Go to Table of Contents

Go to index map

Paleozoic Reservoirs
Assessment Unit 40470301

Geologic Summary

Detailed map of this assessment unit

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: Paleozoic Composite (404703)

ASSESSMENT UNIT: Paleozoic Reservoirs (40470301)

DESCRIPTION: A Paleozoic section of indefinite extent in the foredeep about 4 km beneath the flysch nappes east of Krakow.

SOURCE ROCKS: Geochemistry suggests a Carboniferous source, possible Ordovician claystones. Total organic carbon content averages 1.16 percent; Type I organic matter. Oil is low sulfur, 34° API.

MATURATION: In the oil window. Time for expulsion is Sarmatian; trap formation is Badenian, and migration is Pliocene to present.

MIGRATION: Short vertical and lateral movement into adjacent and overlying units**.**

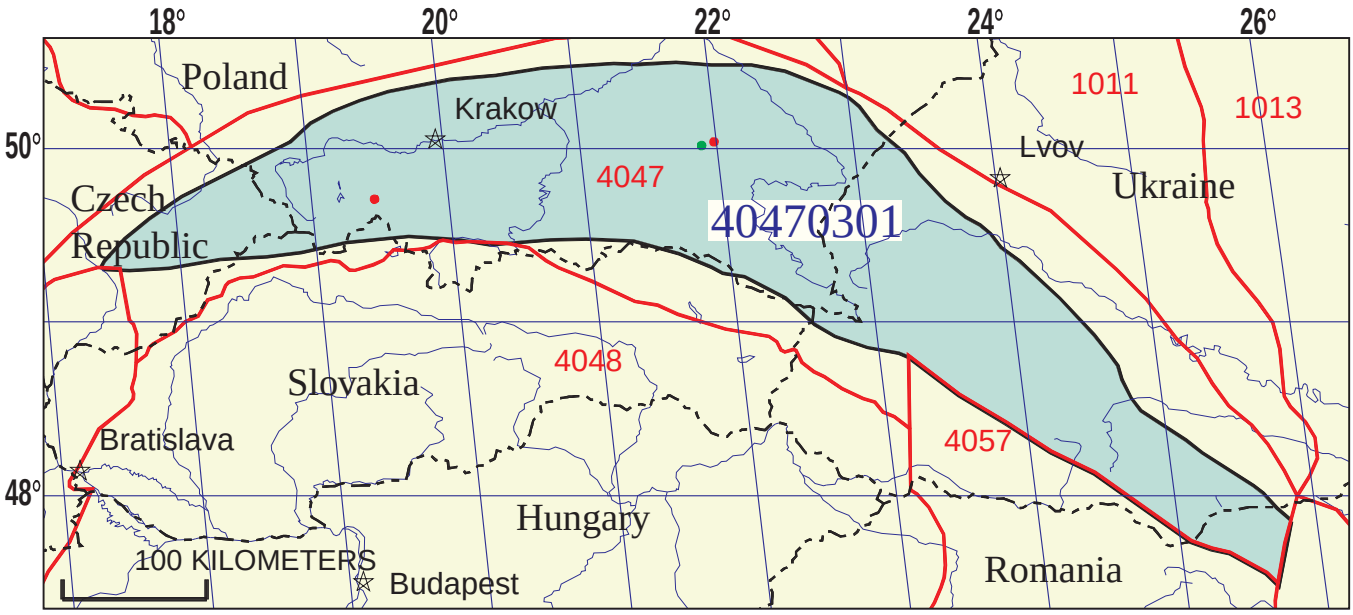
RESERVOIR ROCKS: Carboniferous limestones and dolomites with porosity 1 percent average and 0.7 mD intergranular permeability.

TRAPS AND SEALS: Traps are mainly stratigraphic with facies changes. Seals are claystones and mudstones of the Miocene, Paleogene and Visean age.

REFERENCES:

Karnkowski, Piotr, 1993, Zloza gazu ziemnego iropy naftowej w polsce, Karpaty I zapadlisko przedkarpackie, Krakow, 256 p.

Ministry of Environmental Protection Natural Resources and Forestry, 1998, Poland Petroleum Opportunities: Warsaw, Deptartment of Geology and Geological Concessions, 40 p.



Paleozoic Reservoirs
Assessment Unit - 40470301

EXPLANATION

- Hydrography
- Shoreline
- 4047 Geologic province code and boundary
- Country boundary
- Gas field centerpoint
- Oil field centerpoint
- 40470301 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:……	Paleozoic Composite	Number:	404703
Assessment Unit:……..	Paleozoic Reservoirs	Number:	40470301
* 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):… Oil

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: 1
Established (>13 fields) _____ Frontier (1-13 fields) X 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 125 2nd 3rd _____ 3rd 3rd _____

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)	1	median no.	10	max no.	25
Gas fields:……min. no. (>0)	1	median no.	10	max no.	25

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	1	median size	3	max. size	50
Gas in gas fields (bcfg):……min. size	6	median size	18	max. size	300

Assessment Unit (name, no.)
Paleozoic Reservoirs, 40470301

AVERAGE RATIOS FOR UNDISCOVERED FIELDS, TO ASSESS COPRODUCTS

(uncertainty of fixed but unknown values)

Oil Fields:	minimum	median	maximum
Gas/oil ratio (cfg/bo)……	1100	2200	3300
NGL/gas ratio (bngl/mmcfg)……	30	60	90

Gas fields:	minimum	median	maximum
Liquids/gas ratio (bngl/mmcfg)……	22	44	66
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)……		34	
Sulfur content of oil (%)……			
Drilling Depth (m) ……	500	3000	6000
Depth (m) of water (if applicable)……			

Gas Fields:	minimum	median	maximum
Inert gas content (%)……			
CO_2 content (%)……			
Hydrogen-sulfide content (%)……			
Drilling Depth (m)……	500	3000	7500
Depth (m) of water (if applicable)……			

Assessment Unit (name, no.)
Paleozoic Reservoirs, 40470301

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

1. Poland represents 51 areal % of the total assessment unit

Oil in Oil Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...		51	
Portion of volume % that is offshore (0-100%).....		0	

Gas in Gas Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...		51	
Portion of volume % that is offshore (0-100%).....		0	

2. Ukraine represents 44 areal % of the total assessment unit

Oil in Oil Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...		44	
Portion of volume % that is offshore (0-100%).....		0	

Gas in Gas Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...		44	
Portion of volume % that is offshore (0-100%).....		0	

3. Czech Republic represents 5 areal % of the total assessment unit

Oil in Oil Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...		5	
Portion of volume % that is offshore (0-100%).....		0	

Gas in Gas Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...		5	
Portion of volume % that is offshore (0-100%).....		0	

Paleozoic Reservoirs, AU 40470301
Undiscovered Field-Size Distribution