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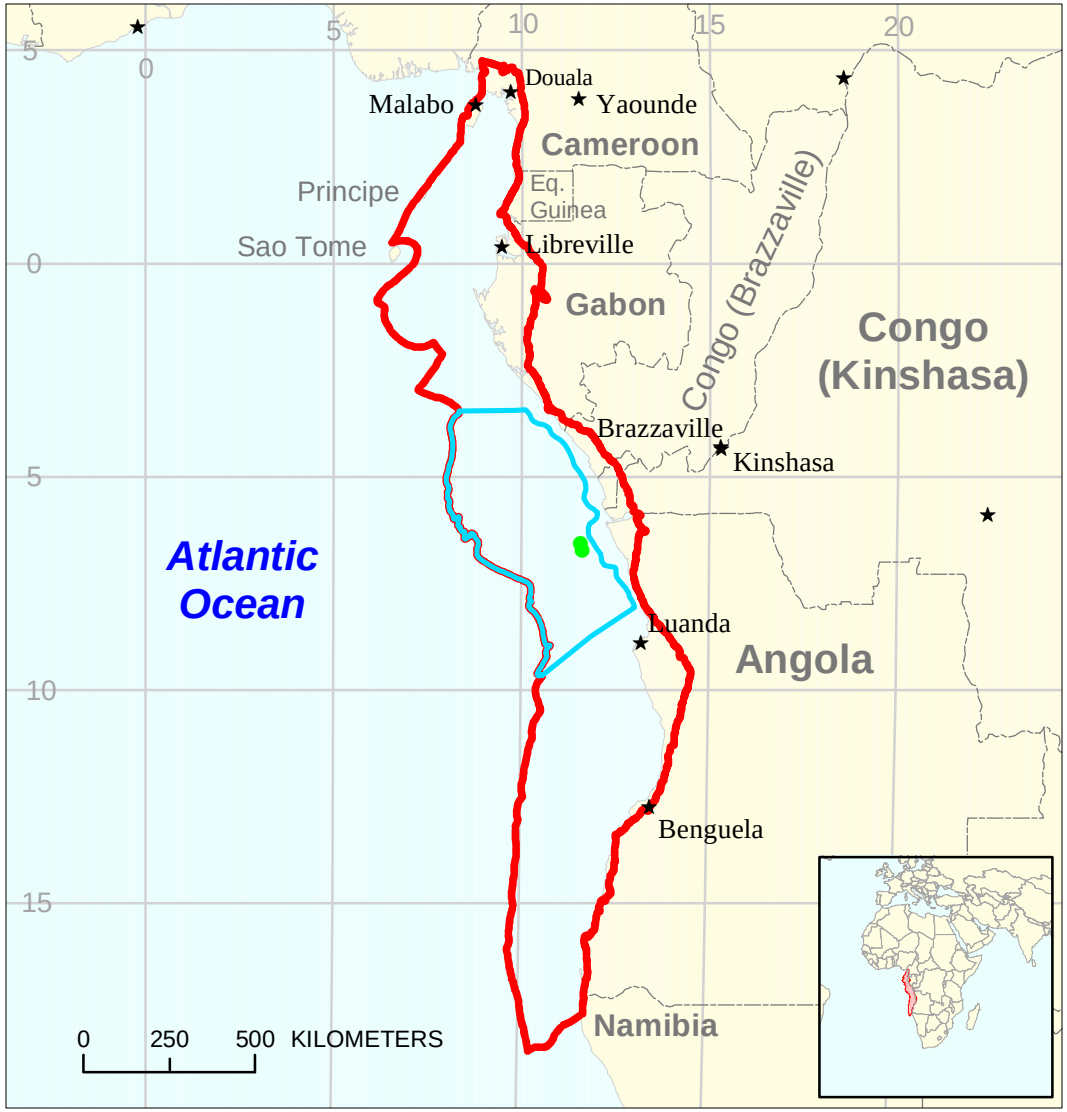
Central Congo Turbidites
Assessment Unit 72030302



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: West-Central Coastal (7203)

GEOLOGISTS: R.R. Charpentier and M.E. Brownfield

TOTAL PETROLEUM SYSTEM: Congo Delta Composite (720303)

ASSESSMENT UNIT: Central Congo Turbidites (72030302)

DESCRIPTION: Both subsalt and suprasalt source rocks and Oligocene/Miocene turbidite reservoirs in the area of the thick Congo Delta. Primarily in deep water.

