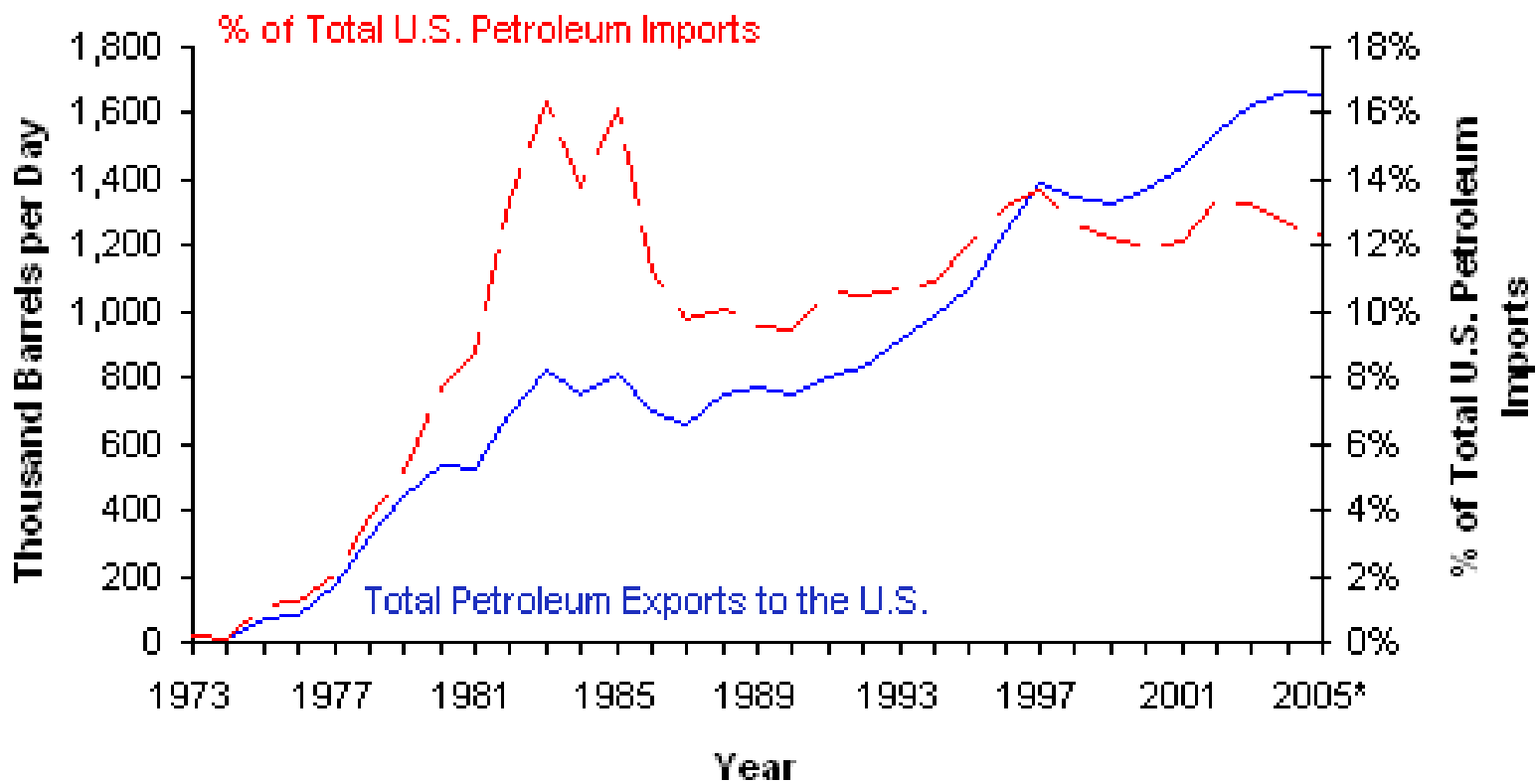


Mexican oil production and exports

Dr. Duncan Wood



Mexico's Total Petroleum Exports to the United States, 1973-2005^a



Source: EIA

^athrough August

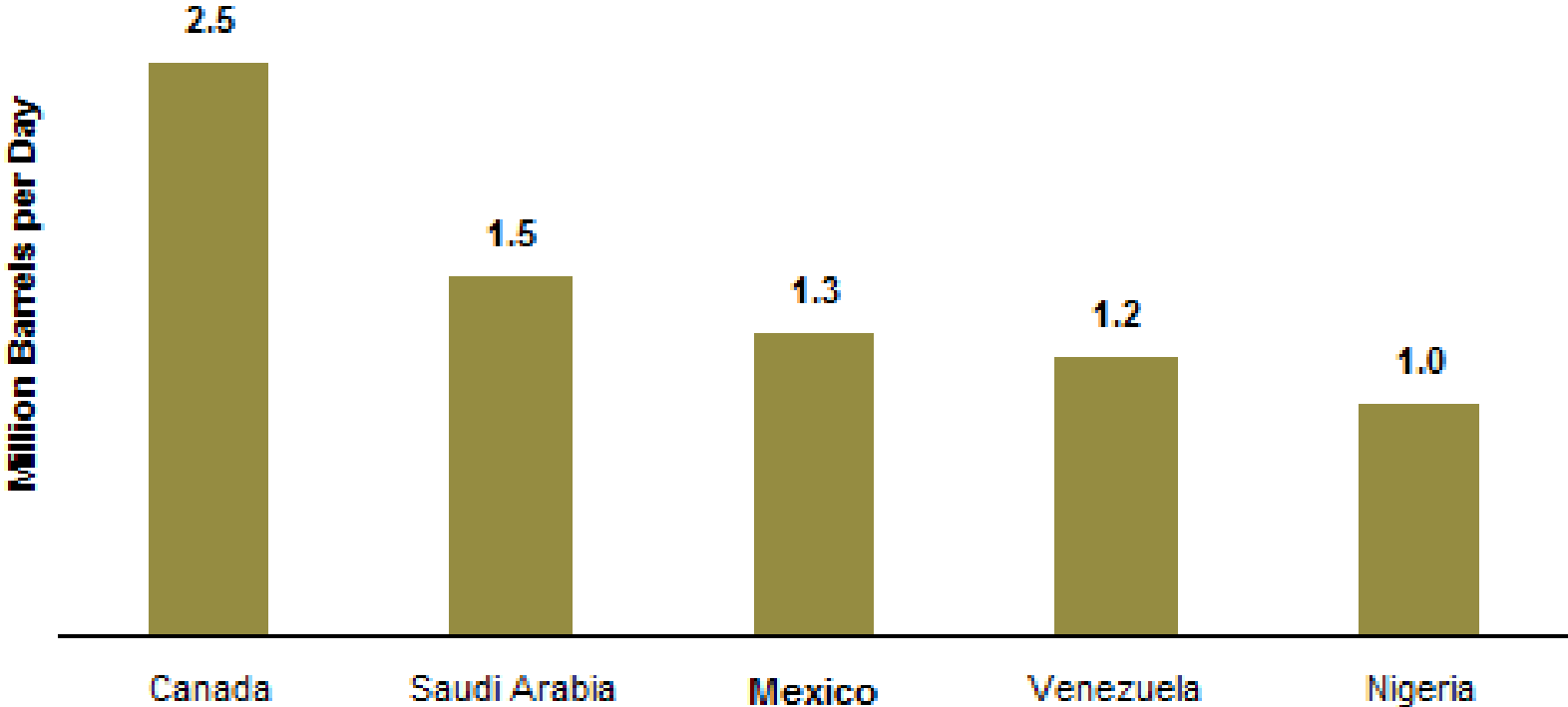
Mexico's Oil Exports to USA

- Mexico is consistently one of the top three exporters of oil to the U.S., along with Canada and Saudi Arabia.
- Mexico's crude oil exports to the United States rose steadily through the 1980s and 1990s, before peaking in 2004 at 1.6 million bbl/d.
- The combination of Mexico's falling oil production and rising domestic demand have led to a reduction in exports to the United States since that peak.
- From 2004-2007, Mexico was the second-largest source of U.S. oil imports, but fell to third-largest in 2008. Now back in second place, thanks largely to reduced imports from Saudi Arabia made possible by the impact of economic recession

Mexico's Oil Exports to USA

- In 2008, Mexico exported 1.4 million bbl/d of crude oil.
- In 2008, the U.S. imported 1.2 million bbl/d of crude oil from Mexico, of which 97 percent went to the GulfCoast.
- The U.S. also imported about 100,000 bbl/d of refined products from Mexico in 2008, mostly residual fuel oil, naphtha, and gasoline blending components.

