

Turkey's Hydrocarbon Potential: Basins, Discoveries & Production

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MERTY ENERGY

- ❑ Consulting 2001
- ❑ Found in 2003
- ❑ 2 employees in 2003
- ❑ 23 employees in 2004
- ❑ 103 Technical (engineer),
- ❑ 295 other Employees
- ❑ 4 Seismic Crews
- ❑ 3 Drilling Crews, At PRESENT

2012

Operating 23 licences onshore and offshore Turkey

Operating 1 oil field, developing 4 gas fields

Biggest Seismic Company in the geography

Branches in Iraq, Syria, and Libya

Certifications/Accreditations

- Petroleum Right Holder (GDPA)
- Operation, Repair, Control (Production and Distribution) of Gas Licence (Energy Market Regulatory Board)
- Gas Wholesale Licence (Energy Market Regulatory Board)
- ISO 9001-2000 Quality Management System*
- ISO 18001 OHSAS Health and Safety*
- ISO 14001 Environment Management System*
- Member IADC
- Member IAGC



Strengths

- Young, enthusiastic people assets
- In house prospect generating ability
- Highly diversified prolific assets portfolio
- Low cost service supplier
- Customs designed oilfield service supplier
- Close relations with stakeholders
- Largest privately held and third largest license holder
- Proven track record as a discoverer
- Dedicated team and management

Weakness

- Missing steady partner
- Volatility in working capital
- Equipment need for market demand
- Relinquishing underexplored assets

Opportunities

Underexplored environment
World class pricing and buy in guarantee
Growing demand for hydrocarbons
Increasing crude prices with recovery of global financial crisis
Steady political & economical environment
Growing interest of foreign investors
Process new Petroleum Law and licensing regime
Growing demand for Oilfield Services in surrounding area; Iraq, Libya, Kuwait, Georgia

Threads

- Increasing number of new entrants with finance support
- Privilege of State Oil Co. In licencing

Geophysical Services

2D/3D Data Acquisition & Field QC

Seismic Data Acquisition

Seismic Data Processing

Seismic Data Interpretation

Gravity

Magnetics

Electrical and Electromagnetic



Drilling and Completion

- Programmed, Supervised and Drilled 16 wells
- Completed and Tested 18 Wells

MERTY Rig 1

PM 2500

Trailer Mounted Mobile

Engine : 1100 HP Detroit

Hook Load : 180 Tons

Depth Range : Drilling 3000 m

Work Over : 4500 m.



