSKI, A. 2016

STRUCTURAL MAP OF THE BOTTOM OF SASINO FM (ORDOVICIAN)



OIL AND GAS IN POLAND



LOWER PALAEOZOIC (SHALE GAS, SHALE OIL, TIGHT GAS, TIGHT OIL)










2 BLOCKS 2nd ROUND
3 BLOCKS 3rd ROUND



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-  Upper Moscovian-Gzhelian
-  Upper Bashkirian-Middle Moscovian
-  Serpukhovian and Lower Bashkirian
-  Viséan
-  Upper Mississippian and Pennsylvanian
-  Lower and Middle Mississippian
-  Carboniferous - magmatic and volcanic
-  Carboniferous - granitoids
-  Upper Devonian
-  Middle Devonian
-  Lower Devonian
-  Devonian
-  Silurian
-  Ordovician+Silurian
-  Ordovician
-  Cambrian-Devonian
-  Cambrian + Silurian
-  Cambrian
-  Cambrian - cataclasites
-  Neoproterozoic-Silurian
-  Proterozoic

GEOLOGICAL MAP OF POLAND
WITHOUT CAENOZOIC, MESOZOIC AND PERMIAN
POŻARYSKI, W., DEMBOWSKI, Z. 1983



OIL AND GAS IN POLAND



DEVONIAN AND CARBONIFEROUS

5 BLOCKS 2nd ROUND
6 BLOCKS 3rd ROUND



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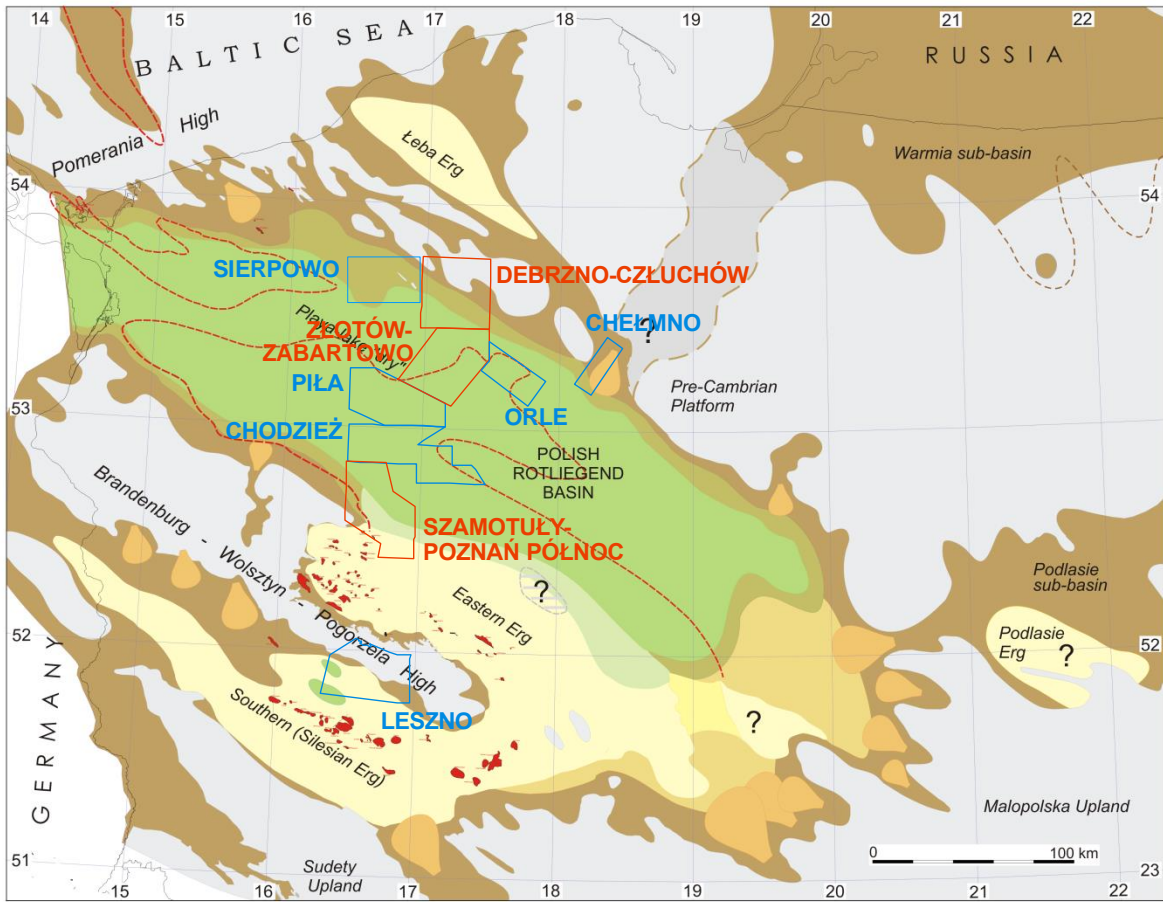