Top 5 Sources of U.S. Petroleum Imports, 2008

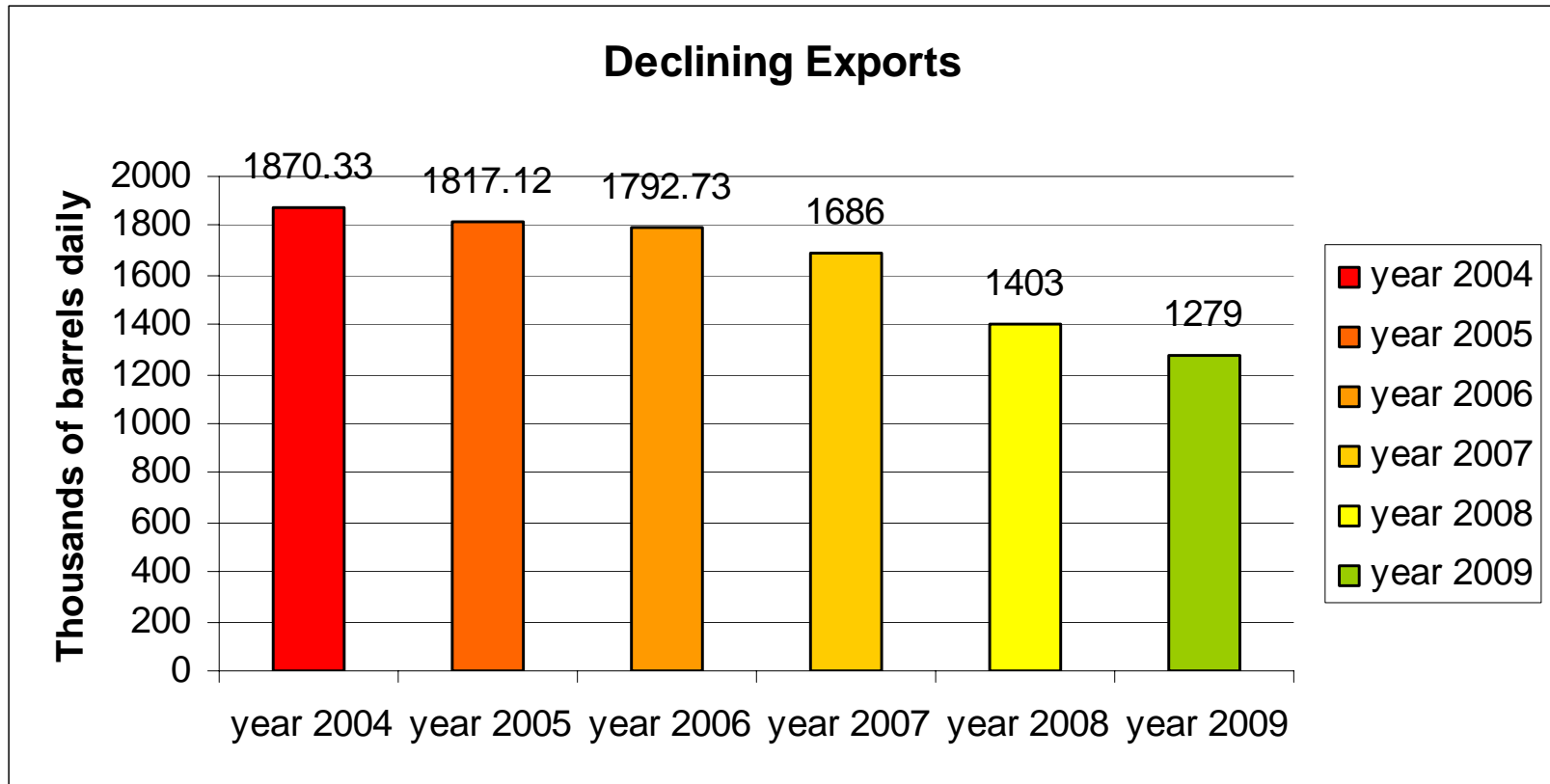


Source: EIA Petroleum Supply Monthly

Mexico's Oil Exports to USA

Crude Oil Imports (Top 15 Countries) (Thousand Barrels per Day)					
Country	Feb-09	Jan-09	YTD 2009	Feb-08	YTD 2008
CANADA	1,913	1,946	1,930	1,920	1,933
MEXICO	1,219	1,299	1,261	1,231	1,214
SAUDI ARABIA	1,099	1,337	1,224	1,614	1,544
VENEZUELA	960	1,172	1,072	945	1,043
ANGOLA	671	527	595	341	458
IRAQ	554	568	562	780	658
NIGERIA	457	488	473	982	1,075
BRAZIL	365	397	382	169	169
KUWAIT	251	225	237	261	249
ECUADOR	243	272	258	169	209
COLOMBIA	225	225	225	220	194
EQUATORIAL GUINEA	167	118	141	69	53
ALGERIA	142	359	256	191	281
RUSSIA	139	157	149	80	47
CHAD	101	79	90	89	103

Declining Exports



Declining Exports

Thousands of barrels daily	Year					
	2004	2005	2006	2007	2008	2009
Exportación de petróleo crudo	1,870.33	1,817.12	1,792.73	1,686	1,403	1,279
Istmo	27.36	80.97	68.29	41.00	23.00	7.0
Maya	1,621.55	1,520.35	1,493.83	1,472.00	1,251.00	1,175.0
Olmeca	221.42	215.80	230.60	173.00	130.00	97.0

Mexican oil production

	Year					
	2004	2005	2006	2007	2008	2009
Production (thousands of barrels daily)						
Liquid Hydrocarbons	3,825	3,760	3,683	3,477	3,164	3,035
<u>Petróleo crudo</u>	<u>3,382.90</u>	<u>3,333.35</u>	<u>3,255.58</u>	<u>3,082</u>	<u>2,799</u>	<u>2,667</u>
Pesado	2,457.98	2,386.97	2,243.75	2,045	1,773	1,616
Ligero	789.59	802.25	831.47	838	815	811
Super Ligero	135.32	144.12	180.35	199	210	240