First Licence awarded in 1880's

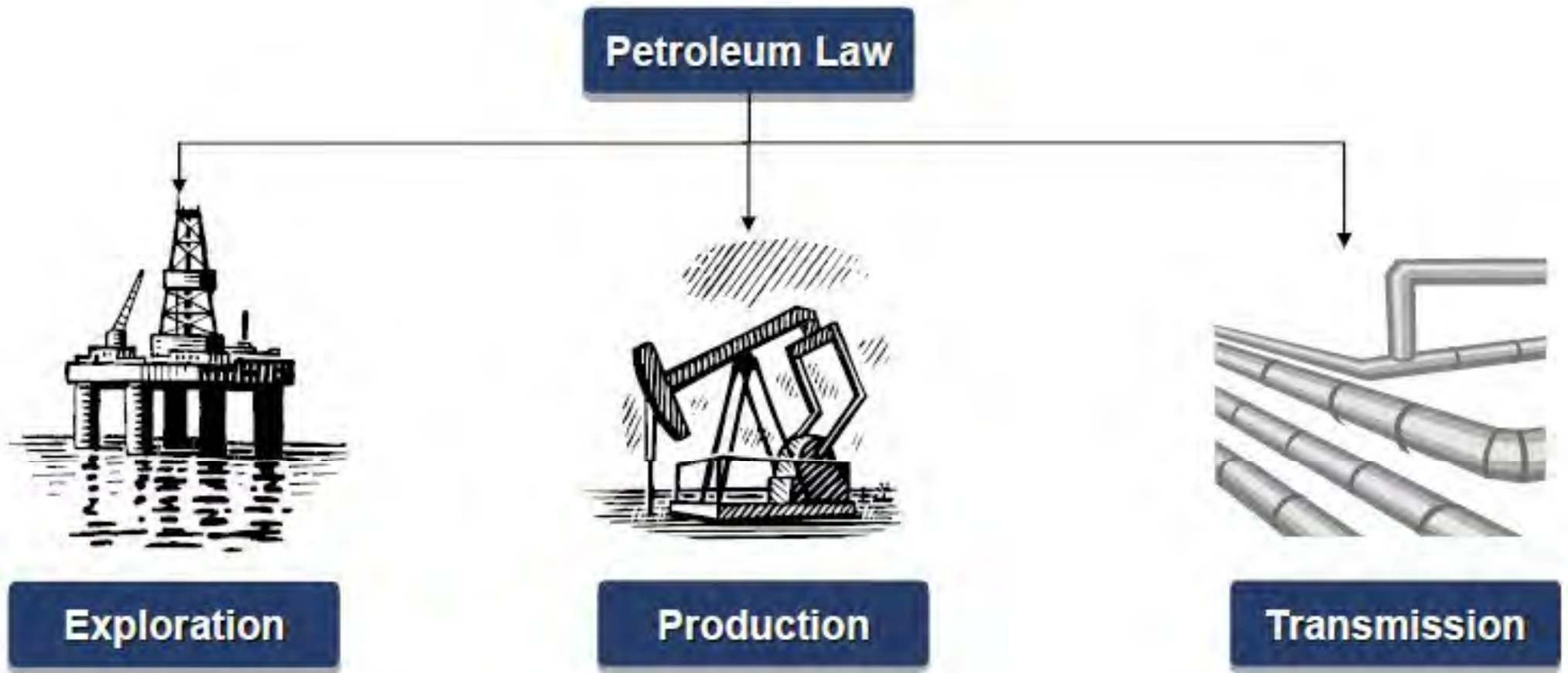


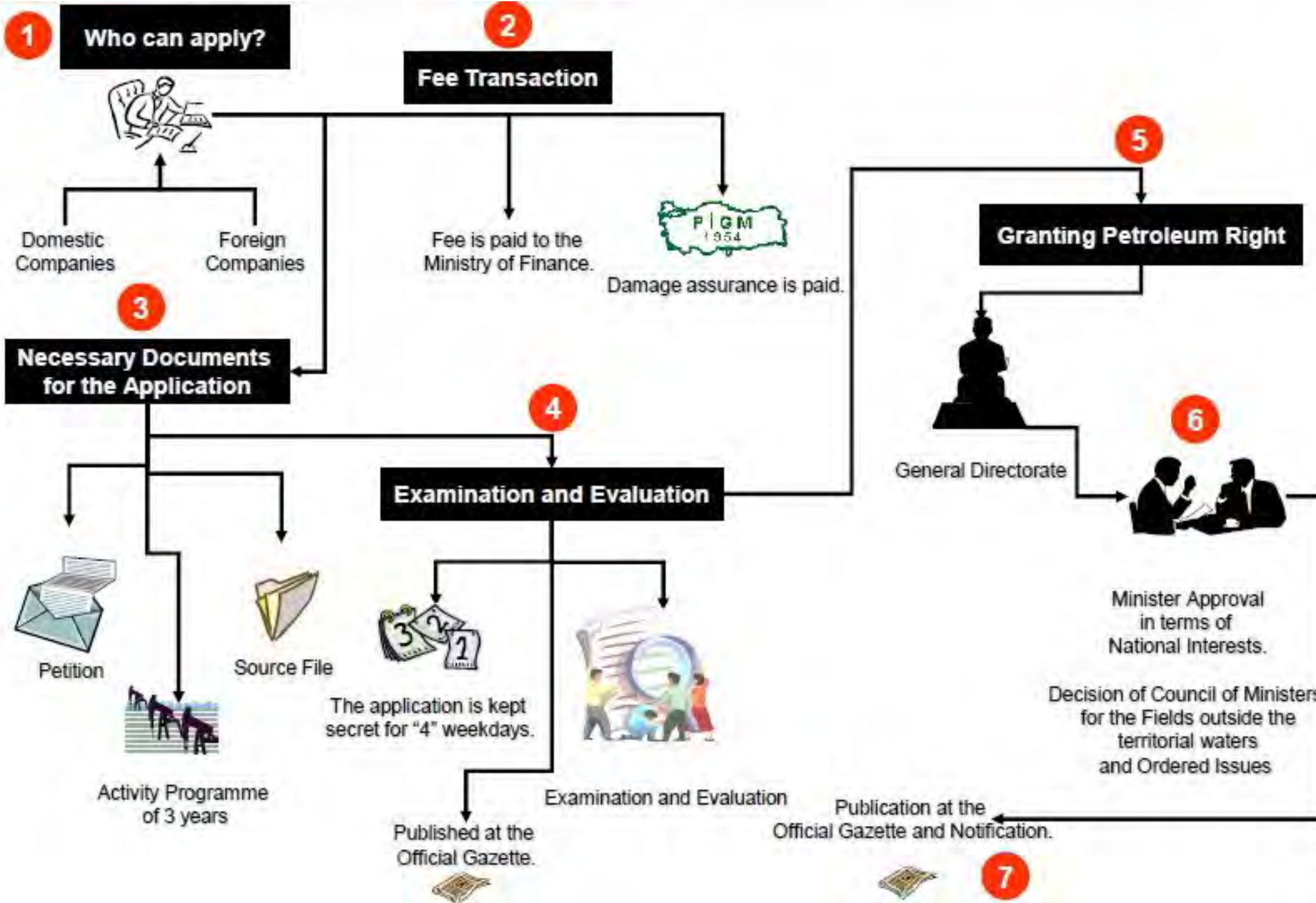
**First Discovery in RAMAN in 1952
Still producing about 10.000 Bbl/d**

**First Law and related institutions
in 1954.**



- **Petroleum Law**; regulates the rights and obligations concerning the exploration, production and transmission of the liquid and gaseous hydrocarbons (crude oil and natural gas) produced or producible from the ground.