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- play-lake mudstones, claystones and fine grained sandstones
- play-lake margin mudstones and fine grained sandstones interbedded with aeolian sandstones
- alluvial and fluvial sandstones and mudstones interbedded with aeolian sandstones
- aeolian dune and interdune sandstones
- source areas without Rotliegend sedimentary cover
- play-lake margin mudstones and fine grained sandstones
- alluvial fan and plain sandstones and conglomerates

**ROTLIEGEND.
PETROLEUM
GEOLOGICAL ATLAS
OF THE SOUTHERN
PERMIAN BASIN AREA**

GAST, R., DUSAR, M.,
BREITKREUTZ, CH.,
GAUPP, R.,
SCHNEIDER, J.W.,
STEMMERIK, L., GELUK,
M., GEISSLER, M.,
KIERSNOWSKI, H.,
GLENNIE, K., KABEL, S.,
JONES, N. 2010



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ROTLIEGEND

3 BLOCKS 2nd ROUND
6 BLOCKS 3rd ROUND



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- A. Land
- low-relief land
 - hilly land
 - presumed direction of terrigenous material transport

B. Platform/isolated carbonate platform (shallow shelf)

- carbonate platform
- ooid-oncoid shelf-edge barrier
- ooid-oncoid shoal within carbonate plat
- high-energy carbonate platform
- low-energy carbonate platform
- lagoon

C. Subaerial part of carbonate platform

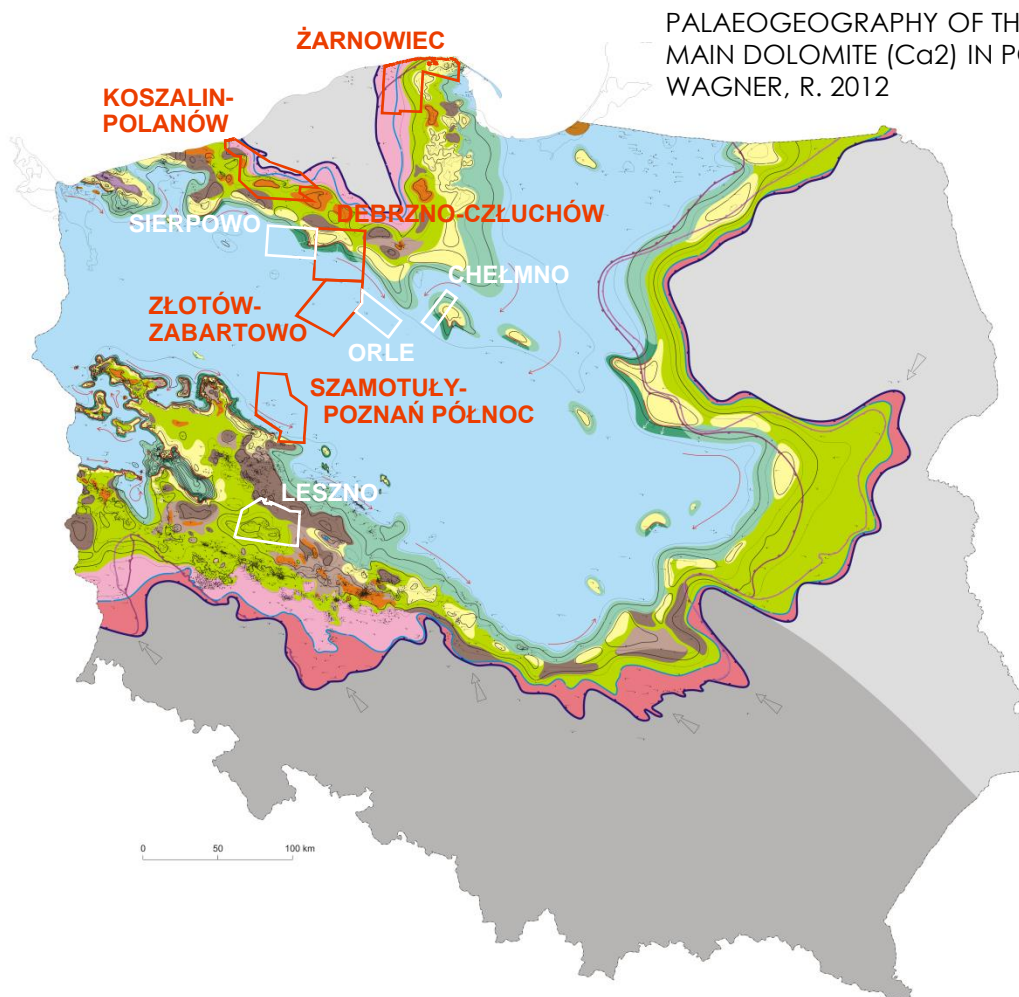
- sulfate-carbonate sabkha
- sulfate-siliciclastic sabkha

