

A faint, stylized map of South America is visible in the background, showing the continent's outline and some internal borders. The text is overlaid on this map.

**Midland/Ector County Fall
2004 Bar Conference**

*South American Energy
Developments*

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Outline

- I. Overview**
- II. Country-Specific Issues**
- III. Conclusion**

I. Overview

Regional Economic Volatility

- **Economic cycles**
 - Devaluations
 - Recessions
 - Local discontent with neo-liberal reforms
 - Sovereign debt defaults
- Other regions competing for foreign investment
- Opportunities presented by being disfavored region

"The More Things Change. . ."

- South American energy sector fluctuated between state and private ownership
- State ownership argument v. private ownership argument
- Level of governmental regulation

"The More Things Change. . ."

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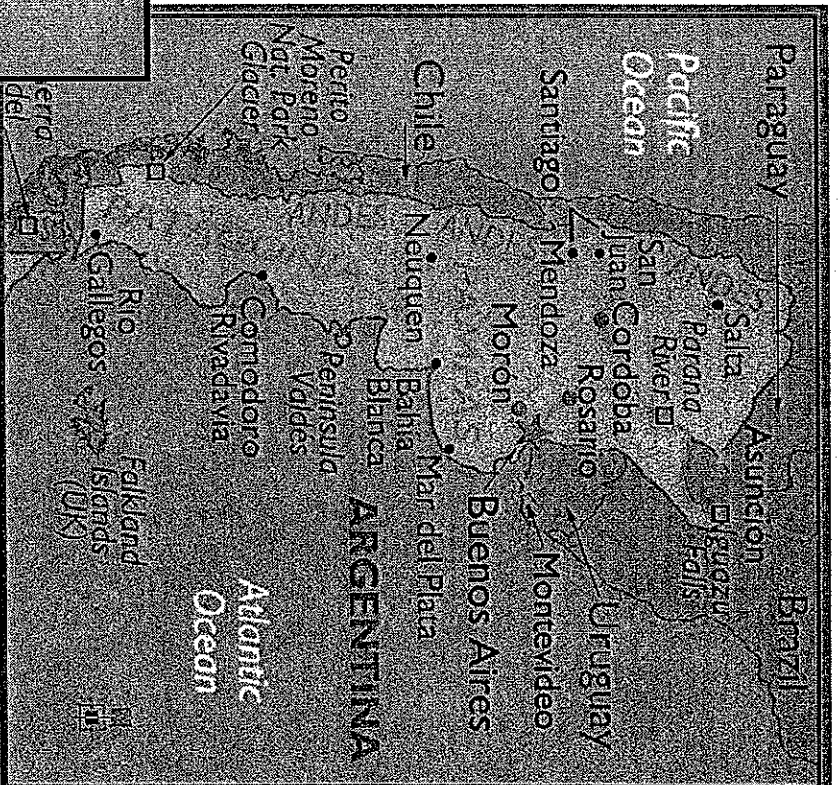
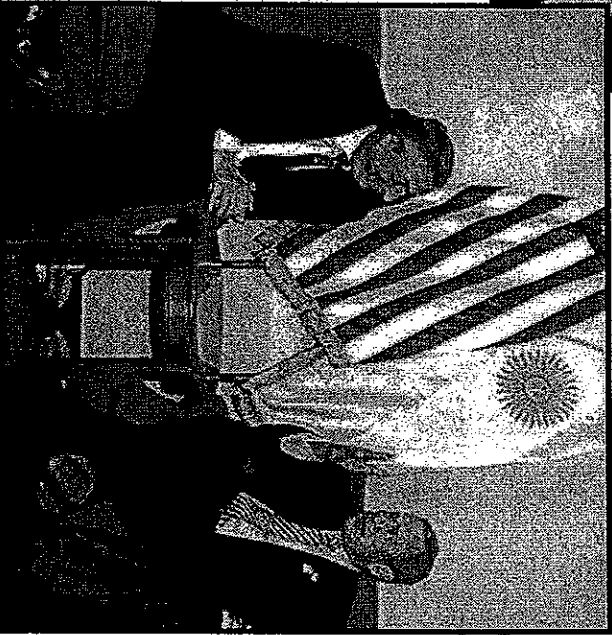
- Neo-liberalism era -- 1980s and 1990s
 - Chile's "Chicago Boys"
 - Argentina's YPF privatization
 - Brazil's reforms under Cardoso
 - Venezuelan market openings in mid 1990s
- Privatizations
 - Improved service
 - Elimination of subsidies
 - Argentina
 - Price increases
 - Layoffs
 - Perceptions of misuse of sale proceeds/distrust of government