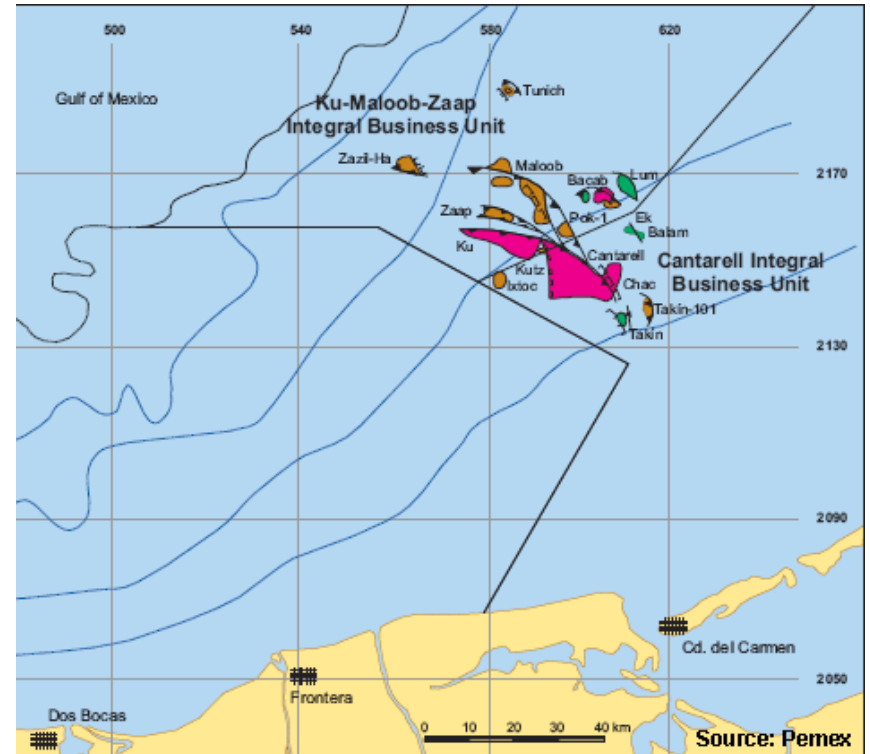
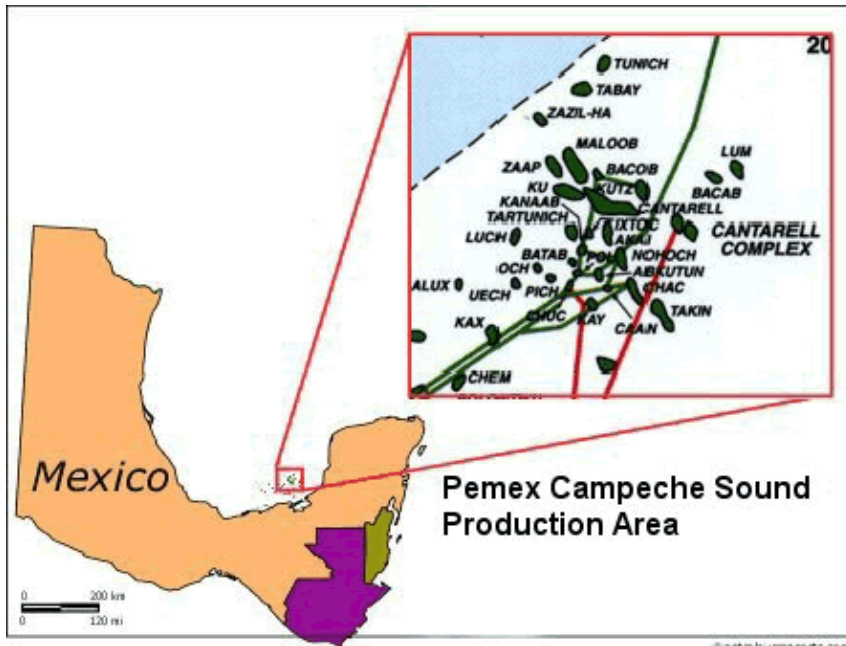
Decline

- In March 2009, average production declined to 2,652.2 thousand barrels daily.
- A 6.6% decrease over March 2008.
- World oil production in March 2009 was 83,350 thousand barrels per day, of which Mexico contributed 3.6% - a
- 0.3 percentage points decrease in comparison with March 2008, when Mexico contributed with 3.9% in the world's production.
- Maturing and declining fields
- No significant new discoveries
- Insufficient investment in E&P
- Inadequate oil reform in 2008