SOURCE ROCKS: Primary source rock is likely the subsalt Lower Cretaceous lacustrine shales of the Bucomazi Formation. Additional possible marine source rocks from the suprasalt section are shales from the Upper Cretaceous Iabe Formation, the Paleocene-Eocene Landana Formation, and the Miocene Malembo Formation. Oils are paraffinic.

MATURATION: Oil generation began in Late Cretaceous and has continued to the present.

MIGRATION: Pathways are mostly fault related.

RESERVOIR ROCKS: Primarily Oligocene and Miocene turbidite channels and basin-floor fans and mounds.

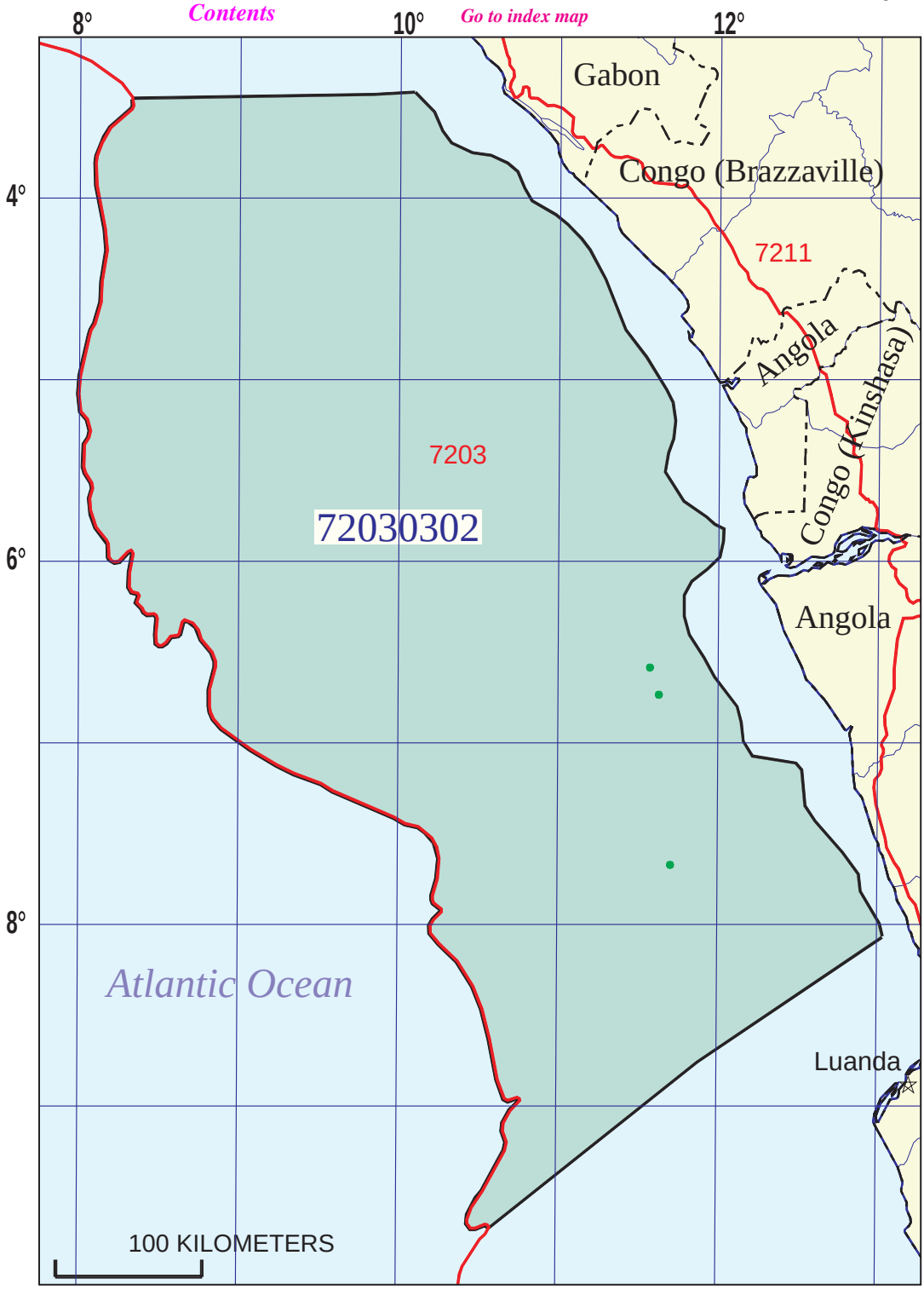
TRAPS AND SEALS: Stratigraphic traps of turbidites sealed by shales and updip pinchouts.

