Go to Table of Contents

Go to index map

Subsalt Jurassic
Assessment Unit 11080103

Subsalt Jurassic Assessment Unit 11080103
Azov-Kuban Basin Geologic Province 1108

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: Azov-Kuban Basin (1108) **GEOLOGIST:** G.F. Ulmishek

TOTAL PETROLEUM SYSTEM: Azov-Kuban Mesozoic-Cenozoic (110801)

ASSESSMENT UNIT: Subsalt Jurassic (11080103)

DESCRIPTION: Assessment unit includes Lower-Middle Jurassic clastic and Oxfordian-Kimmeridgian carbonate rocks overlain by salt. The salt basin occupies the East Kuban depression. A few hydrocarbon fields have been found in carbonate reservoirs. Resource assessment relies upon analogy with the Amu-Darya Basin that has almost identical Jurassic stratigraphy and similar location in front of the Alpine foldbelt.

SOURCE ROCKS: Source rocks for gas and possibly oil are Lower-Middle Jurassic clastics. On analogy with the Amu-Darya Basin, important oil source rocks may also be present at top of the carbonate section directly beneath the evaporite formation.

MATURATION AND MIGRATION: No data on maturation of source rocks are available. Probably, maturation could have started in Late Cretaceous or Paleogene time and continued through the Neogene. Short-distance vertical and lateral migration in adjacent reservoir rocks probably occurred contemporaneously with maturation.

RESERVOIR ROCKS: Most potential reservoir rocks are Upper Jurassic carbonates that probably contain reefs. Lower-Middle Jurassic clastic reservoir rocks have poor reservoir properties at large depths.

TRAPS: Basement-related anticlinal structures and predicted reefs on depression margins are the main potential trap types.

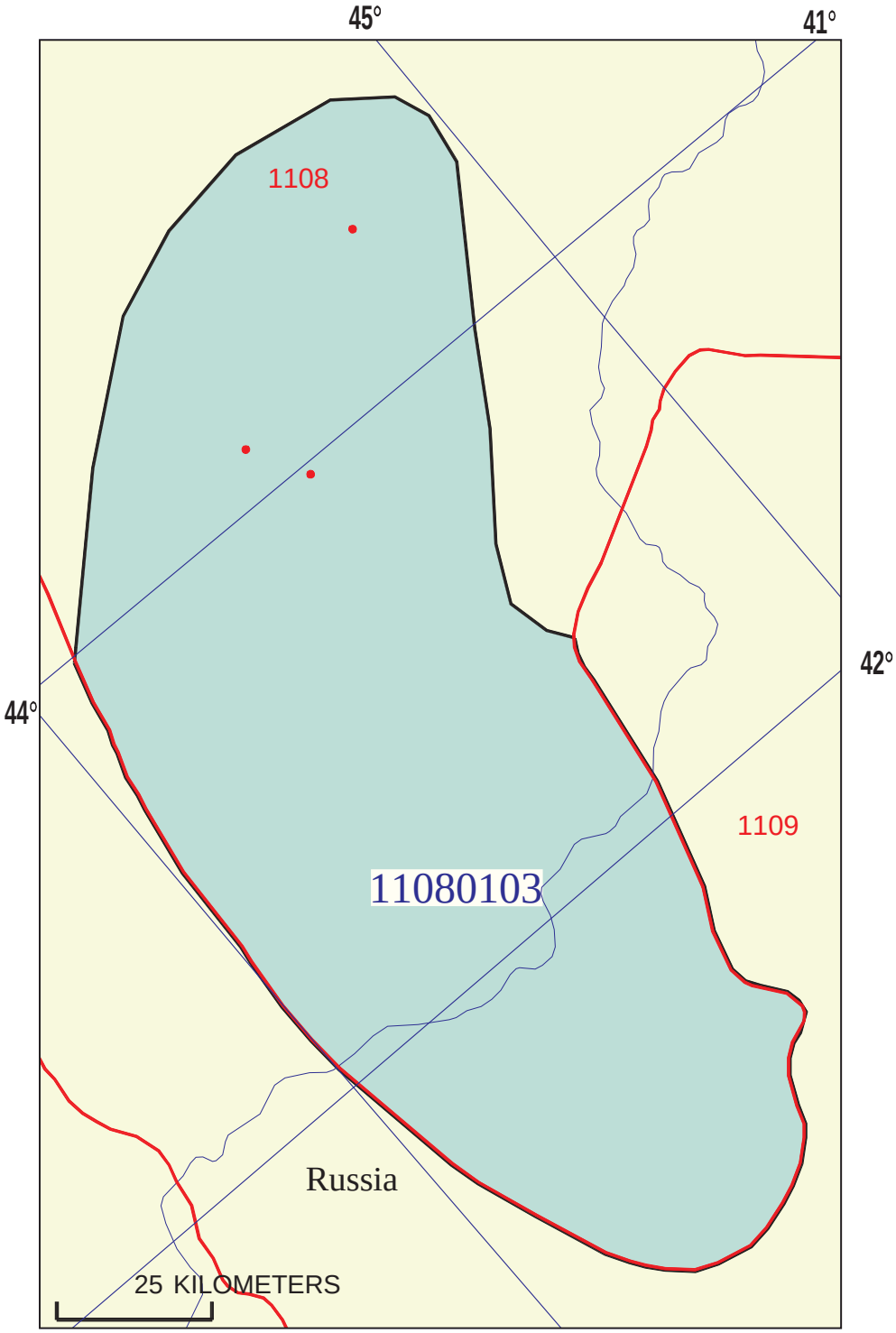
SEALS: Upper Jurassic salt formation is not deformed and constitutes a regional seal that covers the entire assessment unit.