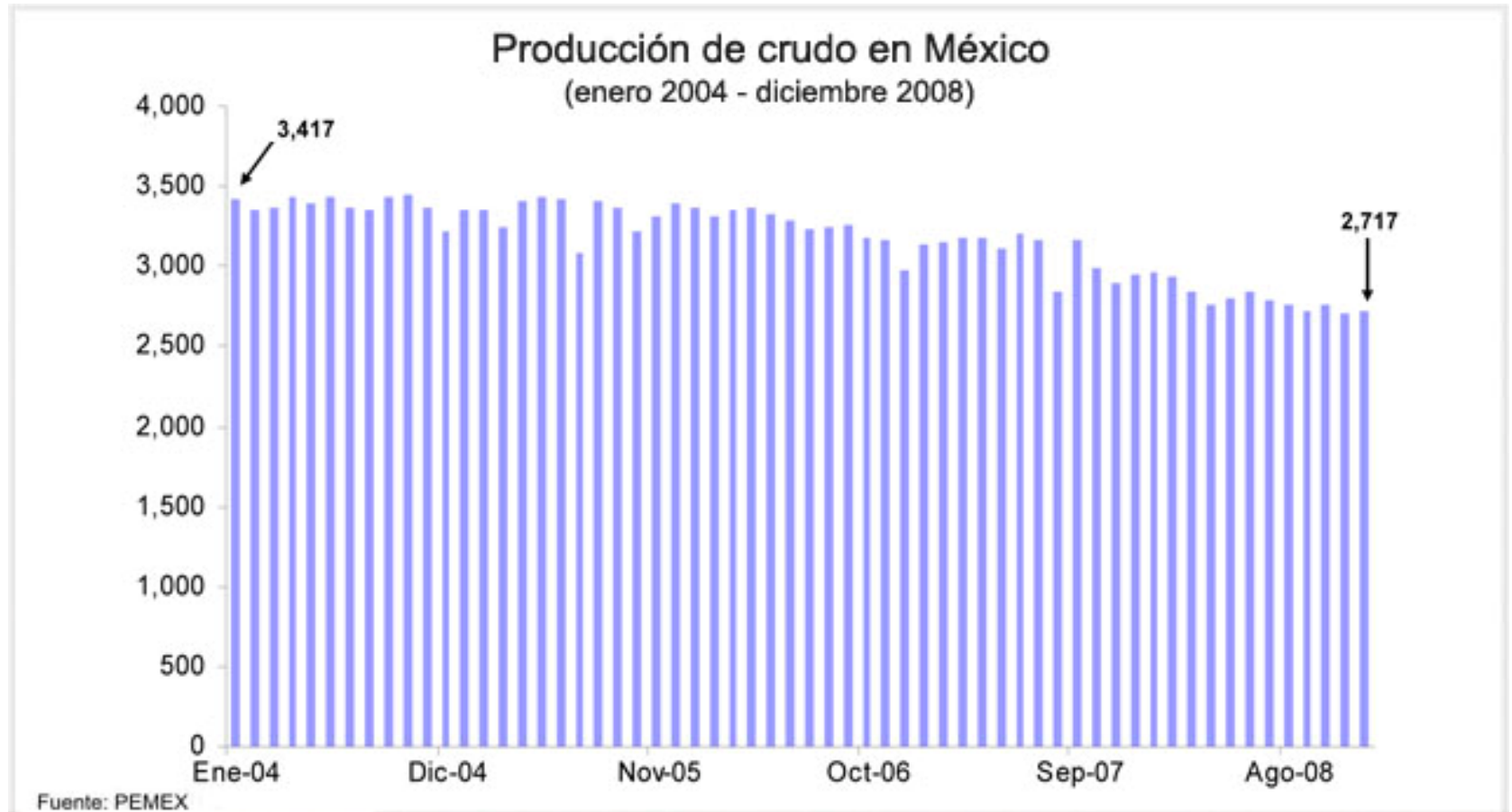
Producción de petróleo en México, 2007

Complejo	Producción (Miles de barriles)	% del total
Cantarell	1,497.3	48.6
ku-Maloob-Zaap	527.0	17.1
Abkatún-Pol Chuc	312.5	10.1
Litoral Tabasco	193.6	6.3
Bellota - Jujo	190.0	6.2
Samaría-Luna	186.7	6.1
Total (6 complejos)	2,907.1	94.3
Producción total	3,082.6	100.0