REFERENCES:

Petroleum Economist, 1998, Emergence of exciting deep-water provinces: Petroleum Economist, v. 65, no. 9, p. 14-15.

Petroleum Economist, 1998, Deep water and deeper politics: Petroleum Economist, v. 65, no. 12, p. 8-10.

Petroleum Economist, 1999, Deep-water oil about to start flowing: Petroleum Economist, v. 66, no. 10, p. 5-7.



Central Congo Turbidites Assessment Unit - 72030302

EXPLANATION

- Hydrography
- Shoreline
- 7203 — Geologic province code and boundary
- Country boundary
- Gas field centerpoint
- Oil field centerpoint
- 72030302 — Assessment unit code and boundary

Projection: Robinson. Central meridian: 0

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

Date:……..	9/21/99		
Assessment Geologist:……..	R.R. Charpentier and M.E. Brownfield		
Region:……..	Sub-Saharan Africa and Antarctica	Number:	7
Province:……..	West-Central Coastal	Number:	7203
Priority or Boutique……..	Priority		
Total Petroleum System:……	Congo Delta Composite	Number:	720303
Assessment Unit:……..	Central Congo Turbidites	Number:	72030302
* Notes from Assessor	Twenty four discoveries are post-1995.		

CHARACTERISTICS OF ASSESSMENT UNIT

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

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: 24 Gas: 0
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 _____ 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)	10	median no.	100	max no.	220
Gas fields:……min. no. (>0)	2	median no.	20	max no.	55

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	60	max. size	7000
Gas in gas fields (bcfg):……min. size	60	median size	300	max. size	15000

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AVERAGE RATIOS FOR UNDISCOVERED FIELDS, TO ASSESS COPRODUCTS

(uncertainty of fixed but unknown values)

Oil Fields:	minimum	median	maximum
Gas/oil ratio (cfg/bo)……	1125	2250	3375
NGL/gas ratio (bngl/mmcfg)……	25	50	75

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)……	15	35	50
Sulfur content of oil (%)……	0.05	0.15	0.85
Drilling Depth (m) ……	1000	3000	5000
Depth (m) of water (if applicable)……	200	1500	4000

Gas Fields:	minimum	median	maximum
Inert gas content (%)……			
CO_2 content (%)……			
Hydrogen-sulfide content (%)……			
Drilling Depth (m)……	1000	3500	6000
Depth (m) of water (if applicable)……	200	1500	4000

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

1. Gabon represents 26 areal % of the total assessment unit

Oil in Oil Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...		15	
Portion of volume % that is offshore (0-100%).....		100	

Gas in Gas Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...		15	
Portion of volume % that is offshore (0-100%).....		100	

2. Congo (Brazzaville) represents 22 areal % of the total assessment unit

Oil in Oil Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...		25	
Portion of volume % that is offshore (0-100%).....		100	

Gas in Gas Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...		25	
Portion of volume % that is offshore (0-100%).....		100	

3. Angola 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):...		59	
Portion of volume % that is offshore (0-100%).....		100	

