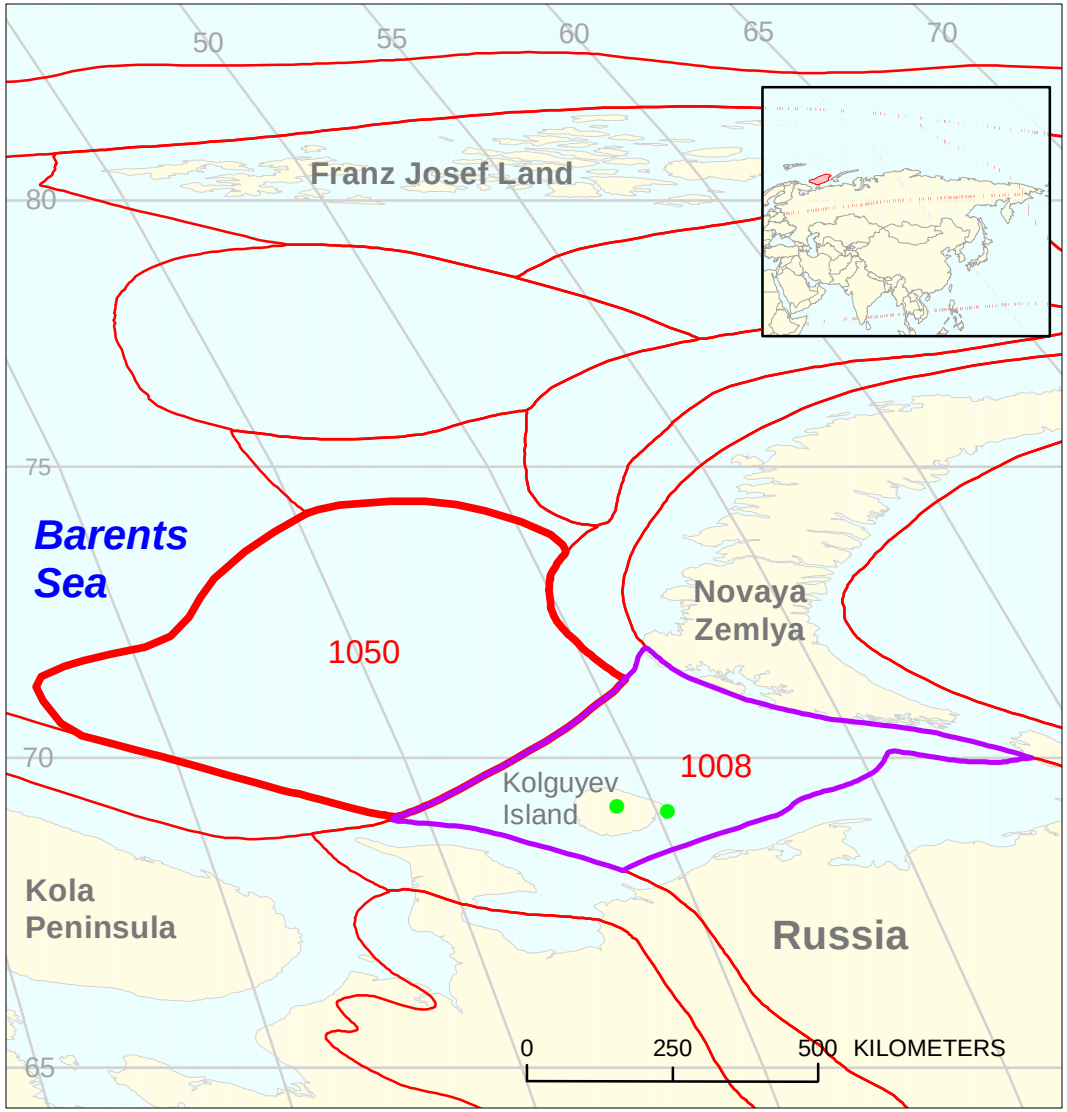
Go to Table of Contents

Go to index map

Kolguyev Terrace
Assessment Unit 10500101



Kolguyev Terrace Assessment Unit 10500101
South Barents Basin Geologic Province 1050
Other geologic province boundary

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: Timan-Pechora Basin (1008) **GEOLOGIST:** S.J. Lindquist
(Petroleum system also includes North Barents Basin 1060, Ludlov Saddle 1059, and South Barents Basin 1050)

TOTAL PETROLEUM SYSTEM: South and North Barents Triassic-Jurassic (105001)

ASSESSMENT UNIT: Kolguyev Terrace (10500101) (frontier)

DESCRIPTION: Assessment unit comprises the northern, offshore part of the Timan-Pechora Basin Province 1008, which is southeast of and adjacent to the South Barents Basin Province 1050. Kolguyev Island constitutes 5 percent of the unit's 79,000 sq km area. Although located in the Timan-Pechora basin, the unit is part of the South Barents petroleum system.