Sufficient Human Resources



Investment Programme



Technical Capacity



COMPANY

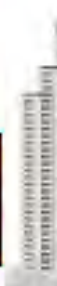
Experience in Oil Sector



Financial Strength

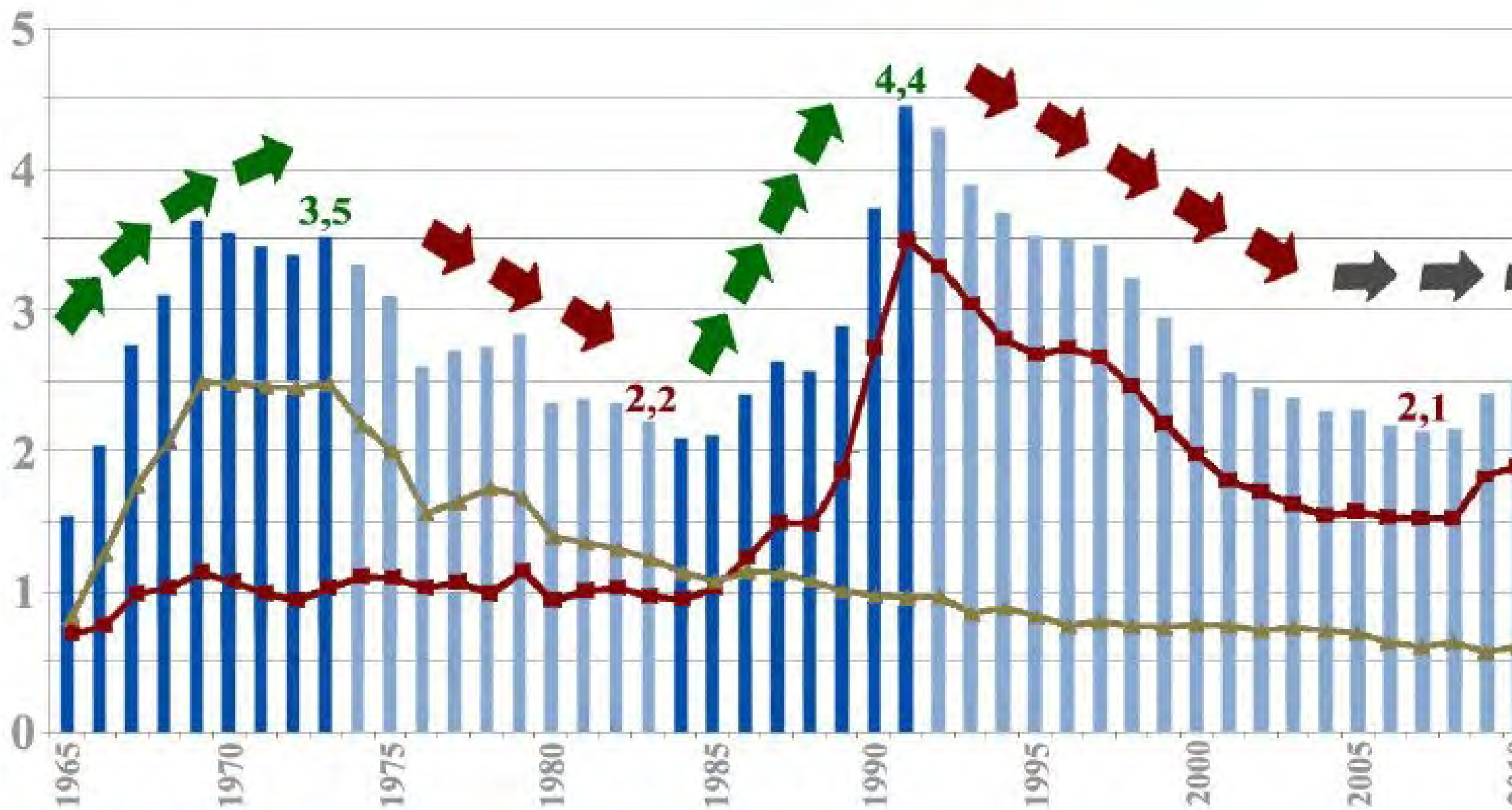


Success in Other Sectors, if any



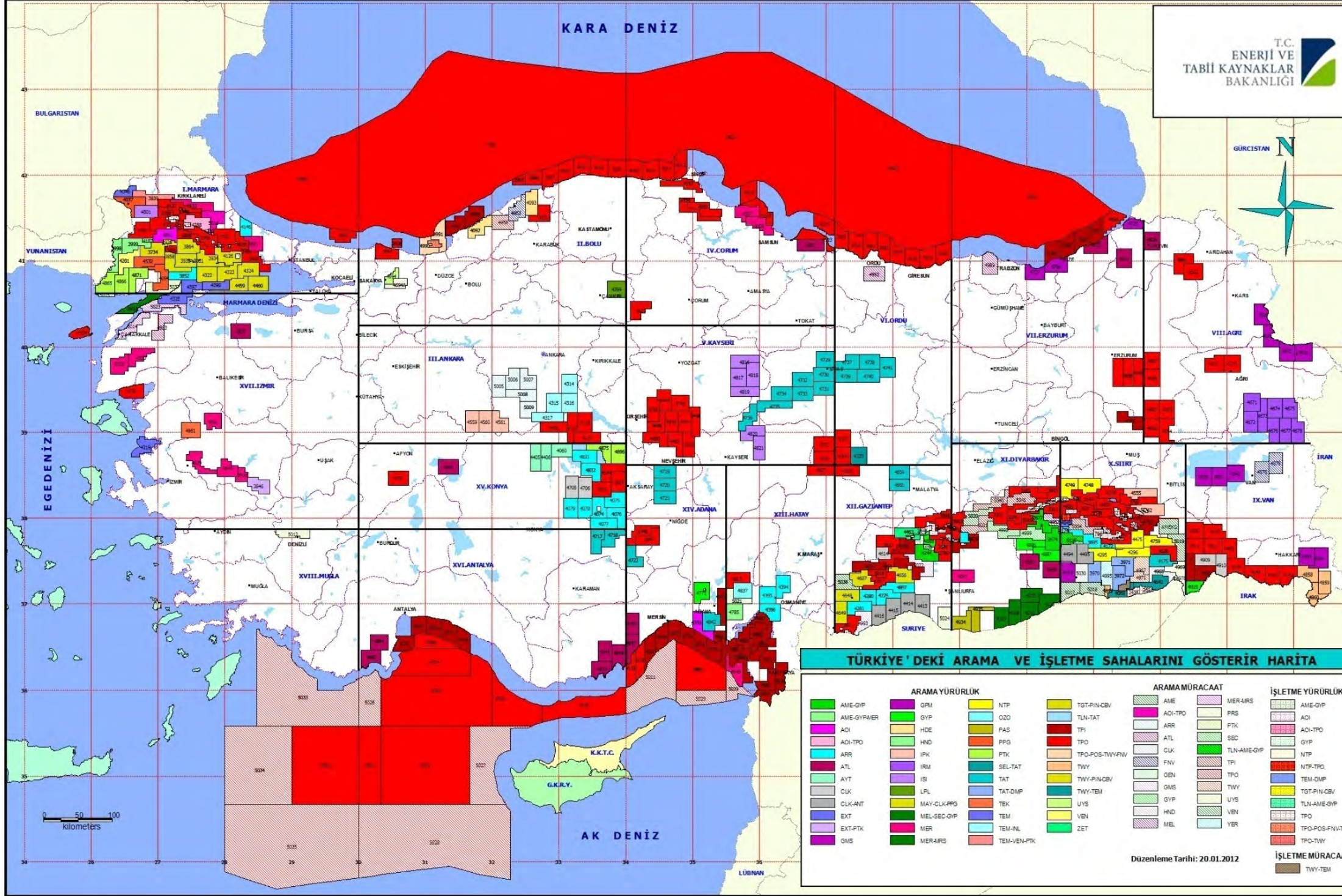
- Foreign investors can **transfer abroad** the registered capitals and net profit of the foreign investors that they will acquire from production,
- Petroleum right holders can employ foreign employees in order to use in petroleum activities.
- Petroleum right holders can realize **procurement, renting and expropriation** for the field necessary for the petroleum activities and its right of construction.
- Petroleum right holders are exempted from **Cabotage Law** for offshore activities
- Petroleum right holders can export **35 %** of the oil produced in onshore fields and **45 %** of the oil produced in offshore fields that have been discovered after 1980.





