

# How Developments in Mexico will Influence the Gulf Coast Petrochemical Industry

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Houston

The Future of the Gulf Coast Petrochemical Industry  
Houston, April 29, 2005

# Baker & Associates

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- ❑ Consultants on Mexican oil and gas, chemical and power industries
- ❑ Houston-based since 1996
- ❑ Publisher of Mexico Energy Intelligence, a business and policy reporting service
- ❑ Publisher of Mexico Energy Press Report based on in-house database

# In this presentation

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- Briefly consider Caribbean area
- Review course of Mexican petrochemical industry
- Examine Project Fénix
- Test null hypothesis: Mexico threatens Gulf Coast chemical producers
- Conclusions

# Caribbean: T&T and Venezuela

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- Rich endowments of stranded natural gas appropriate for LNG projects
- Perceived country risk in Venezuela will limit new investments in capacity
  - Competing claims on resources
  - Centralized decision-making
  - Politicized organizations
  - Legal and policy uncertainty

# Mexico's chemical business

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- ❑ 1970s Oil Boom led to major Pemex investments in capacity: two major complexes, Morelos and Pajaritos
- ❑ Regulations loosened in 1980s and 1990s to allow private investment
- ❑ Oil Union opposes privatization
- ❑ Result: 20 years of stagnation
- ❑ Total chemical imports exceed \$10 bn



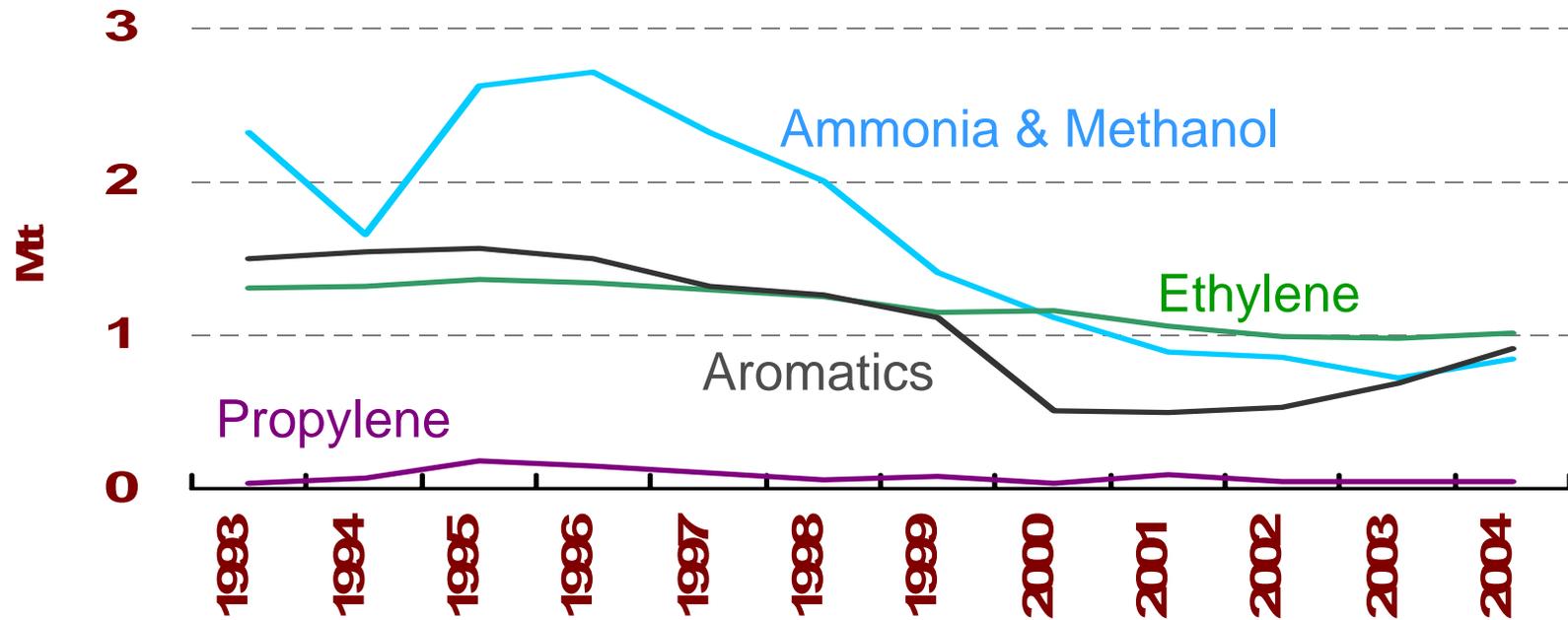
## Evolution of Pemex's petrochemical unit