SOURCE ROCKS: Source rocks are absent from the area. Lower to Middle Triassic shales are probable source rocks in the adjacent South Barents Basin.

MATURATION: In the South Barents Basin, source rocks are deeply buried in the gas window zone.

MIGRATION: Long-distance lateral migration from the South Barents Basin is necessary to adequately charge reservoirs in the assessment unit.

RESERVOIR ROCKS: Known reservoir rocks are primarily Triassic and to a lesser degree Lower to Middle Jurassic siliciclastics of shallow marine to coastal origin.

TRAPS AND SEALS: Anticlines, domes, and fault traps. Excellent seals are Jurassic and Triassic shales to hundreds of meters in thickness, with Upper Jurassic marine shale providing the best regional seal.

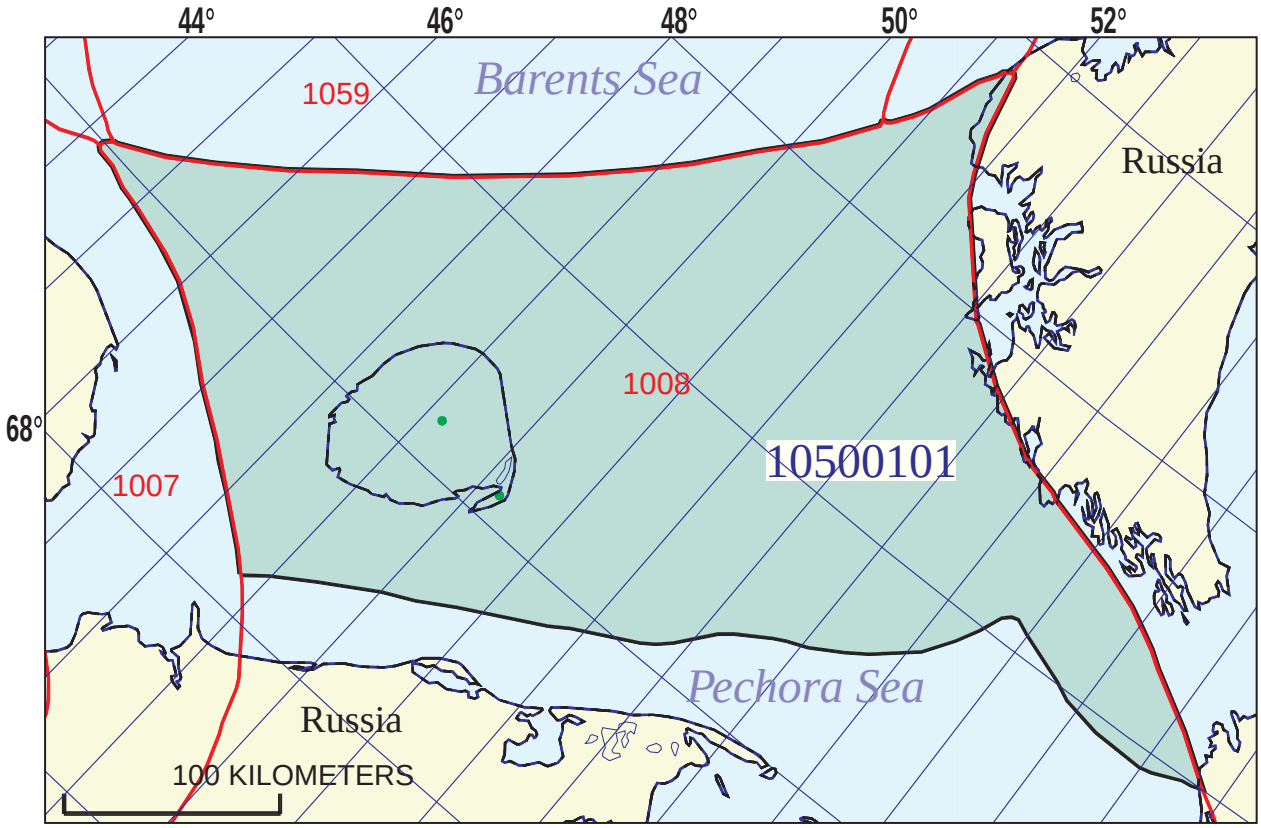
REFERENCES:

Dore, A.G., 1995, Barents Sea geology, petroleum resources and commercial potential: Arctic, v. 48, no. 3, p. 207-221.