■ Liberal Approach
■ State dominated approach

■ Özel Sektör Üretimi
■ TPAO Üretimi



There Are 43 Companies in Petroleum Industry

PETROLEUM POTENTIAL OF TURKEY

ROMANIA

RUSSIA

BLACK SEA

GEORGIA

TURKEY

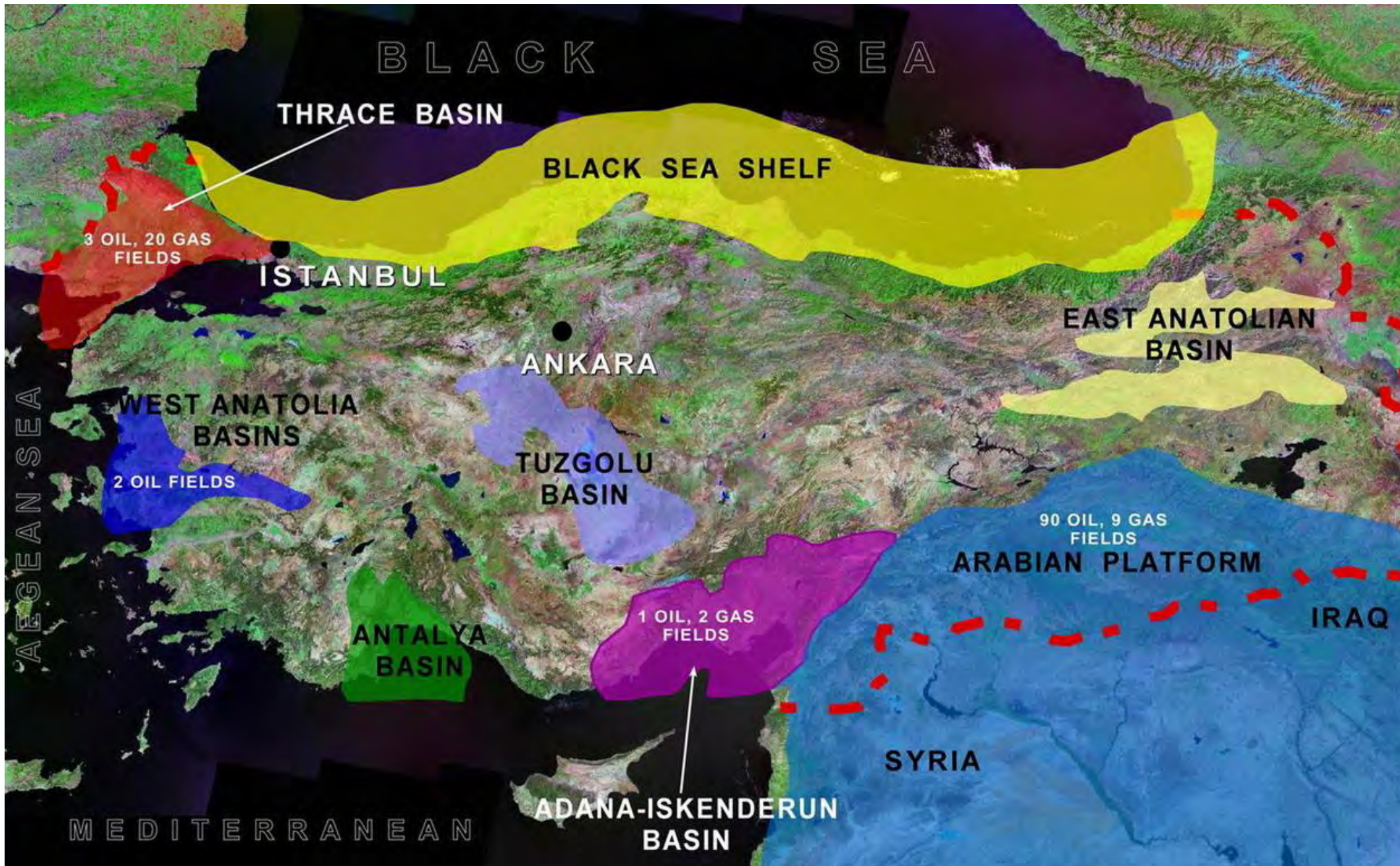
SYRIA

IRAQ

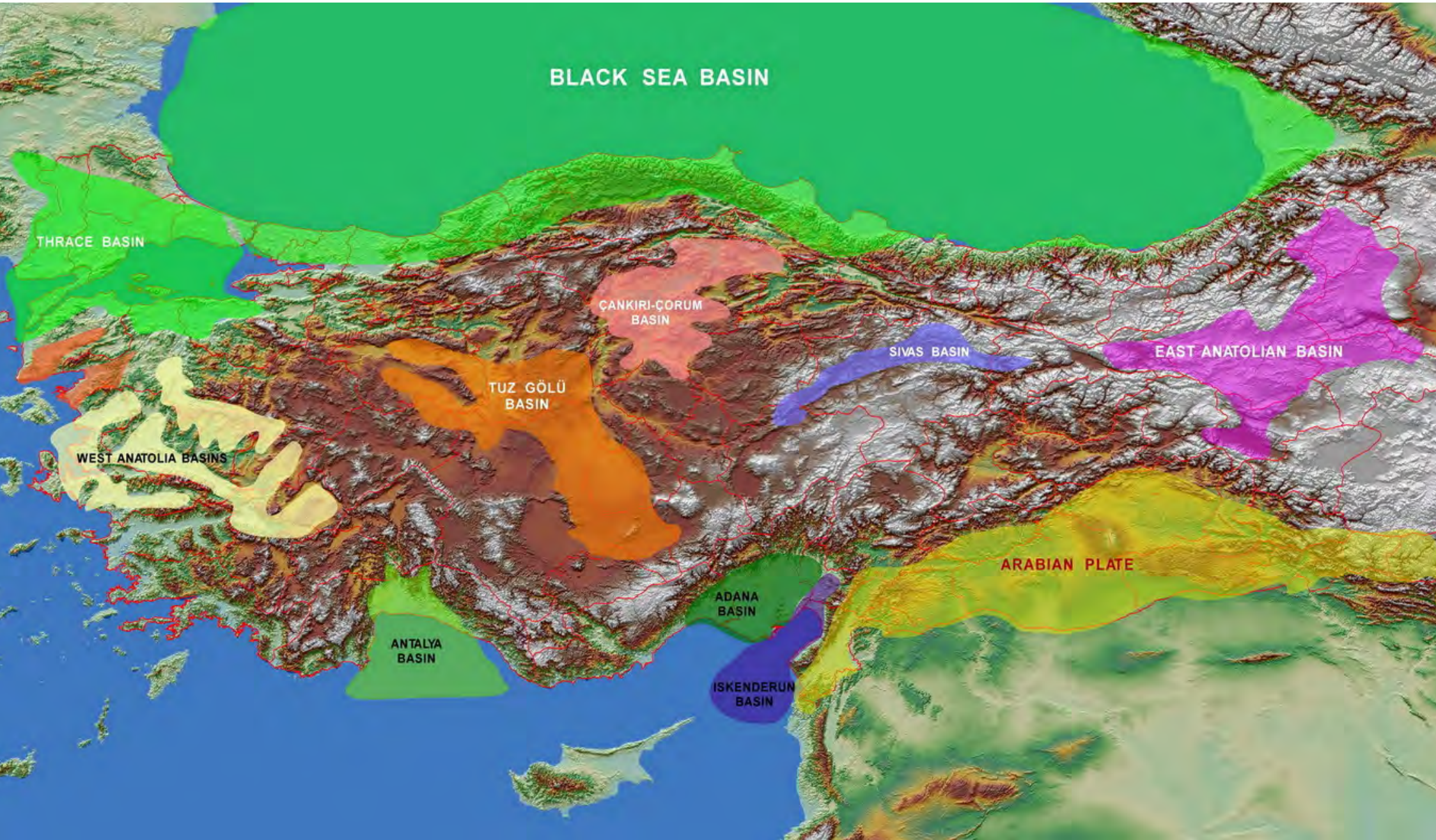