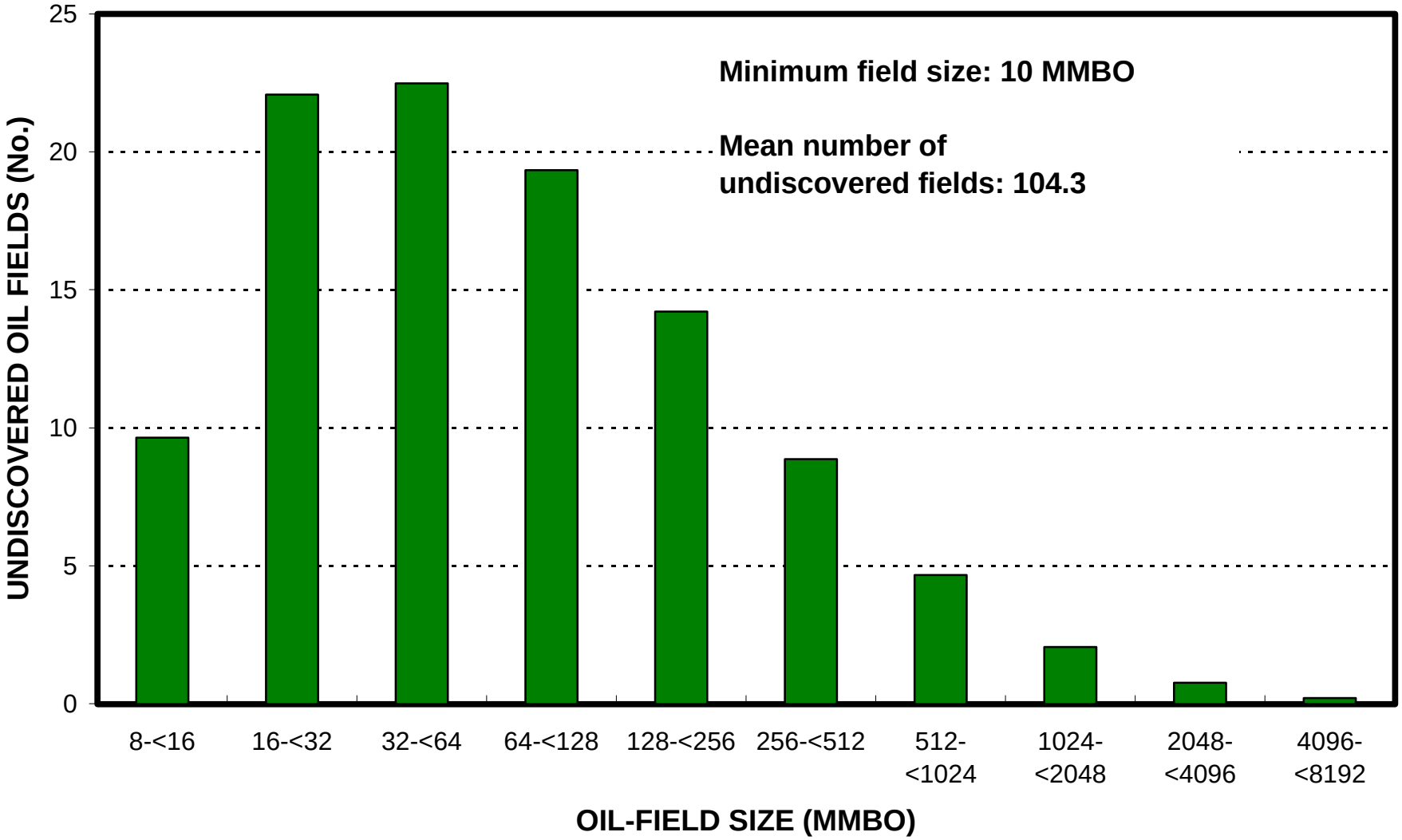
Gas in Gas Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...		59	
Portion of volume % that is offshore (0-100%).....		100	

4. Congo (Kinshasa) represents 1 areal % of the total assessment unit

Oil in Oil Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...		1	
Portion of volume % that is offshore (0-100%).....		100	

Gas in Gas Fields:	minimum	median	maximum
Richness factor (unitless multiplier):.....			
Volume % in parcel (areal % x richness factor):...		1	
Portion of volume % that is offshore (0-100%).....		100	

Central Congo Turbidites, AU 72030302
Undiscovered Field-Size Distribution



Central Congo Turbidites, AU 72030302
Undiscovered Field-Size Distribution