Johansen, S.E., Ostisty, B.K., Birkeland, O., Fedorovsky, Y.F., Marirosjan, V.N., Bruun Christensen, O., Cheredeev, S.I., Ignatenko, E.A., and Magulis, L.S., 1992, Hydrocarbon potential in the Barents Sea region—play distribution and potential, *in* Vorren, T.O., Bergsager, E., Dahl-Stamnes, O.A., Holter, E., Johansen, B., Lie, E., and Lund, T.B., Arctic geology and petroleum potential: Norsk Petroleumsforening (Norwegian Petroleum Society) Special Publication 2, p. 273-320.

Leith, T.L., Weiss, H.M., Mork, A., Arhus, N., Elvebakk, G., Embry, A.F., Brooks, P.W., Stewart, K.R., Pchelina, T.M., Bro, E.G., Verba, M.L., Danyushevskaya, A., and Borisov, A.V., 1992, Mesozoic hydrocarbon source-rocks of the Arctic region, *in* Vorren, T.O., Bergsager, E., Dahl-Stamnes, O.A., Holter, E., Johansen, B., Lie, E., and Lund, T.B., Arctic geology and petroleum potential: Norsk Petroleumsforening (Norwegian Petroleum Society) Special Publication 2, p. 1-25.

Lindquist, S.J., 1999, South and North Barents Triassic-Jurassic Total Petroleum System of the Russian Offshore Arctic: U.S. Geological Survey Open-File Report 99-50-N, 16 p., 4 figs., 1 table.



Kolguyev Terrace
Assessment Unit - 10500101

EXPLANATION

- Hydrography
- Shoreline
- 1050 Geologic province code and boundary
- Country boundary
- Gas field centerpoint
- Oil field centerpoint
- 10500101 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:……..	10/14/99		
Assessment Geologist:……..	G.F. Ulmishek		
Region:……..	Former Soviet Union	Number:	1
Province:……..	Timan-Pechora Basin	Number:	1008
Priority or Boutique……	Priority		
Total Petroleum System:……	South and North Barents Triassic-Jurassic	Number:	105001
Assessment Unit:……..	Kolguyev Terrace	Number:	10500101
* Notes from Assessor	No growth function applied.		

CHARACTERISTICS OF ASSESSMENT UNIT

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

What is the minimum field size?……. 10 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: 2 Gas: 0
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.	15	max no.	40
Gas fields:……min. no. (>0)	2	median no.	45	max no.	120

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	10	median size	20	max. size	700
Gas in gas fields (bcfg):……min. size	60	median size	150	max. size	10000

Assessment Unit (name, no.)
Kolguyev Terrace, 10500101

AVERAGE RATIOS FOR UNDISCOVERED FIELDS, TO ASSESS COPRODUCTS

(uncertainty of fixed but unknown values)

Oil Fields:	minimum	median	maximum
Gas/oil ratio (cfg/bo)……	1500	2500	3500
NGL/gas ratio (bngl/mmcfg)……	30	60	90

Gas fields:	minimum	median	maximum
Liquids/gas ratio (bngl/mmcfg)……	20	40	60
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	41	50
Sulfur content of oil (%)……	0	0.02	0.05
Drilling Depth (m) ……	1300	3000	5000
Depth (m) of water (if applicable)……	0	40	80

Gas Fields:	minimum	median	maximum
Inert gas content (%)……			
CO_2 content (%)……			
Hydrogen-sulfide content (%)……		0	
Drilling Depth (m)……	1300	3000	5000
Depth (m) of water (if applicable)……	0	40	80