MEDITERRANEAN



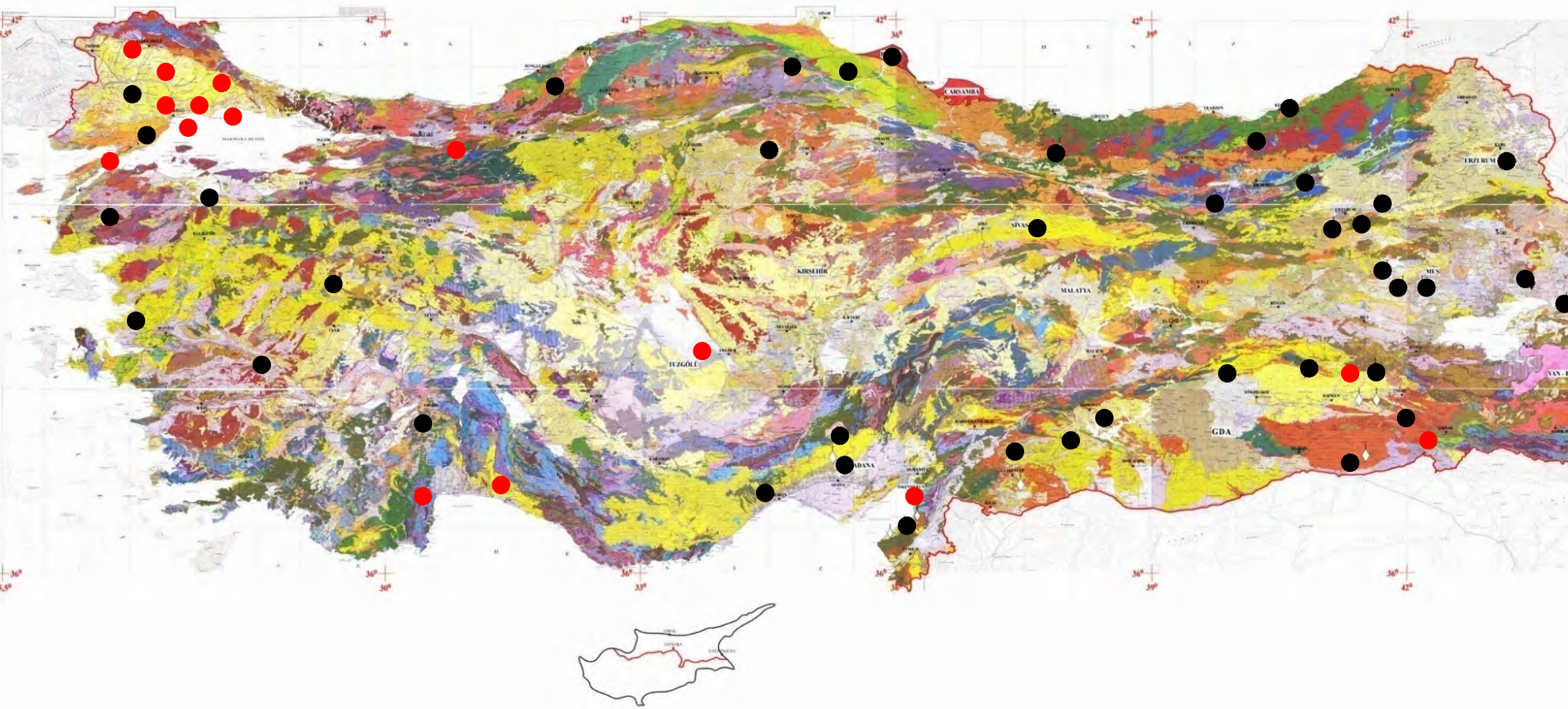
TURKEY, GEOLOGICALLY HAS MANY BASINS



SEVERAL AREAS ARE MODERATELY EXPLORED. HOWEVER THE MAJORITY REMAINS UNEXPLORED



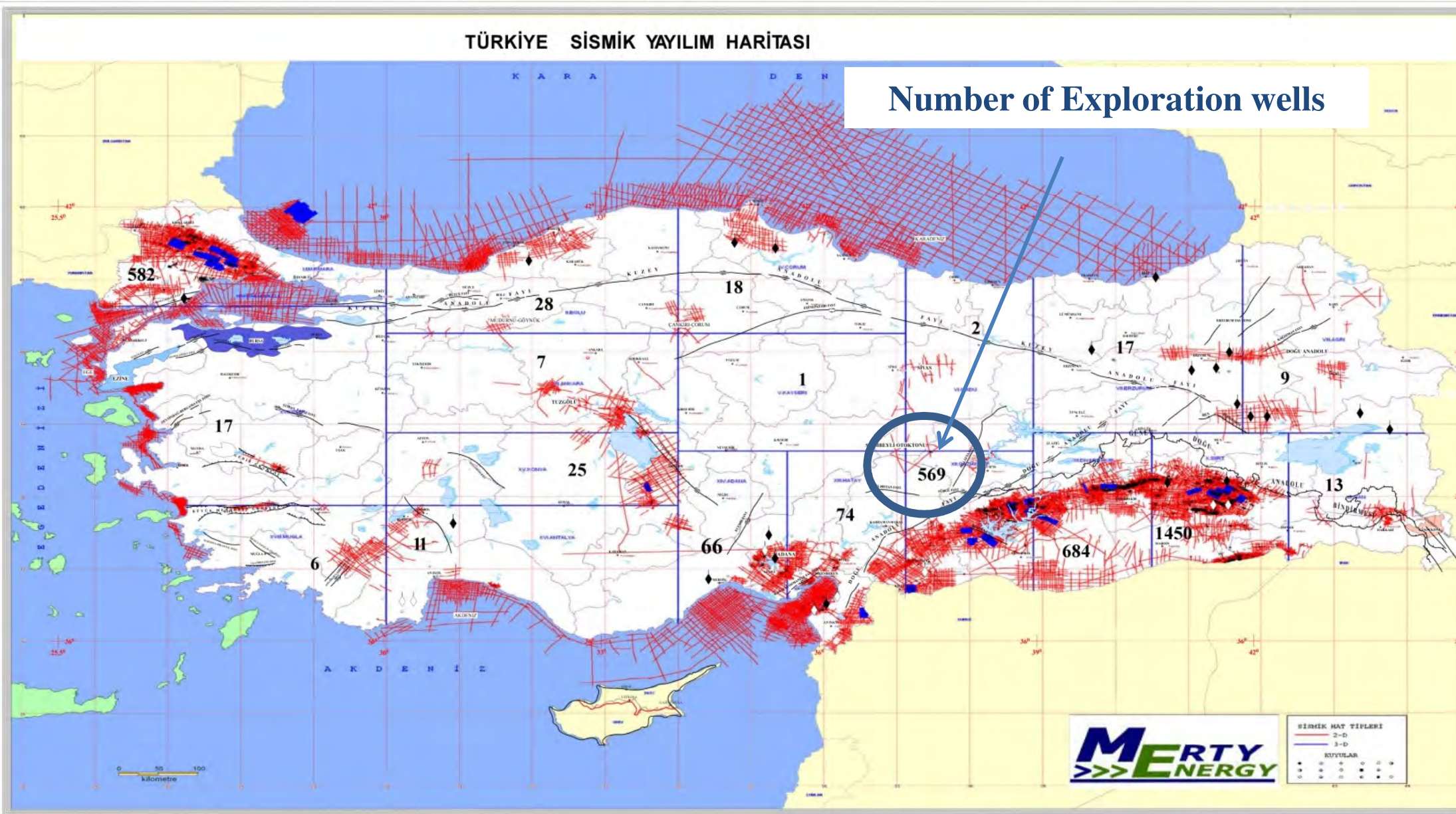
THERE ARE MORE THAN 20 TERTIARY BASINS ONSHORE



