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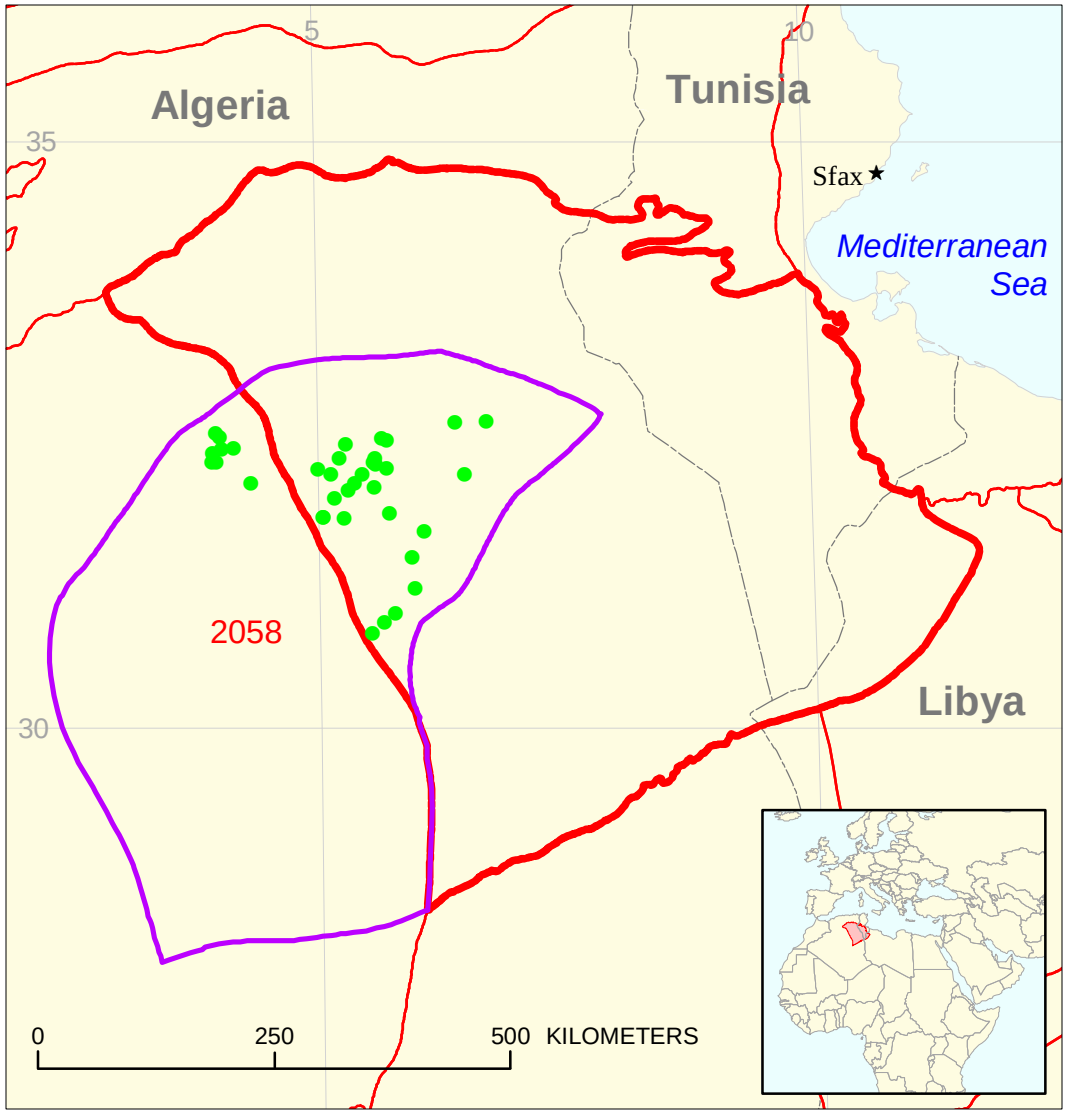
Tanezzuft-Oued Mya Structural/Stratigraphic Assessment Unit 20540101



Tanezzuft-Oued Mya Structural/Stratigraphic Assessment Unit 20540101
Trias/Ghadames Basin Geologic Province 2054
Other geologic province boundary