D. Slope of carbonate platform

- gentle slope
- steep slope
- zone of gravity flows
- supposed paleocurrent direction

E. Basin plain (deep shelf)

- shallow part
- deep part
- shoal
- boreholes with Main Dolomite
- boreholes without Main Dolomite
- carbonate platform edge
- palaeoizopachs in m
- pre-erosional range of Ca2
- pre-erosional range of PZ2 cyclotheme
- range of complete erosion of Ca2 and f
- range of partial erosion of Ca2



PALAEO GEOGRAPHY OF THE ZECHSTEIN / MAIN DOLOMITE (Ca₂) IN POLAND
WAGNER, R. 2012

OIL AND GAS IN POLAND



ZECHSTEIN (MAIN DOLOMITE)

5 BLOCKS 2nd ROUND

4 BLOCKS 3rd ROUND

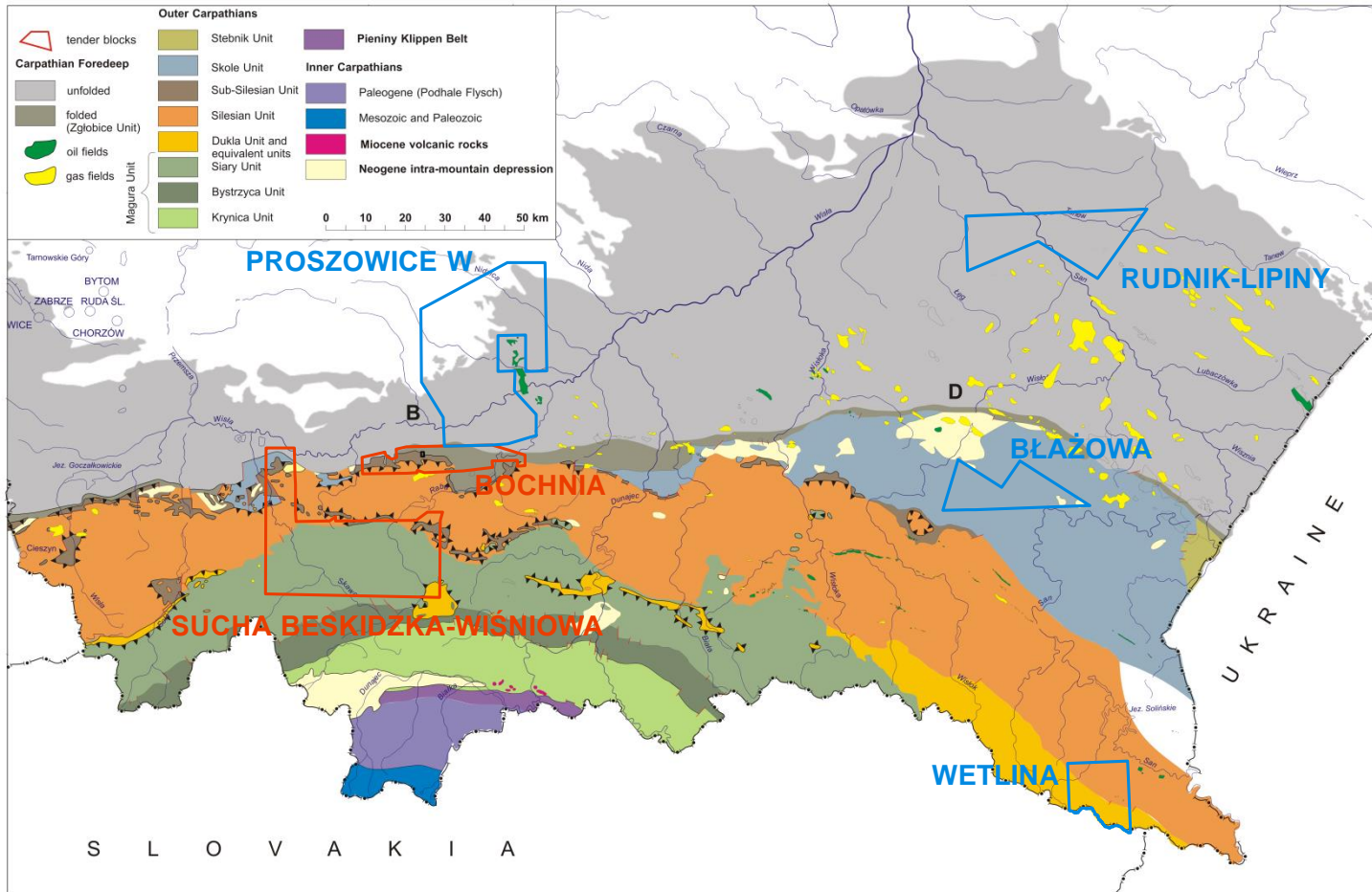


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RECONSTRUCTION OF THE PETROLEUM PLAYS IN OUTER CARPATHIANS. POPRAWA, P. 2010



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CARPATHIANS AND CARPATHIAN FOREDEEP

2 BLOCKS 2nd ROUND

4 BLOCKS 3rd ROUND



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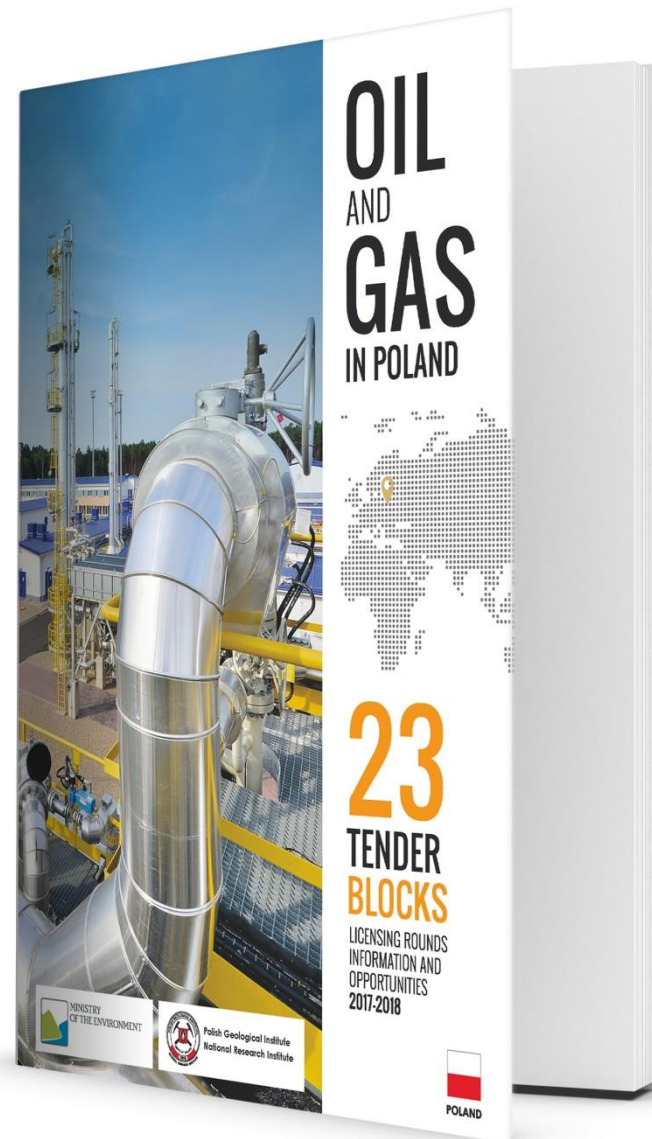
<http://eur-lex.europa.eu/oj/direct-access.html>