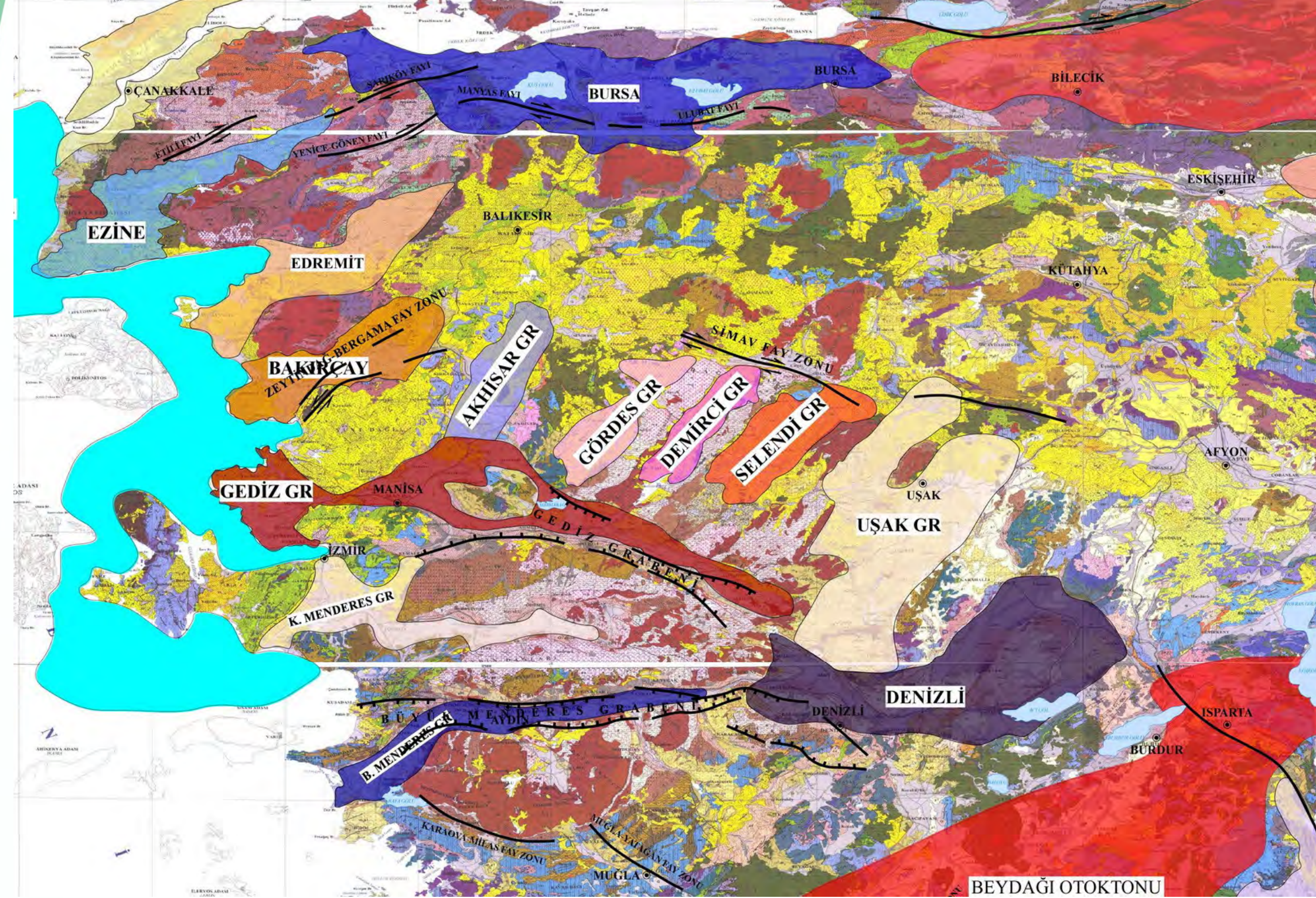
Oil and gas shows else where in Turkey

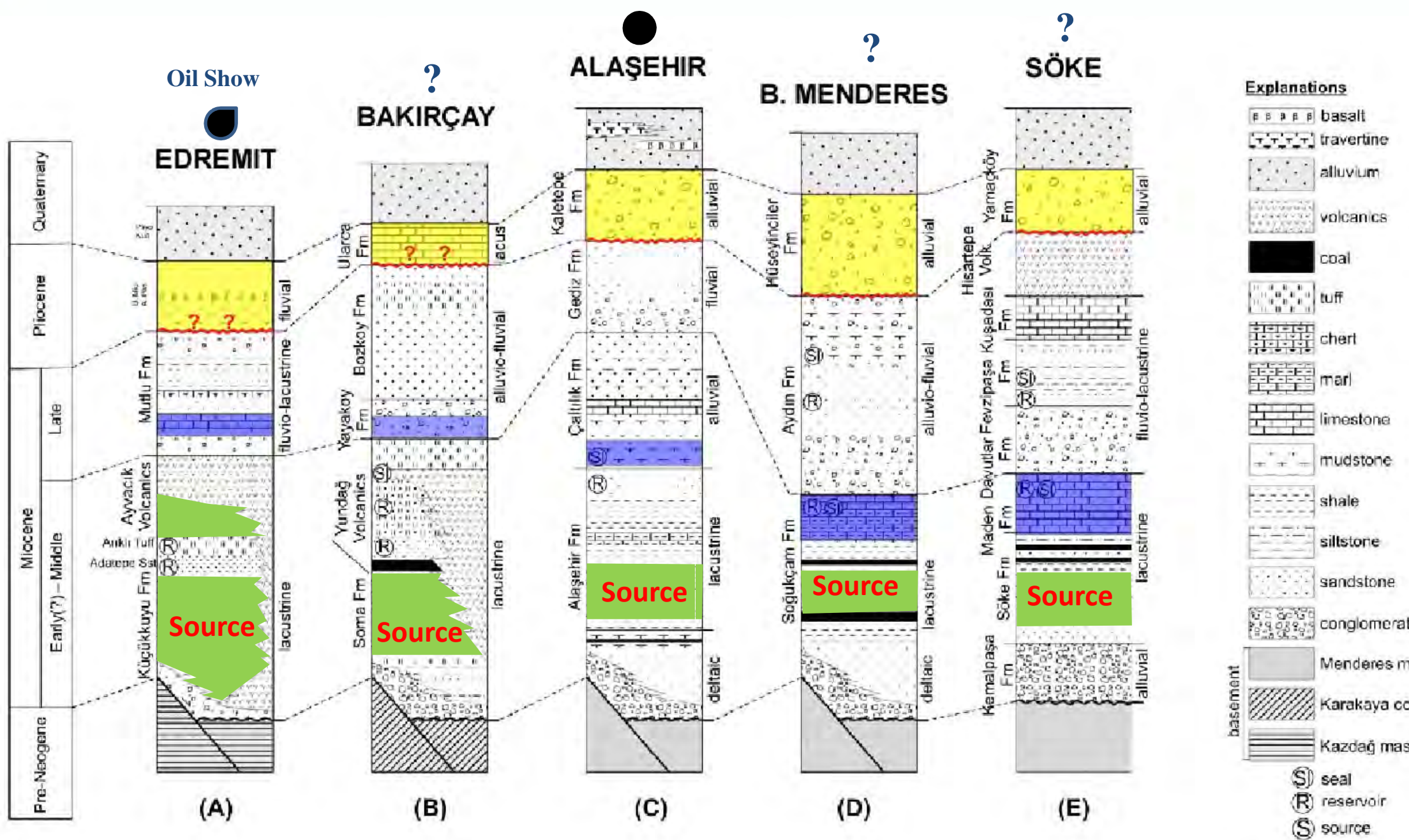
TÜRKİYE SİSMİK YAYILIM HARİTASI

Number of Exploration wells



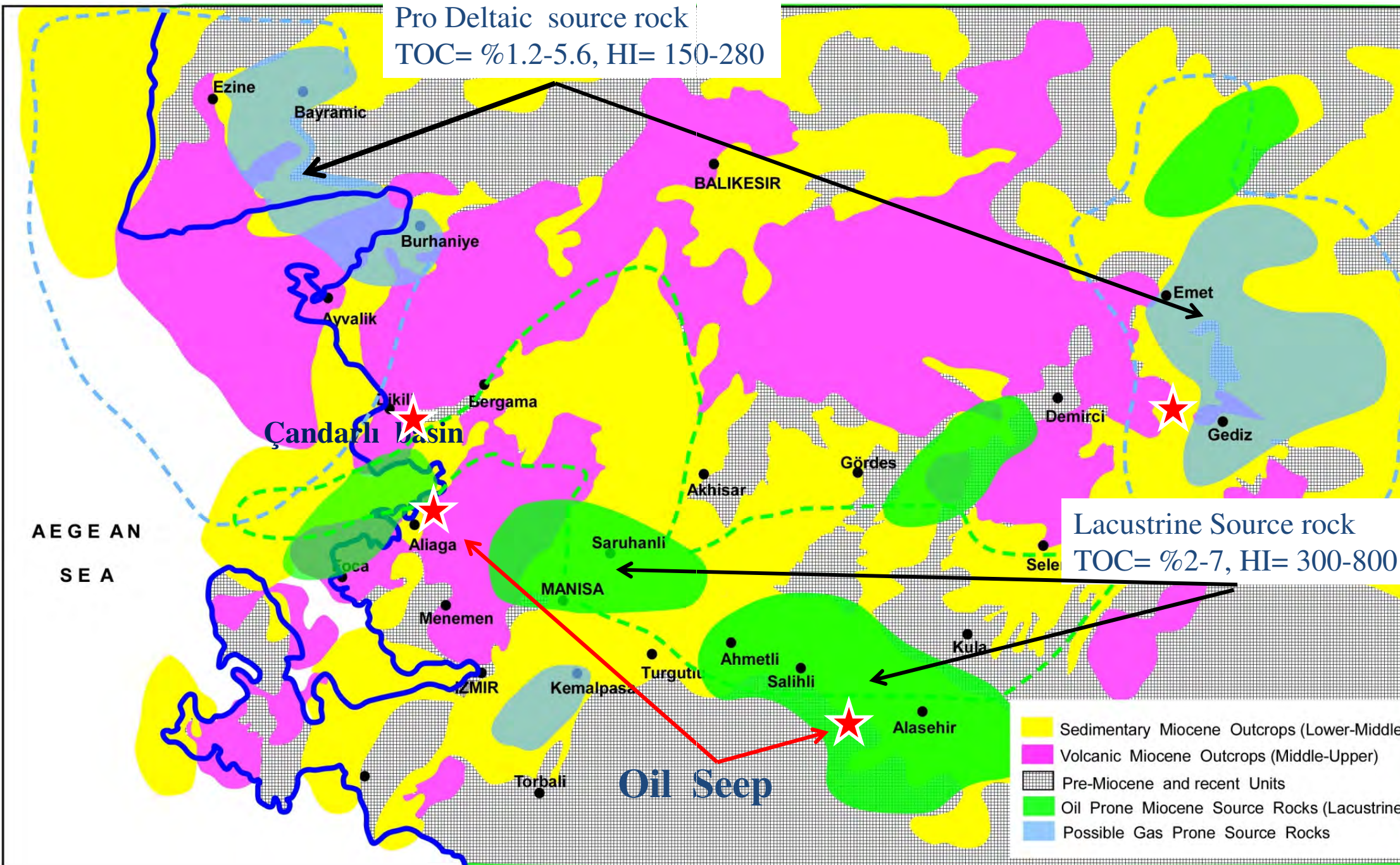
Seismic coverage as of 2007 together with the number of wells drilled