Geologic Summary

Detailed map of this assessment unit

Exploration/Discovery-History Data

- Plots of Known Field Sizes
- Plots of Grown Resources
- Tables

Assessment Input Data

Assessment Results

- Assessment Unit Summary
- Detailed Assessment Results
- Undiscovered Field-Size Distributions

USGS PROVINCE: Trias/Ghadames Basin (2054) **GEOLOGIST:** T.R. Klett

TOTAL PETROLEUM SYSTEM: Tanezzuft-Oued Mya (205401)

ASSESSMENT UNIT: Tanezzuft-Oued Mya Structural/Stratigraphic (20540101)

DESCRIPTION: This total petroleum system and corresponding assessment unit coincide with the Oued Mya Basin, bounded on the north by the Tilrhemt Arch, on the east by the Amguid-Hassi Touareg structural axis, on the south by the Mouydir Structural Terrace, and on the west by the Idjerane-M'Zab structural axis.

SOURCE ROCKS: The primary source rock is mudstone of the Silurian Tanezzuft Formation.

MATURATION: In northern portion of the total petroleum system, petroleum generation peaked during the Cretaceous to Tertiary. In the southern portion of the total petroleum system, some petroleum generation may have occurred during the Carboniferous, but was halted during the Hercynian deformational event and never resumed.

MIGRATION: Petroleum migrated laterally.

RESERVOIR ROCKS: Known reservoir rocks are Cambrian-Ordovician fluvial to marine sandstone, Ordovician to Silurian fluvial to marine sandstone, and Triassic fluvial sandstone.

TRAPS AND SEALS: Most of the known accumulations are in anticlines and faulted anticlines. Some combination traps are present. Triassic to Jurassic evaporites, mudstone, and carbonate rocks provide a regional top seal. Triassic volcanic rocks provide the primary seal for some reservoirs and intraformational Paleozoic marine mudstone provides secondary, lateral seals.

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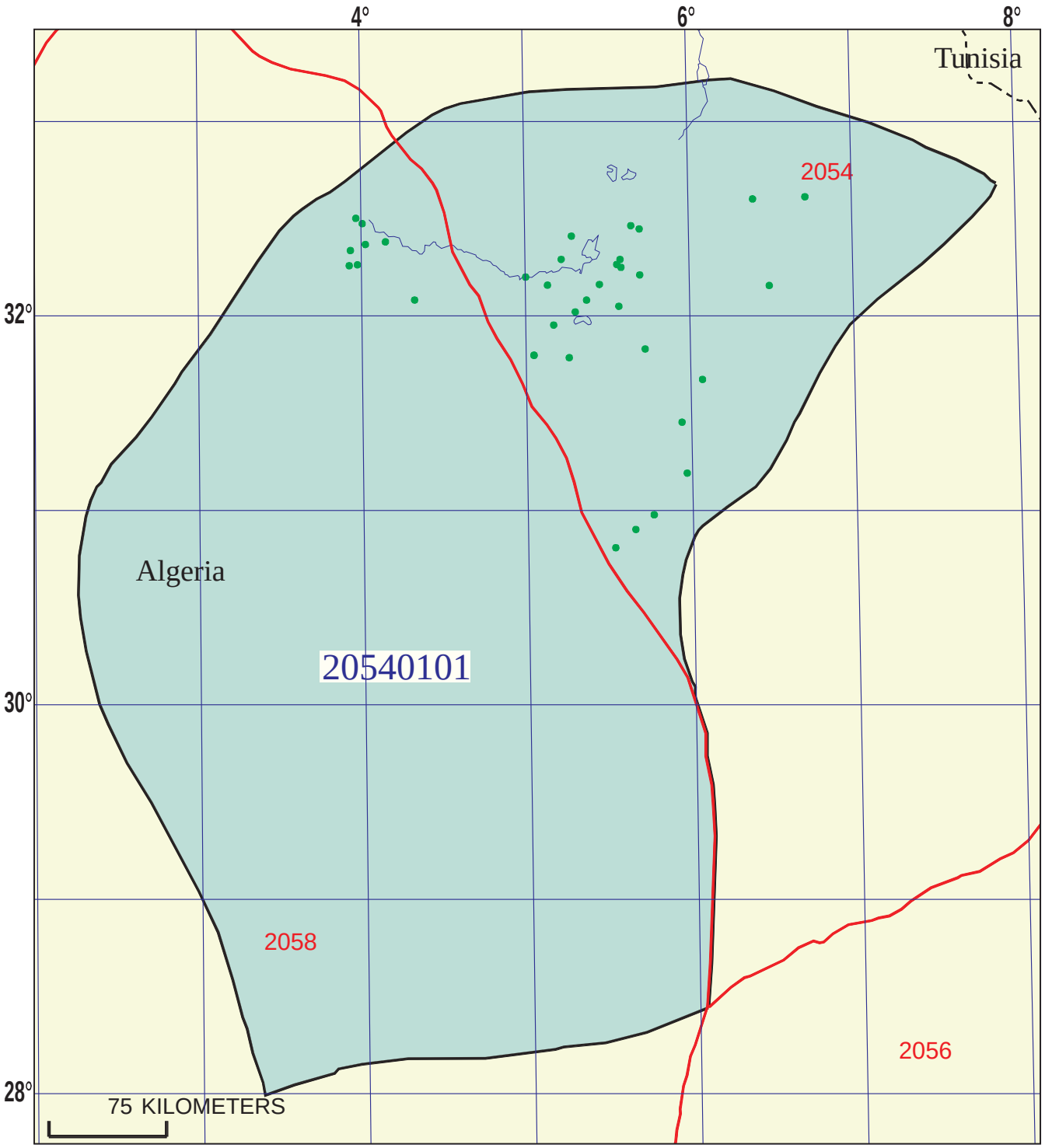