REFERENCES:

Krylov, N.A., ed., 1987, Tectonics and petroleum productivity of the North Caucasus (Tektonika i neftegazonosnost Severnogo Kavkaza): Moscow, Nauka, 96 p.

Letavin, A.I., ed., 1988, Mesozoic-Cenozoic sequences of the North Caucasus (Mezozoysko-kaynozoyskiye kompleksy Predkavkazya): Moscow, Nauka, 94 p.

Maksimov, S.P., Kleschev, K.A., and Shein, V.S., eds, 1986, Geology and geodynamics of hydrocarbon-productive regions of the southern USSR (Geologiya i geodinamika neftegazonosnykh territoriy yuga SSSR): Moscow, Nedra, 232 p.



Subsalt Jurassic
Assessment Unit - 11080103

EXPLANATION

- Hydrography
- Shoreline
- 1108 Geologic province code and boundary
- Country boundary
- Gas field centerpoint
- Oil field centerpoint
- 11080103 Assessment unit code and boundary

Projection: Equidistant Conic. Central meridian: 100. Standard Parallel: 58 30

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

Date:……..	6/4/99		
Assessment Geologist:……..	G.F. Ulmishek		
Region:……..	Former Soviet Union	Number:	1
Province:……..	Azov-Kuban Basin	Number:	1108
Priority or Boutique……	Priority		
Total Petroleum System:……	Azov-Kuban Mesozoic-Cenozoic	Number:	110801
Assessment Unit:……..	Subsalt Jurassic	Number:	11080103
* Notes from Assessor	Fields not grown. Assessment is based on analogy with the Amu-Darya Basins.		

CHARACTERISTICS OF ASSESSMENT UNIT

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

What is the minimum field size?……. 7 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: 2

Established (>13 fields) _____ Frontier (1-13 fields) X Hypothetical (no fields) _____

Median size (grown) of discovered oil fields (mmboe):
1st 3rd NA 2nd 3rd NA 3rd 3rd NA

Median size (grown) of discovered gas fields (bcfg):
1st 3rd NA 2nd 3rd NA 3rd 3rd NA

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.	5	max no.	12
Gas fields:……min. no. (>0)	2	median no.	12	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	7	median size	12	max. size	200
Gas in gas fields (bcfg):……min. size	42	median size	100	max. size	3000

Assessment Unit (name, no.)
Subsalt Jurassic, 11080103

AVERAGE RATIOS FOR UNDISCOVERED FIELDS, TO ASSESS COPRODUCTS

(uncertainty of fixed but unknown values)

Oil Fields:	minimum	median	maximum
Gas/oil ratio (cfg/bo)……	700	1500	2500
NGL/gas ratio (bngl/mmcfg)……	30	60	90

Gas fields:	minimum	median	maximum
Liquids/gas ratio (bngl/mmcfg)……	15	30	45
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)……	35	40	50
Sulfur content of oil (%)……	0.2	0.4	0.6
Drilling Depth (m) ……	3000	4000	5000
Depth (m) of water (if applicable)……			

Gas Fields:	minimum	median	maximum
Inert gas content (%)……	2	4	6
CO_2 content (%)……	1	2	3
Hydrogen-sulfide content (%)……	0.5	2	4
Drilling Depth (m)……	3500	5000	7000
Depth (m) of water (if applicable)……			