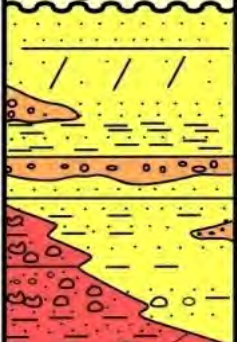




Çiftçi et.al., 2010

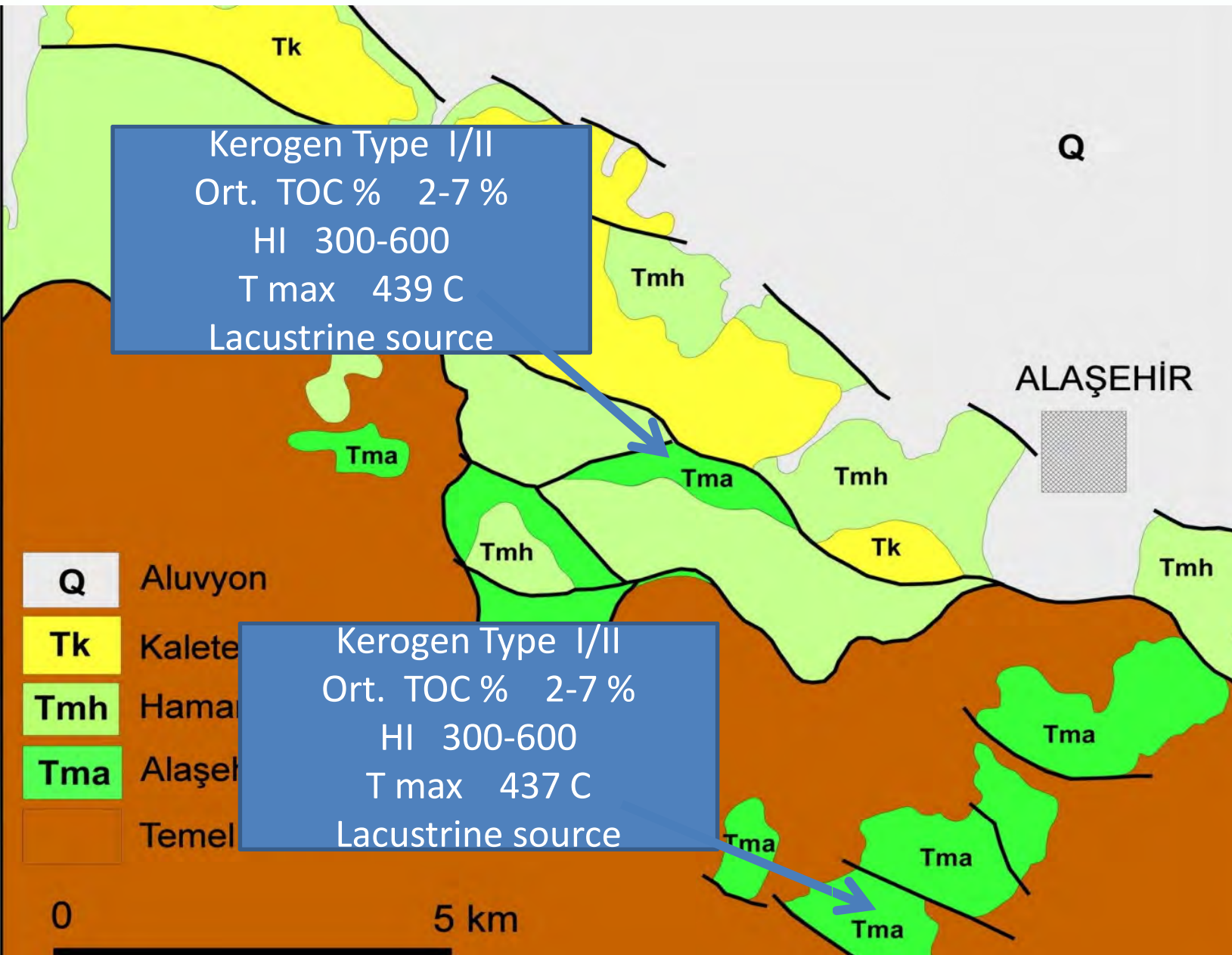
Actually similar stratigraphy, more important similar sedimentary environment ex
 throughout many Tertiary (mainly Eocene-Miocene) Basins