### *Fifteen years of uncertainty*

Date	Note
1991	
Jul 01, 1991	Pemex hires consultants to analyze options: SRI, ChemSystems, Arthur D. Little, McKinsey & Company
1995	
Mar 18, 1995	Clash over future of Pemex's petrochemical future: Pemex CEO vs. Oil Union
Jul 01, 1995	Public tender of Cosoleacaque ammonia plant; canceled in 1996; Energy Minister dismissed
1996	
Nov 13, 1996	Law changed to allow private investment in products to be produced by Fénix
1998	
Jul 01, 1998	Government puts 49% of Morelos Complex up for international bid, but no bidders
2000	
Dec 01, 2000	Raúl Muñoz Leos, former DuPont country manager, appointed to lead Pemex
2003	
May 01, 2003	Pemex begins promotion of Fénix; identifies 20 prospective investors, confirms 13
Oct 01, 2003	Project Fénix starts to take form
2004	
Apr 05, 2004	Pemex receives proposals from 7 prospective investors; includes Sabic and Nova
Jul 01, 2004	Pemex Chemicals abandons "baby" subsidiaries, and restructures into one company
Oct 21, 2004	Pemex selects 3 partners: Idesa, Indelpro and Nova Chemicals
Nov 01, 2004	Former DuPont executive dismissed as CEO of Pemex
2005	
Apr 15, 2005	Target date (in Oct. 04) to define site location, investments, markets and capital structure
Apr 25, 2005	Project Fénix final plans again delayed
Jun 30, 2005	Date set (in October 04) for formal agreement among investors and start-up of new company

# Mexico

## Decline of Pemex chemical output since 1993



# Pemex product exports (KBD & MMcfd\*)

	2002	2003	2004	% 03/04
Total	156	177	151	-15%
LPG	0	0	0	-
Gasolines	71	71	76	7%
Other	41	73	58	-21%
Nat Gas*	4	0	0	-

# Pemex imports (KBD & MMcfd\*)

	2002	2003	2004	% 03/04
Total	244	200	234	17%
LPG	60	56	50	-11%
Propane	42	30	34	13%
Gasolines	90	54	95	76%
Nat Gas*	592	757	766	1%

# PROJECT "FENIX"

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## □ Basic idea

- Two world-scale complexes that use local feedstocks, especially natural gasolines that currently are being exported

## □ Purposes

- Develop integrated chemical value chains of higher-value products
- Reduce the chemical trade deficit (\$10bn)
- Create economic multiplier effect

# Profile of Fénix capacity

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- Two petrochemical complexes
- Ethylene complex
  - 1 MM metric tons ethylene
  - 2 MM metric tons of derivatives
  - Investment needed: US\$1.8 billion
- Aromatics train
  - 1 MM metric tons capacity
  - Investment needed: US\$800 million

# What Pemex offers investors?

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- Role as off-taker of product
- Natural gas as feedstock, but at South Texas reference prices
- 80,000 b/d of natural gasolines as feedstock, but at Mont Belvieu prices
  - On Nov. 29, 2004 Mont Belvieu = \$50.02/bbl
  - Same day, Pajaritos, Veracruz = \$48.50/bbl

# Initial list of Fénix prospects in 2003

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- **Dow (USA)**
- **Basell (Holland)**
- **Alfa (México)**
- **Nova (Canada)**
- **Idesa (México)**
- **Repsol (Spain)**
- **Sabir (Saudi Arabia)**
- **Primex (México)**
- **ExxonMobil (USA)**
- **ENI (Italy)**
- **Chevron Phillips (USA)**

# Pemex's partners in Fénix

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## □ IDESA

- Mexican chemical company with wide experience in intermediate petrochemicals

## □ INDELPRO

- Joint venture of ALFA and BASSELL

## □ NOVA CHEMICALS

- Major actor in ethylene, polyethylene & styrene

## □ PEMEX CHEMICALS

# Quick review of Fénix press coverage in Mexico

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- Output from our in-house database of online press reports on Mexico's oil and gas, power and chemical industries, and political environment
  - >10,000 records, mainly since 2003
  - Can search by topic, company or key word
  - Most (>95%) in Spanish
  - Next slides show translated titles