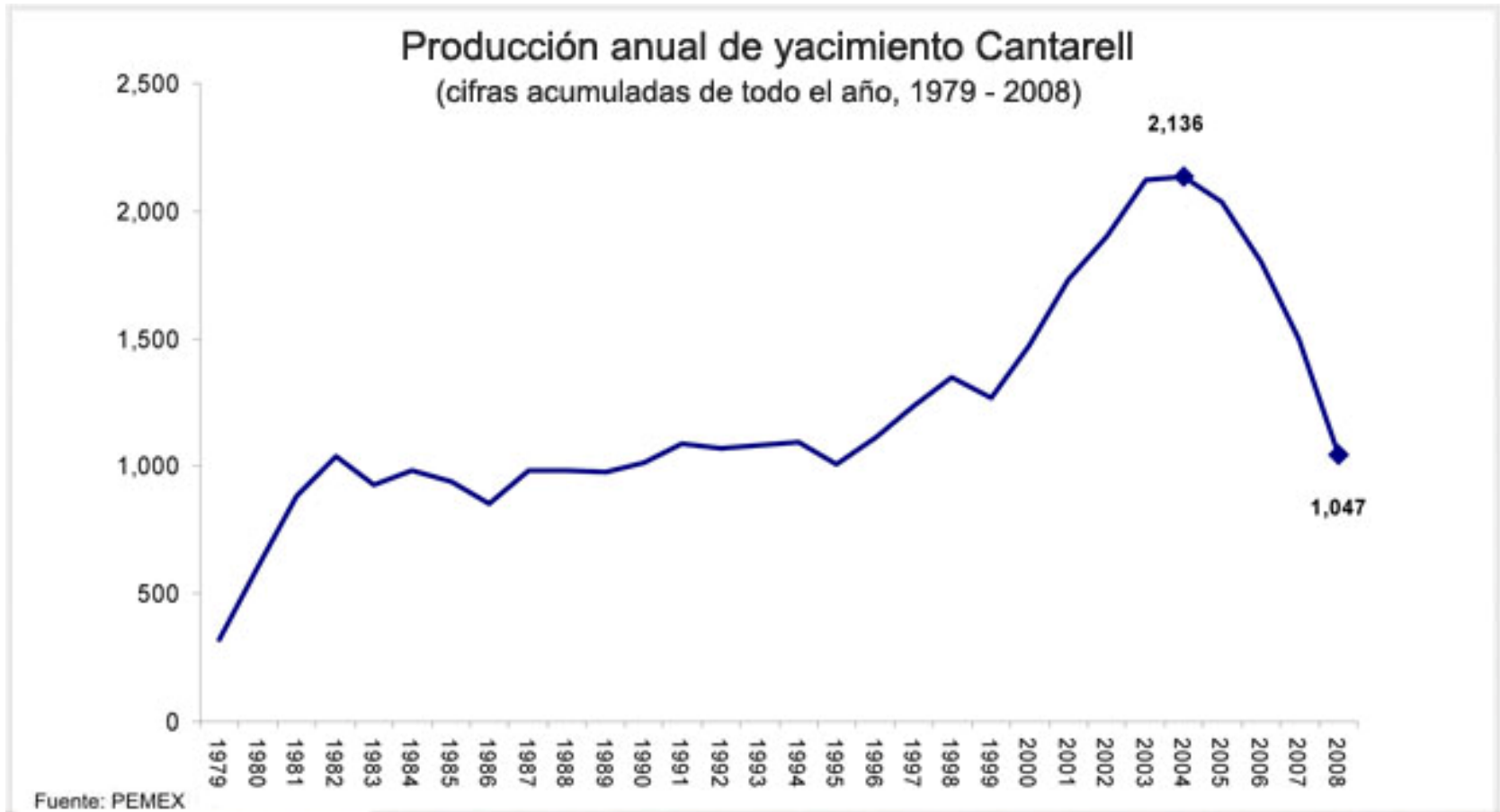
Cantarell & KMZ



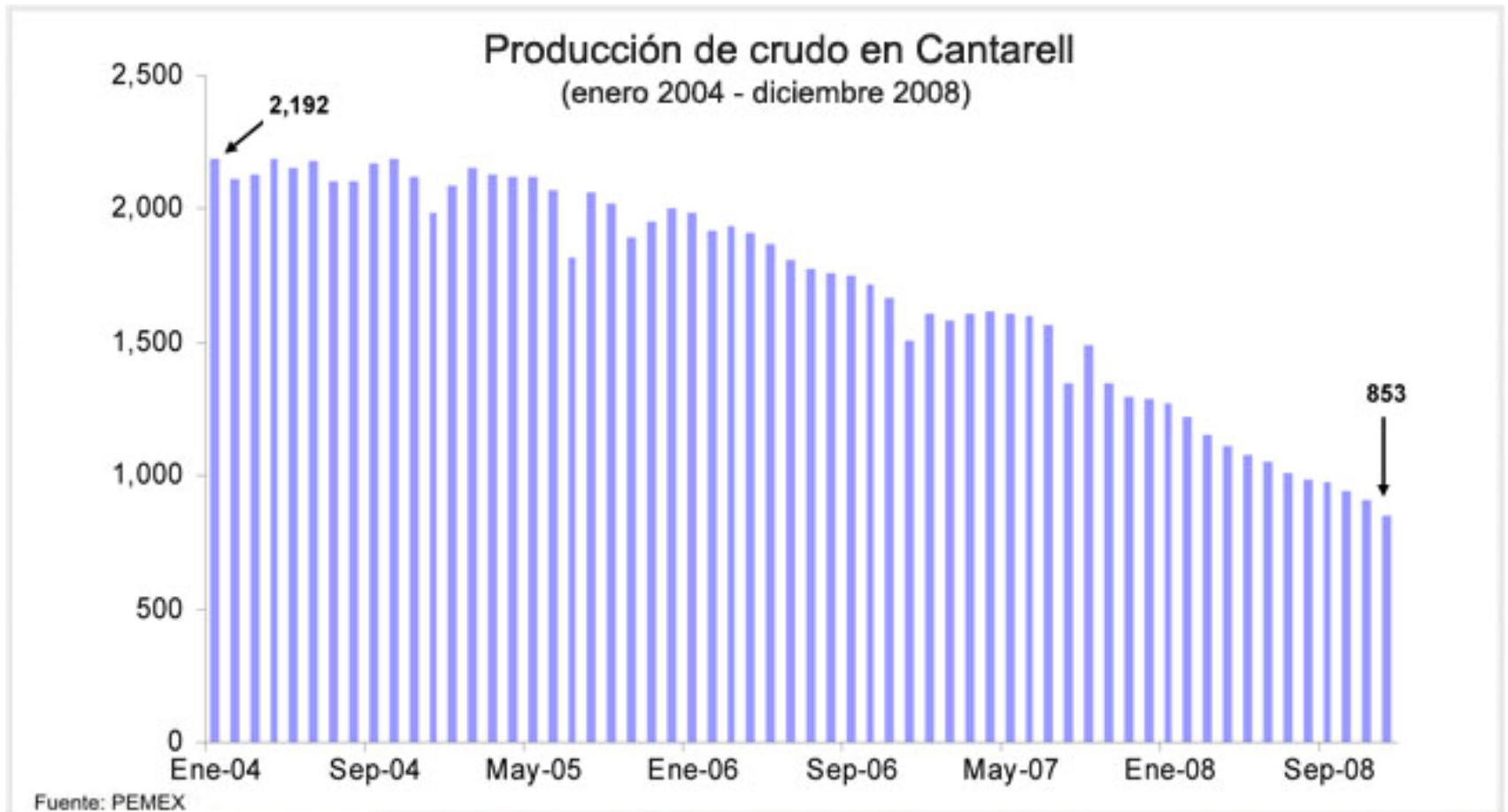
Mexico's Oil Production



Production in Cantarell

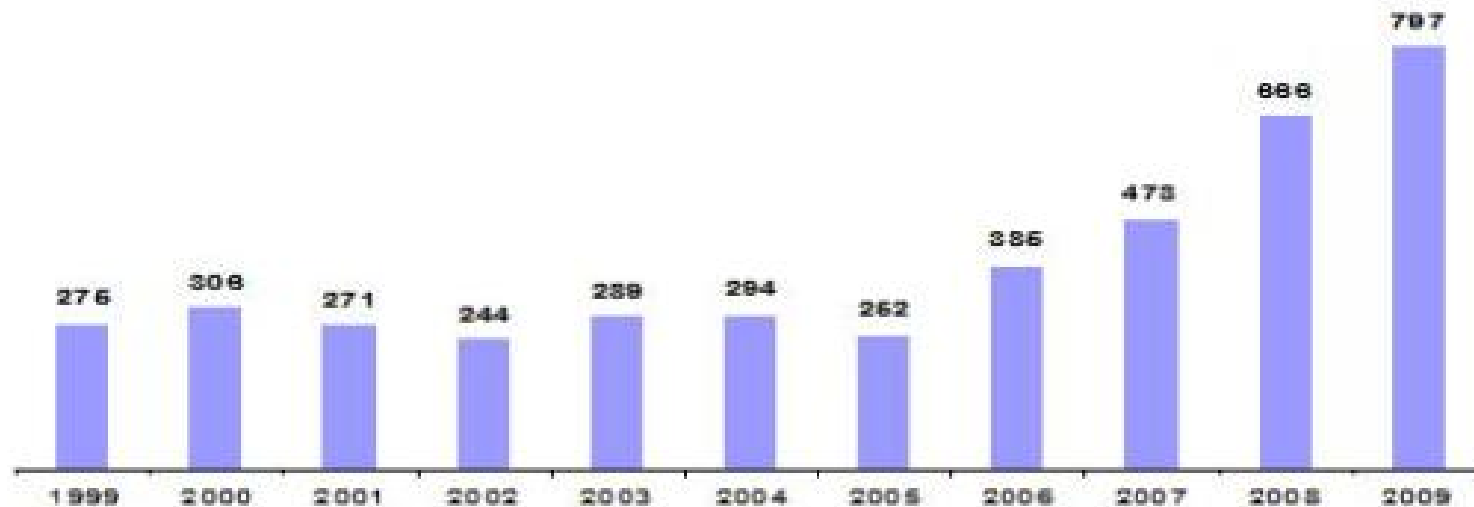


Production in Cantarell



Production Ku Maloob Zaap

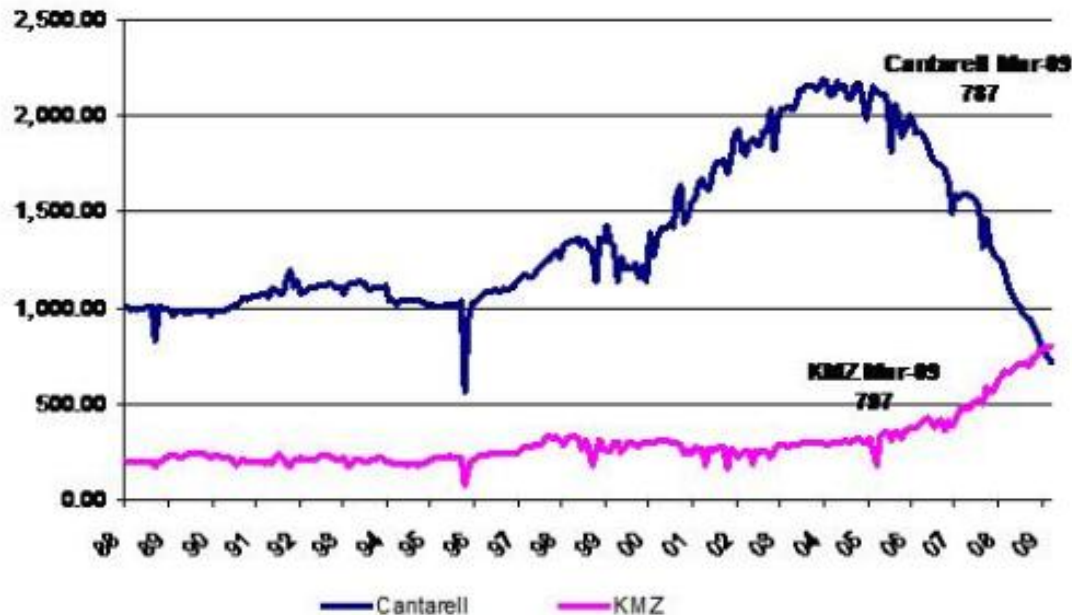
Producción Promedio Anual de Crudo en KMZ
(miles de barriles diarios, primer trimestre de cada año)



Production KMZ March 2009

- Ku-Maloob-Zaap's production has outnumbered Cantarell's, and the gap between these two is growing.
- Ku-Maloob-Zaap's average production is 800 thousand barrels per day which is 46.1k more barrels than Cantarell and contributed 30% of total crude production.

Producción mensual
(miles de barriles diarios)

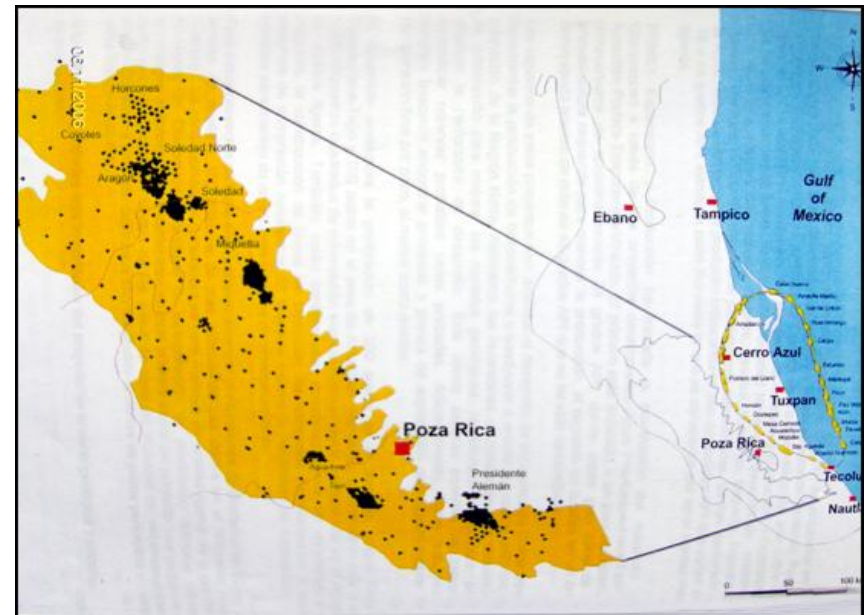


Producción de petróleo en México, 2007

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Chicontepec

- Area covering 3800 km²
- Huge reserve – 17.7 bn barrels