Tanezzuft-Oued Mya Structural/Stratigraphic Assessment Unit - 20540101

EXPLANATION

- Hydrography
- Shoreline
- 2054 — Geologic province code and boundary
- Country boundary
- Gas field centerpoint
- Oil field centerpoint
- 20540101 — Assessment unit code and boundary

Projection: Robinson. Central meridian: 0

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

Date:……..	6/29/98		
Assessment Geologist:……..	T.R. Klett		
Region:……..	Middle East and North Africa	Number:	2
Province:……..	Trias/Ghadames Basin	Number:	2054
Priority or Boutique……	Priority		
Total Petroleum System:……	Tanezzuft-Oued Mya	Number:	205401
Assessment Unit:……..	Tanezzuft-Oued Mya Structural/Stratigraphic	Number:	20540101
* Notes from Assessor			

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: 27 Gas: 0

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

Median size (grown) of discovered oil fields (mmboe):
1st 3rd 261.8 2nd 3rd 17.4 3rd 3rd 25.9

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)	4	median no.	34	max no.	70
Gas fields:……min. no. (>0)	1	median no.	10	max no.	30

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	16	max. size	362
Gas in gas fields (bcfg):……	min. size	60	median size	100	max. size	2000

Assessment Unit (name, no.)
Tanezzuft-Oued Mya Structural/Stratigraphic, 20540101

AVERAGE RATIOS FOR UNDISCOVERED FIELDS, TO ASSESS COPRODUCTS

(uncertainty of fixed but unknown values)

Oil Fields:	minimum	median	maximum
Gas/oil ratio (cfg/bo)……	434	868	1302
NGL/gas ratio (bngl/mmcfg)……	20	40	60

Gas fields:	minimum	median	maximum
Liquids/gas ratio (bngl/mmcfg)……	25	50	75
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)……	39	42	49
Sulfur content of oil (%)……		0.1	
Drilling Depth (m) ……	2500	3500	4500
Depth (m) of water (if applicable)……			

Gas Fields:	minimum	median	maximum
Inert gas content (%)……			
CO_2 content (%)……			
Hydrogen-sulfide content (%)……			
Drilling Depth (m)……	610	1600	5000
Depth (m) of water (if applicable)……			

Assessment Unit (name, no.)
Tanezzuft-Oued Mya Structural/Stratigraphic, 20540101

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

1. Algeria 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	

2. Province 2054 represents 33 areal % of the total assessment unit

Oil in Oil Fields:	minimum	median	maximum
Richness factor (unitless multiplier):……			
Volume % in parcel (areal % x richness factor):…		67	
Portion of volume % that is offshore (0-100%)……		0	