<https://bip.mos.gov.pl/koncesje-geologiczne/przetargi-na-koncesje-na-poszukiwanie-rozpoznawanie-i-wydobywanie-weglowodorow/>

<https://www.pgi.gov.pl/obszary-przetargowe/>

www.mos.gov.pl

www.pgi.gov.pl



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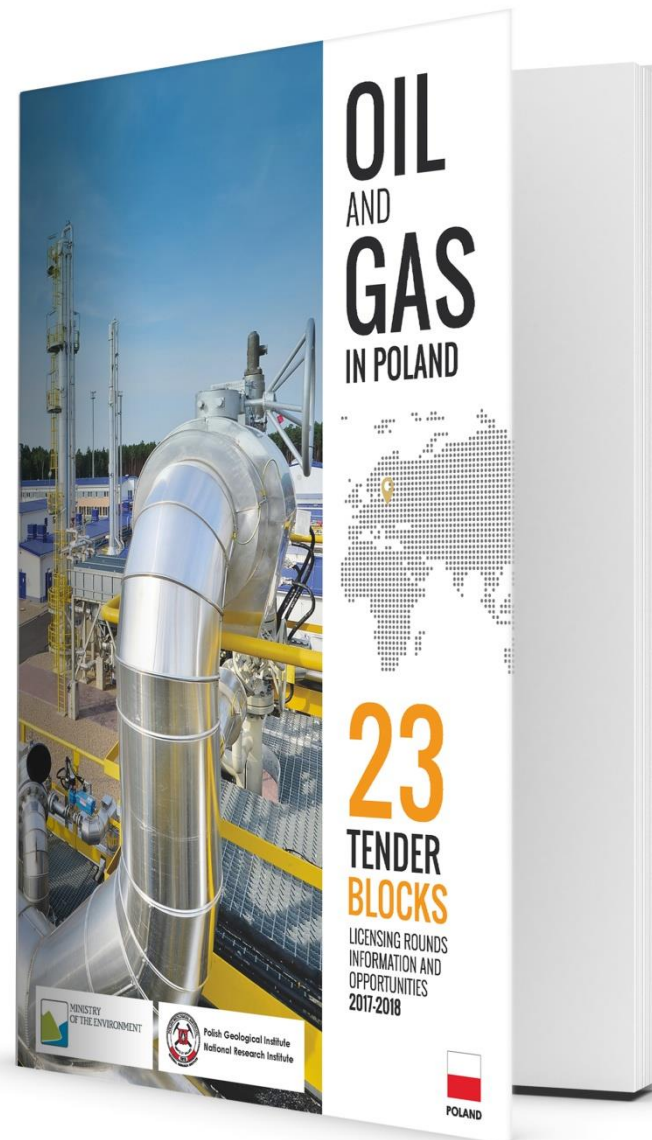
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