Go to Table of Contents

Go to index map

Foreland Basin
Assessment Unit 40470101

Foreland Basin Assessment Unit 40470101

North Carpathian Basin Geologic Province 4047

Geologic Summary

Detailed map of this assessment unit

Exploration/Discovery-History Data

- Plots of Known Field Sizes
- Plots of Grown Resources
- Tables

Assessment Input Data

Assessment Results

- Assessment Unit Summary
- Detailed Assessment Results
- Undiscovered Field-Size Distributions

USGS PROVINCE: North Carpathian Basin (4047) **GEOLOGIST:** M.J. Pawlewicz

TOTAL PETROLEUM SYSTEM Isotopically Light Gas (404701)

ASSESSMENT UNIT: Foreland Basin (40470101)

DESCRIPTION: This unit is defined by all Miocene molasse sediments in the North Carpathian Foredeep.

SOURCE ROCKS: Source rocks are various Type III organic matter rich facies in the Miocene molasse sediments.

MATURATION: Thermal maturation/temperature presently is at historical maximum; below the threshold of thermogenic gas.

MIGRATION: Migration is short vertical and horizontal distances, probably a maximum of 5 km.

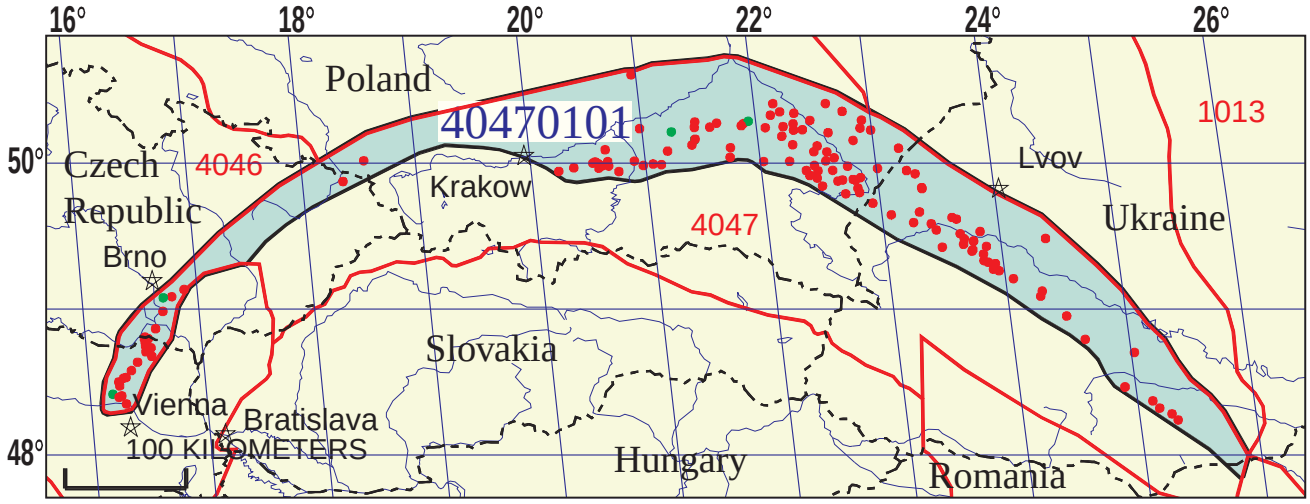
RESERVOIR ROCKS: Reservoir rocks are sandstone and siltstone units in the Miocene molasse.

TRAPS AND SEALS: Traps are stratigraphic traps and facies changes in the molasse sediments**.** Seals are also primarily from facies changes where shale and claystones overlie more coarse sediments.

REFERENCES:

Kotarba, M., 1992, Bacterial gases in Polish part of the Carpathian Foredeep and the Flysch Carpathians–Isotopic and geological approach, bacterial gas, p. 133-46.

Kotarba, M., and others, 1998, Model of gaseous hydrocarbon generation in the Miocene strata of the Polish part of the Carpathian Foredeep, Przeglad Geologiczny, v. 46, no. 8/2, p. 737-742.



Foreland Basin
Assessment Unit - 40470101

EXPLANATION

- Hydrography
- Shoreline
- 4047 Geologic province code and boundary
- Country boundary
- Gas field centerpoint
- Oil field centerpoint
- 40470101 Assessment unit code and boundary

Projection: Robinson. Central meridian: 0

SEVENTH APPROXIMATION
NEW MILLENNIUM WORLD PETROLEUM ASSESSMENT
DATA FORM FOR CONVENTIONAL ASSESSMENT UNITS

Date:……..	9/9/99		
Assessment Geologist:……..	M.J. Pawlewicz		
Region:……..	Europe	Number:	4
Province:……..	North Carpathian Basin	Number:	4047
Priority or Boutique…….	Priority		
Total Petroleum System:……	Isotopically Light Gas	Number:	404701
Assessment Unit:…….	Foreland Basin	Number:	40470101
* Notes from Assessor	Lower 48-all growth function.		