Assessment Unit (name, no.)
Subsalt Jurassic, 11080103

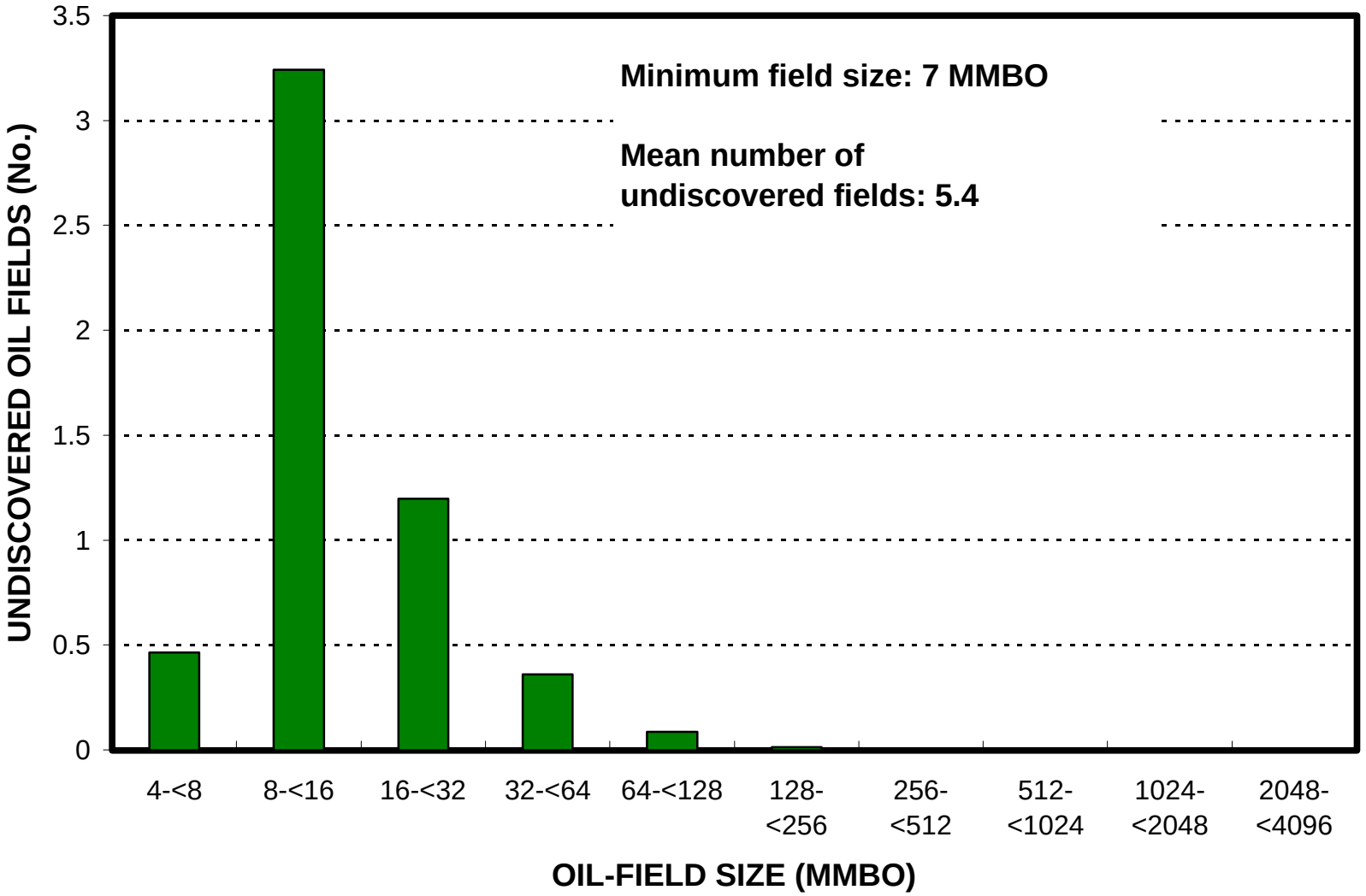
ALLOCATION OF UNDISCOVERED RESOURCES IN THE ASSESSMENT UNIT TO COUNTRIES OR OTHER LAND PARCELS (uncertainty of fixed but unknown values)

1. Russia represents 100 areal % of the total assessment unit

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

Subsalt Jurassic, AU 11080103
Undiscovered Field-Size Distribution



Subsalt Jurassic, AU 11080103
Undiscovered Field-Size Distribution