Lacustrine and deltaic source rocks of Eocene (?), Oligocene (?),

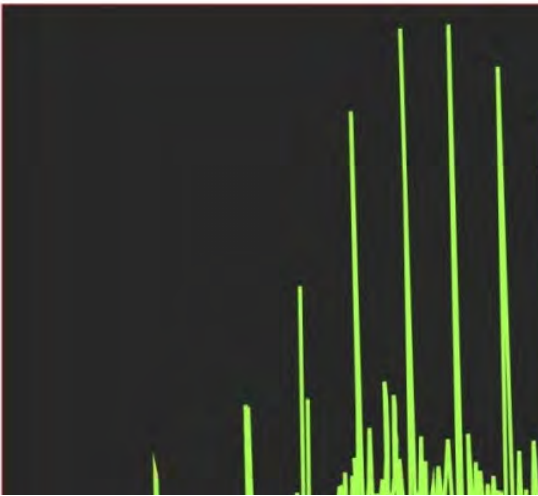
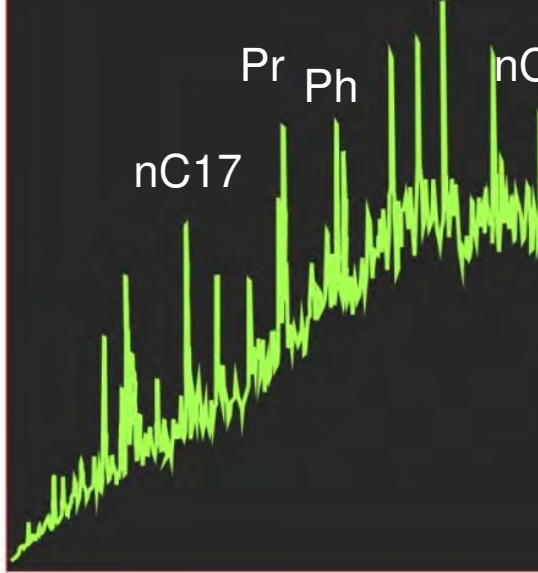
GENERALISED STRATIGRAPHIC SECTION OF ALASEHIR and WEST ANATOLIAN BASINS

AGE	FORMATION	THICKNESS(m)	LITHOLOGY	EXPLANATIONS	
QUATERNARY	Qal / Qel			Qal/Qel	Alluvium A. UNCONFORMITY
PLIOCENE	KALETEPE	100-250 Tpk		Tk	Lateral alluvial fan deposits consisting of alternating conglomerate and sandstones. Typical with its topographical features. UNCONFORMITY
MIOCENE	GEDİZ FM. HAMAMDERE M. / SALIHLI MEMBER	500 - 750 m. Tmg		Tg	Axial river deposit consisting of alternating conglomerates, sandstones and mudstones. CONCORDANT
		500 - 750 m. Tmg		Tgh	Red colored alluvial fan deposit, muddy in patches UNCONFORMABLE
	500 - 900 m. Tma		Ta	●	Laminated laustrine shales of type characteristics which include approximately 1.5 - 7.5% of TOC with HI values of 300 to 800, with lensoidal, thick bedded lacustrine delta sands of medium to high quality reservoir characteristics.
EOCENE / OLIGOCENE	HAMITABAT FM.			Th	☀ ● Pro delta shales (with High TOC) and turbiditic sands with rare tuff interbeds ANGULAR UNCONFORMITY
CENOZOIC - MEZOSOIC	AMORPHICS	PzMzm		PzMzm	Metamorphics, Various shist - calcite and marble alternations



AGE		LITHOLOGY	EXPLANATION
Formation	Thickness(m)		
Pliocene	Qal	[Lithology symbols]	Alluvium
	Qel		A UNCONFORMITY
Pliocene	KALETEPE	[Lithology symbols]	Tk
			Tgs
			Tg
			Tgh
Miocene	G. EDIZ FM.	[Lithology symbols]	Tae
			Ta
			Tak
			Tam
Miocene	HAMAMCIERE U.	[Lithology symbols]	Tam
			Tam
			Tam
			Tam
Miocene	EVRENLI U.	[Lithology symbols]	Tam
			Tam
			Tam
			Tam
Miocene	SALIHLI U.	[Lithology symbols]	Tam
			Tam
			Tam
			Tam
Miocene	HAMA	[Lithology symbols]	Tam
			Tam
			Tam
			Tam
Miocene	ALASEHIR FM.	[Lithology symbols]	Tam
			Tam
			Tam
			Tam
Miocene	KAYADIRI U.	[Lithology symbols]	Tam
			Tam
			Tam
			Tam
Upper Miocene	HAMAMCIERE U.	[Lithology symbols]	Tam
			Tam
			Tam
			Tam
Upper Miocene	SALIHLI U.	[Lithology symbols]	Tam
			Tam
			Tam
			Tam
Upper Miocene	G. EDIZ FM.	[Lithology symbols]	Tam
			Tam
			Tam
			Tam
Pliocene	KALETEPE	[Lithology symbols]	Tk
			Tgs
			Tg
			Tgh
Pliocene	Qal	[Lithology symbols]	Alluvium
			Qel
			Qal
			Qel
Paleozoic - Mesozoic	MENDERES METAMORFİKLERİ	[Lithology symbols]	Pz/Mzm
			Pz/Mzm
			Pz/Mzm
			Pz/Mzm

**A sample is Alasehir graben...
 Very prospective source rock, mature and with high porosity
 Deltaic sandstones**



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