Assessment Unit (name, no.)
Kolguyev Terrace, 10500101

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%)……		95	

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%)……		95	

2. Province 1008 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%)……		95	

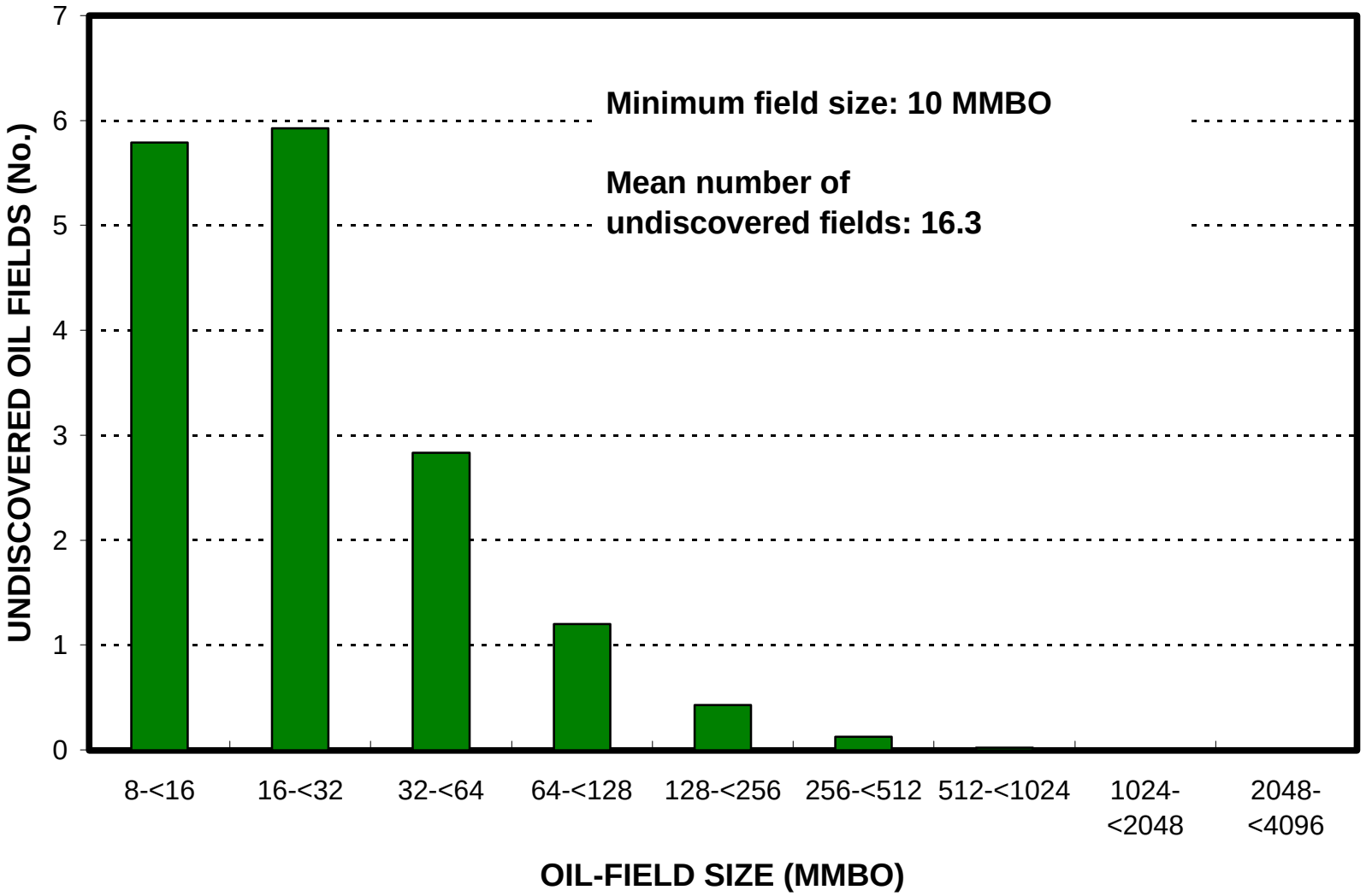
Gas in Gas Fields:	minimum	median	maximum
Richness factor (unitless multiplier):……			
Volume % in parcel (areal % x richness factor):…		100	
Portion of volume % that is offshore (0-100%)……		95	

3. Province 1050 represents 0 areal % of the total assessment unit

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

Kolguyev Terrace, AU 10500101
Undiscovered Field-Size Distribution



Kolguyev Terrace, AU 10500101
Undiscovered Field-Size Distribution