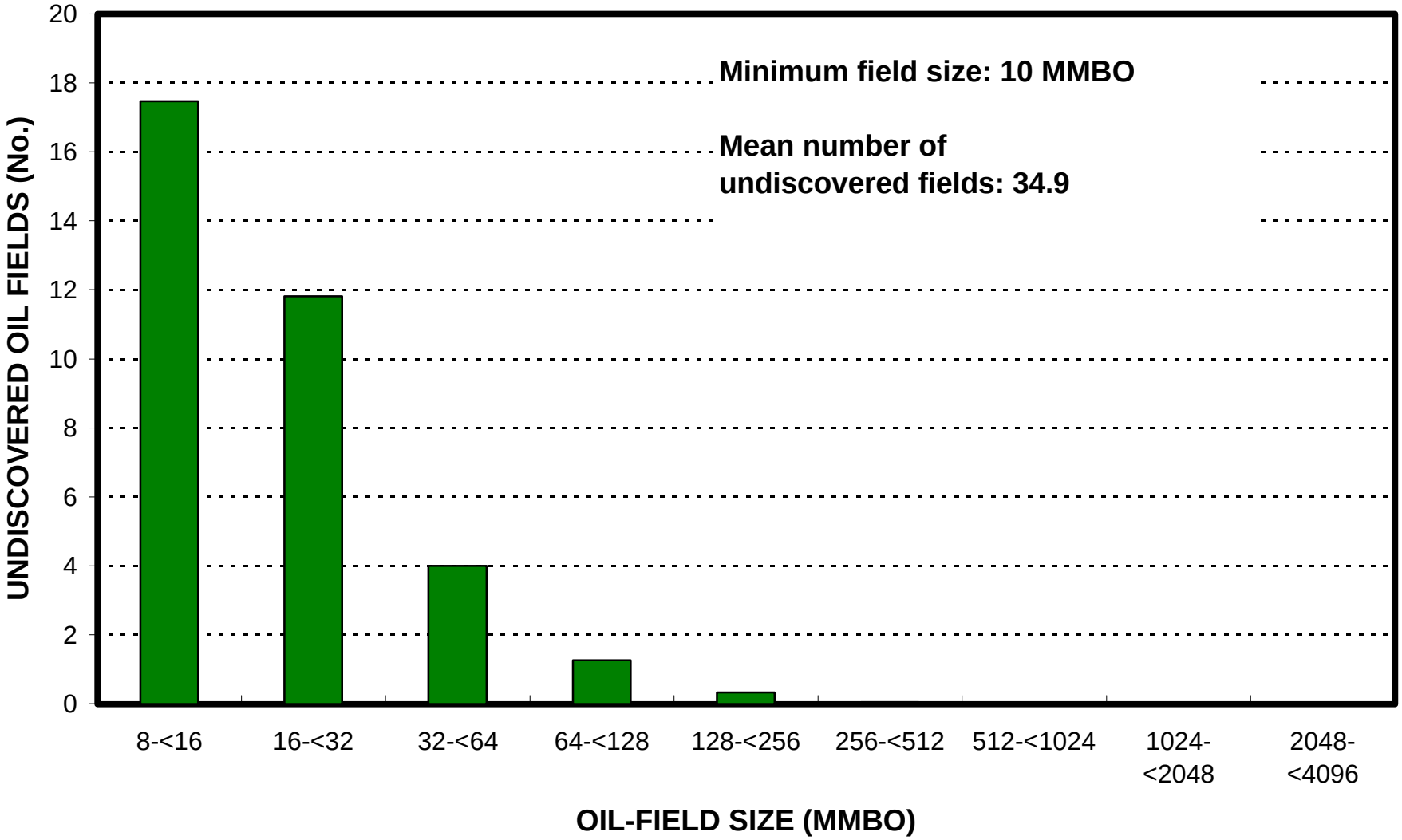
Gas in Gas Fields:	minimum	median	maximum
Richness factor (unitless multiplier):……			
Volume % in parcel (areal % x richness factor):…		67	
Portion of volume % that is offshore (0-100%)……		0	

3. Province 2058 represents 67 areal % of the total assessment unit

Oil in Oil Fields:	minimum	median	maximum
Richness factor (unitless multiplier):……			
Volume % in parcel (areal % x richness factor):…		33	
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):…		33	
Portion of volume % that is offshore (0-100%)……		0	

Tanezzuft-Oued Mya Structural/Stratigraphic, AU 20540101
Undiscovered Field-Size Distribution



Tanezzuft-Oued Mya Structural/Stratigraphic, AU 20540101
Undiscovered Field-Size Distribution