- By 2017 it is hoped that Chicontepec will produce between 550-700 thousand barrels a days
- This will require huge investment, new technologies, time.
- Chicontepec reserves are low quality oil, low permeability, low pressure – complex production.



Chicontepec

- Currently, the project contributes a little more than 1% to national production, but it is estimated that by 2015 this will grow to around 20%.
- During 2007, Chicontepec produced 23,000 bd of oil and around 33,000 bd in 2008
- Starting in 2009, it is estimated that this project will produce 72,000 bd, and that this production will gradually increase as more wells are drilled
- For the period 2009-2017, the project is estimated to produce an average of 443,000 bd. Crude production will supposedly reach its peak in 2016.

The challenges of Chicontepec

- Because of the geology in the area, 16,000 wells will have to be drilled between 2002-2020
- In 2010 1,411 wells will be drilled and a level of at least 1,200 wells will be drilled each year until 2020.
- Steady flow of rigs and platforms heading south
- Compare to Cantarell – in 30 years 250 wells have been drilled. Production per well in Cantarell has been between 5-15 thousand barrels/day; in Chicontepec between 100 -300 barrels/day per well.

The future

- The close proximity of the U.S. market and the sophisticated level of refineries in the United States will continue to attract the bulk of Mexico's oil exports.
- Rising Mexican demand and shrinking production will mean Mexico will lose its position as a net exporter by 2020-25
- New refinery projects in Tula and Salamanca will absorb more Mexican oil (300 thousand barrels/day)
- Failure to reform PEMEX to allow for effective deep water production will mean that Mexico cannot turn this around
- US will have to turn to other suppliers.