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Transylvanian Subsalt Assessment Unit 40570102

Transylvanian Subsalt Assessment Unit 40570102

Transylvanian Basin Geologic Province 4057

Geologic Summary

Detailed map of this assessment unit

Assessment Input Data

Assessment Results

This assessment unit was not assessed quantitatively.

USGS PROVINCE: Transylvania Basin (4057) Romania **GEOLOGIST:** M.J. Pawlewicz

TOTAL PETROLEUM SYSTEM: Transylvania Composite (405701)

ASSESSMENT UNIT: Transylvania Subsalt (40570102)

DESCRIPTION: This is a hypothetical assessment unit defined by post-tectonic sediments and pre Badenian-Pliocene sediments, including an extensive Badenian age salt layer. These Paleogene sediments include evaporites, carbonates, shales, and siliciclastics of continental and marine origin.

SOURCE ROCKS: No specific rocks are named as the source for hydrocarbons, although late Cretaceous shales are considered to be a source for gas.

MATURATION: Although presently at highest thermal maturation, heat flow is variable across the basin. The basin has a relatively low heat flow compared to the continental average and surrounding areas. A structurally complicated basement makes the depth to basement, and thus sediment thickness, quite variable.

MIGRATION: Considered to be short (less than 1 to 3 km) vertical and lateral migration.

RESERVOIR ROCKS: Would probably include sandstones and carbonates.

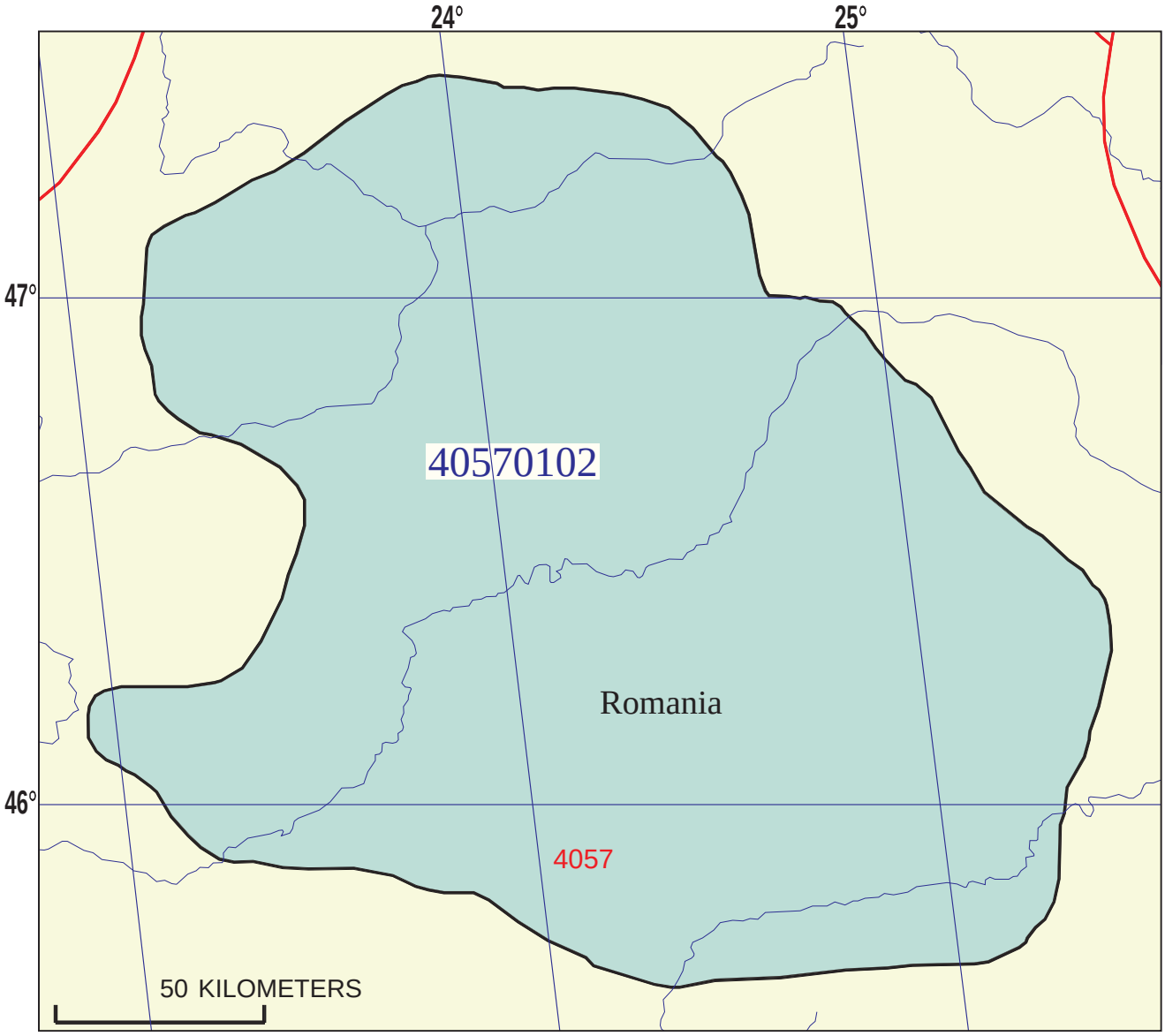
TRAPS AND SEALS: Probably includes facies changes and structural traps adjacent to basement faults.