## Project Fénix as told in the Mexican press

Titles 2003-05 translated

Keyword for search: Fénix

Title

File

### 2003

#### April

**Apr 07, 2003**

- <1> Pemex pushes for joint venture with private capital for chemicals venture | 1084
- <2> US\$2.8 billion to be needed to reactivate petrochemical sector | 1086

#### May

**May 16, 2003**

- <3> Fénix will not help Mexican plastics industry | 1339

**May 21, 2003**

- <4> Plan to reactivate petrochemical industry is postponed until July | 1381

#### June

**Jun 24, 2003**

- <5> Chemical companies want Pemex to offer long-term feedstock contracts | 2126

#### July

**Jul 02, 2003**

- <6> Ethane pricing puts Fénix project in danger | 2178

**Jul 11, 2003**

- <7> Veracruz lobbies to site Fénix in Coatzacoalcos | 2251

#### August



Title	File
<b>Aug 12, 2003</b>	
<8> Industry supports Fénix: José de Jesús Valdés	10349
<b>Aug 27, 2003</b>	
<9> Altamira, sidelined in Pemex's Fénix plans	2613
<hr/>	
<b>October</b>	
<b>Oct 14, 2003</b>	
<10> Fénix to be located in Coatzacoalcos	2838
<b>Oct 23, 2003</b>	
<11> Improvements in Pemex Chemicals: Osegueda	10350
<b>Oct 31, 2003</b>	
<12> Affiliates of Pemex Chemicals to be rejoined, closing obsolete plants: Fox	3204
<13> Repsol, Shell and Exxon could participate in Project Fénix	10334
<hr/>	
<b>November</b>	
<b>Nov 03, 2003</b>	
<14> Fénix: A project Fox inherited from 3 PRI administrations	3236
<b>Nov 04, 2003</b>	
<15> Pemex to receive proposals for Fénix in 2004	3243
<b>Nov 14, 2003</b>	
<16> Plastics industry to be helped by Fénix	3469
<b>Nov 18, 2003</b>	
<17> Pemex record tax contribution; overview of Project Fénix	10351

## 2004

### February



Title	File
<b>Feb 25, 2004</b>	
<18> Coatzacoalcos is best for Fénix	5293
<b>Feb 27, 2004</b>	
<19> Veracruz offers tax exemptions for Fénix	4801
<b>March</b>	
<b>Mar 05, 2004</b>	
<20> April 5 Pemex to open bids for Fénix	4929
<b>April</b>	
<b>Apr 19, 2004</b>	
<21> Tamaulipas offers advantages for Fénix	5235
<b>May</b>	
<b>May 07, 2004</b>	
<22> Fénix: 2 complexes with US\$2.5 billion to be invested	10314
<b>May 11, 2004</b>	
<23> 8 companies interested in Fénix	5354
<b>May 20, 2004</b>	
<24> Sad history of petrochemicals: Fénix the hope and in June partners to be chosen	5440
<b>May 31, 2004</b>	
<25> Pemex needs US\$2.6 for Fénix	5657
<b>June</b>	
<b>Jun 11, 2004</b>	
<26> Petrobras: interested in business with Pemex Petrochemicals	5878
<b>July</b>	



Title	File
<b>Jul 06, 2004</b>	
<27> Veracruz and Tamaulipas campaign for location of Fénix	6228
<b>Jul 12, 2004</b>	
<28> International companies to decide location of Project Fénix	6295
<29> Partners negotiate investment in Fénix	6298
<30> 11 companies interested in constructing Fénix in Veracruz	6306
<b>Jul 27, 2004</b>	
<31> Siting of Fénix to be decided in October	6512
<b>Jul 29, 2004</b>	
<32> Coatzacoalcos and Altamira want Fénix project	6535
<b>August</b>	
<b>Aug 16, 2004</b>	
<33> Outside party evaluation of siting options of Fénix: Veracruz or Tamaulipas	6763
<b>Aug 25, 2004</b>	
<34> IDESA to participate in Fénix	6969
<b>Aug 31, 2004</b>	
<35> Pemex studies option of dividing Project Fénix	7038
<b>September</b>	
<b>Sep 13, 2004</b>	
<36> Fénix to stay in Veracruz	7250
<b>Sep 15, 2004</b>	
<37> Uncertainty about the siting of Fénix	7314
<b>October</b>	
<b>Oct 11, 2004</b>	
<38> 6 companies compete for Fénix	7657