CHARACTERISTICS OF ASSESSMENT UNIT

Oil (<20,000 cfg/bo overall) **or** Gas (≥20,000 cfg/bo overall):… Gas

What is the minimum field size?……. 1 mmboe grown (≥1mmboe)
(the smallest field that has potential to be added to reserves in the next 30 years)

Number of discovered fields exceeding minimum size:…… Oil: 0 Gas: 53
Established (>13 fields) X Frontier (1-13 fields) _____ Hypothetical (no fields) _____

Median size (grown) of discovered oil fields (mmboe):
1st 3rd _____ 2nd 3rd _____ 3rd 3rd _____
Median size (grown) of discovered gas fields (bcfg):
1st 3rd 292 2nd 3rd 52 3rd 3rd 25

Assessment-Unit Probabilities:

Attribute	Probability of occurrence (0-1.0)
1. **CHARGE:** Adequate petroleum charge for an undiscovered field ≥ minimum size……	1.0
2. **ROCKS:** Adequate reservoirs, traps, and seals for an undiscovered field ≥ minimum size……	1.0
3. **TIMING OF GEOLOGIC EVENTS:** Favorable timing for an undiscovered field ≥ minimum size	1.0

Assessment-Unit GEOLOGIC Probability (Product of 1, 2, and 3):…….. 1.0

4. **ACCESSIBILITY:** Adequate location to allow exploration for an undiscovered field ≥ minimum size…… 1.0

UNDISCOVERED FIELDS

Number of Undiscovered Fields: How many undiscovered fields exist that are ≥ minimum size?:
(uncertainty of fixed but unknown values)

Oil fields:……min. no. (>0)	_____	median no.	_____	max no.	_____
Gas fields:……min. no. (>0)	20	median no.	70	max no.	175

Size of Undiscovered Fields: What are the anticipated sizes (**grown**) of the above fields?:
(variations in the sizes of undiscovered fields)

Oil in oil fields (mmbo)……min. size	_____	median size	_____	max. size	_____
Gas in gas fields (bcfg):……min. size	6	median size	20	max. size	400

Assessment Unit (name, no.)
Foreland Basin, 40470101

AVERAGE RATIOS FOR UNDISCOVERED FIELDS, TO ASSESS COPRODUCTS

(uncertainty of fixed but unknown values)

Oil Fields:	minimum	median	maximum
Gas/oil ratio (cfg/bo)……			
NGL/gas ratio (bngl/mmcfg)……			
Gas fields:	**minimum**	**median**	**maximum**
Liquids/gas ratio (bngl/mmcfg)……	4	8	12
Oil/gas ratio (bo/mmcfg)……			

SELECTED ANCILLARY DATA FOR UNDISCOVERED FIELDS

(variations in the properties of undiscovered fields)

Oil Fields:	minimum	median	maximum
API gravity (degrees)……			
Sulfur content of oil (%)……			
Drilling Depth (m) ……			
Depth (m) of water (if applicable)……			
Gas Fields:	**minimum**	**median**	**maximum**
Inert gas content (%)……	0.3	2	22
CO_2 content (%)……	0.04	0.1	0.5
Hydrogen-sulfide content (%)……			
Drilling Depth (m)……	50	1500	3500
Depth (m) of water (if applicable)……			

Assessment Unit (name, no.)
Foreland Basin, 40470101

ALLOCATION OF UNDISCOVERED RESOURCES IN THE ASSESSMENT UNIT TO COUNTRIES OR OTHER LAND PARCELS (uncertainty of fixed but unknown values)

1. Poland represents 50 areal % of the total assessment unit

Oil in Oil Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...			
Portion of volume % that is offshore (0-100%).....			

Gas in Gas Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...		50	
Portion of volume % that is offshore (0-100%).....		0	

2. Ukraine represents 37 areal % of the total assessment unit

Oil in Oil Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...			
Portion of volume % that is offshore (0-100%).....			

Gas in Gas Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...		37	
Portion of volume % that is offshore (0-100%).....		0	

3. Czech Republic represents 10 areal % of the total assessment unit

Oil in Oil Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...			
Portion of volume % that is offshore (0-100%).....			

Gas in Gas Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...		10	
Portion of volume % that is offshore (0-100%).....		0	

4. Austria represents 3 areal % of the total assessment unit

Oil in Oil Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...			
Portion of volume % that is offshore (0-100%).....			

Gas in Gas Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...		3	
Portion of volume % that is offshore (0-100%).....		0	

Foreland Basin, AU 40470101
Undiscovered Field-Size Distribution