REFERENCES:

Ionescu, Nelu, 1994, Exploration history and hydrocarbon prospects in Romania, *in* Popescu, B.M., ed., Hydrocarbons of Eastern Central Europe–Habitat, exploration and production history: Berlin, Springer-Verlag, 255 p.

Visarion, M., and Veliciu, S., 1981, Some geological and geophysical characteristics of the Transylvanian Basin: Earth Evolution Sciences, v. 3-4, p. 212-217.

Proust, J-N., and Hosu, A., 1996, Sequence stratigraphy and Paleocene evolution of the Transylvanian Basin (Romania, Eastern Europe): Sedimentary Geology, v. 105, p. 117-140.



Transylvanian Subsalt Assessment Unit - 40570102

EXPLANATION

- Hydrography
- Shoreline
- 4057 Geologic province code and boundary
- Country boundary
- Gas field centerpoint
- Oil field centerpoint
- 40570102 Assessment unit code and boundary

Projection: Robinson. Central meridian: 0

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

Date:……..	4/5/99		
Assessment Geologist:……..	M.J. Pawlewicz		
Region:……..	Europe	Number:	4
Province:……..	Transylvanian Basin	Number:	4057
Priority or Boutique……..	Priority		
Total Petroleum System:……	Transylvanian Composite	Number:	405701
Assessment Unit:……..	Transylvanian Subsalt	Number:	40570102
* Notes from Assessor	Lower 48 growth factor.		
	Not quantitatively assessed because assessment unit is extremely speculative.		

CHARACTERISTICS OF ASSESSMENT UNIT

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

What is the minimum field size?……. _____ 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: _____ Gas: _____
Established (>13 fields) _____ 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 _____ 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……	
2. **ROCKS:** Adequate reservoirs, traps, and seals for an undiscovered field ≥ minimum size……	
3. **TIMING OF GEOLOGIC EVENTS:** Favorable timing for an undiscovered field ≥ minimum size	

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

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

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) _____ median no. _____ max no. _____

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 _____ median size _____ max. size _____

Assessment Unit (name, no.)

_____

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)……			
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 (%)……			
CO_2 content (%)……			
Hydrogen-sulfide content (%)……			
Drilling Depth (m)……			
Depth (m) of water (if applicable)……			

Assessment Unit (name, no.)

_____

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

1. _____ represents _____ 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):…			
Portion of volume % that is offshore (0-100%)……			