Title	File
<b>Oct 13, 2004</b>	
<39> Decision on Fénix delayed	7712
<b>Oct 15, 2004</b>	
<40> Soon--the names of the investors in Fénix	7757
<41> Advantages of Fénix in Coatzacoalcos	7765
<b>Oct 21, 2004</b>	
<42> New consortium: Nova, Alfa, Idesa and Pemex	7856
<43> Fénix for two Mexican companies and one Canadian	7868
<b>Oct 22, 2004</b>	
<44> Investors in Fénix announced: Nova, Alfa, IDESA and Pemex	7877
<45> Importance of Fénix: reduce imports by 1/3	7882
<46> Part of Fénix output to be for export	7883
<47> Fénix output to replace imports of US\$3 billion	7885
<b>Oct 24, 2004</b>	
<48> Mistrust about Pemex-investor relationships	7921
<b>Oct 25, 2004</b>	
<49> Seat of Fénix to be decided in 8 months	7923
<b>Oct 26, 2004</b>	
<50> Oil Union: Excluded from Project Fénix	7964
<51> Tabasco seeks Fénix project	10305
<b>Oct 27, 2004</b>	
<52> Fénix: site location in dispute	10341
<b>Oct 28, 2004</b>	
<53> Pemex to take 49% of Fénix	7989



Title

File

**Oct 31, 2004**

<54> PRI senators ask that doubts be cleared up about Project Fénix

8011

**November****Nov 16, 2004**

<55> Petrochemicals: Is Fénix the salvation?

8348

**Nov 29, 2004**

<56> ANIQ's controversy with Fénix investors

8645

**Nov 30, 2004**

<57> Project Fénix delayed until April [2005]

8794

**December****Dec 10, 2004**

<58> Veracruz intensifies its lobbying to have Fénix

9112

**2005****January****Jan 08, 2005**

<59> "Project Fénix does not exist" Rafael De Celis

9329

**Jan 11, 2005**

<60> Private capital wants greater participation of Pemex in Fénix

9260

**February****Feb 03, 2005**

<61> Fénix is not dead: Fernando Elizondo [Energy Minister]

9585

**Feb 12, 2005**

<62> Pemex to reduce its equity from 49 to 20% in Project Fénix

9657

**March**



Title	File
<b>Mar 27, 2005</b>	
<63> Project Fénix will have an economic multiplier effect	10321
<b>Mar 30, 2005</b>	
<64> Feedstocks for Project Fénix will be studied	10318
<b>April</b>	
<b>Apr 06, 2005</b>	
<65> Project Fénix is still alive: Eugenio Hernández [Gov. State of Tamaulipas]	10322
<b>Apr 22, 2005</b>	
<66> Pemex's Project Fénix is postponed	10317
<b>Apr 23, 2005</b>	
<67> Project Fénix is postponed on account of natural gas pricing	10316
<b>Apr 24, 2005</b>	
<68> "Project Fénix is more alive than ever"	10315
<b>Apr 26, 2005</b>	
<69> World Bank delays report on Fénix	10348

# Why has Fénix been delayed?

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- Pemex feedstock pricing
  - Policy gridlock over transfer pricing
  - Investors want 20% discount over Mont Belvieu
  - Natural gas pricing methodology in dispute
- Plant location
  - Fierce competition between Altamira and Coatzacoalcos; location not yet decided
- Long-term contracts
  - Pemex is unwilling to sign long-term feedstock contracts

# Null hypothesis: Mexico becomes threat to U.S. Gulf producers

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- If built, a world-scale ethylene and aromatics complex will impact prices and investment plans of other producers
- In relation to the Mexican plastics market, there may be a small logistics advantage compared to Gulf Coast producers

# Null hypothesis: Mexico becomes threat to U.S. Gulf producers

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- But, to have a long-term advantage over competitors, the project needs incentives in feedstock and energy prices
- These key topics are still on the table

# Political risk analysis

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- Presidential election of 2006 politicizes
  - Plant location decision
  - Long-term feedstock contracts
  - Country-risk for foreign investors
- If winner in 2006 is a leftist government (PRD), may result in cancellation of the project or in pragmatic market reforms
- Mexico to remain strong market for chemical exports

# Conclusions

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- ❑ Fénix negotiations probably will not be concluded by end of Fox term on November 30, 2006
- ❑ Therefore, the threat to Gulf Coast producers from Mexico is not imminent
- ❑ Venezuela has open options, but must decide among political and economic priorities

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