Uncertainties and Questions

- Wartime uncertainties
- Political uncertainties and rise of populism
 - Venezuela
 - Brazil
 - Bolivia
 - Argentina
- Who owns hydrocarbons?
- Popular opposition to increase in tariffs for public services
- Skepticism regarding long term continuity of existing government policies
- Not necessarily new concerns

II. Country Specific Issues

Argentina



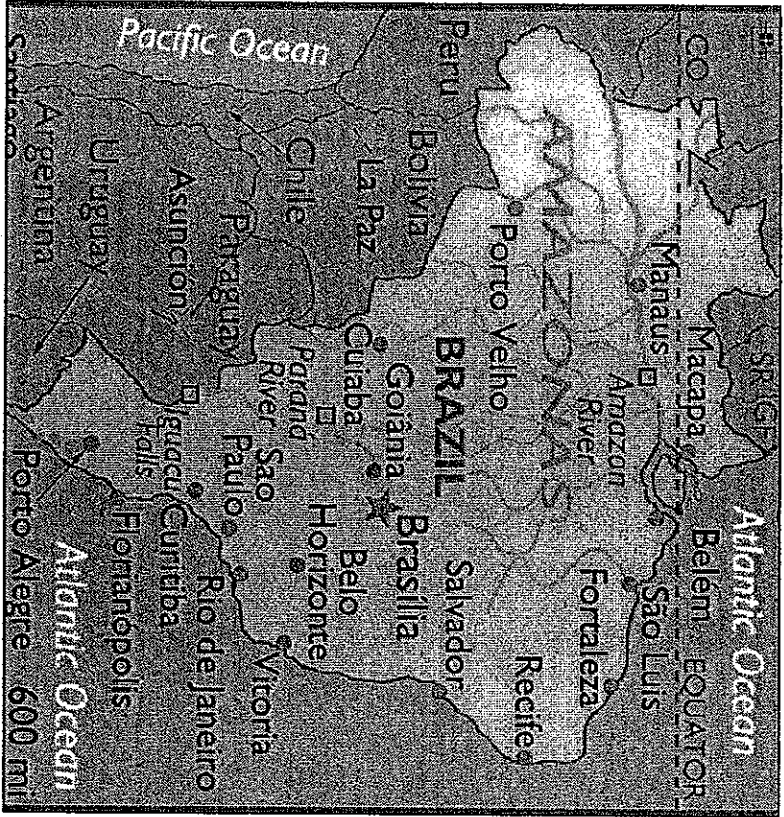
Argentina

- **2002 Economic crisis**
 - Devaluation
 - “Pesification” of public services
 - BIT claims
 - Operating costs also go down
- **Lack of local financing**
- **“Pesified” rates cause market distortions for gas and power public services**
 - Negotiations pending with concessionaries
 - 10%-30% adjustment for commercial/industrial users
- **Increased role of government**
 - Only producer is free to set gas prices
 - Effect on downstream market being ignored

Argentina (cont'd)

- **Withholding tax on export of hydrocarbons**
 - Range from 20%-32% depending on international market price
 - Government discourages exports due to impact on local markets
- **Draft Public Services Law**
 - Only gas and power sectors have full-fledged laws
- **Northwest Pipeline Project**
 - Repsol, Techin
 - Government "trust" financing
- **Sale of Gas to Chile**
- **New state owned oil and gas company – ENARSA**
 - E&P offshore activities
- **Increased purchases of oil from Venezuela and Brazil**

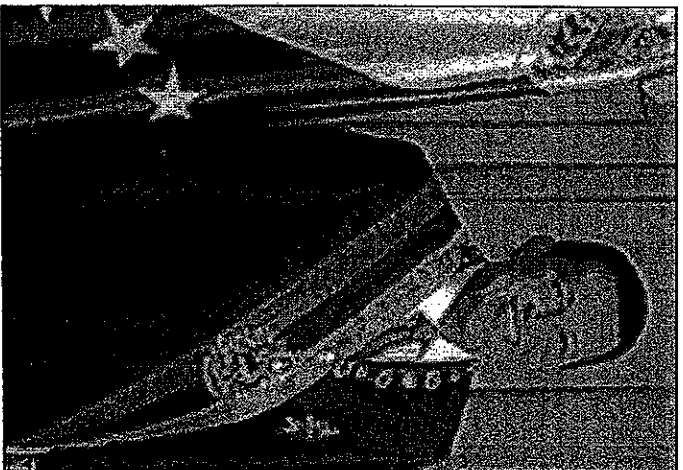
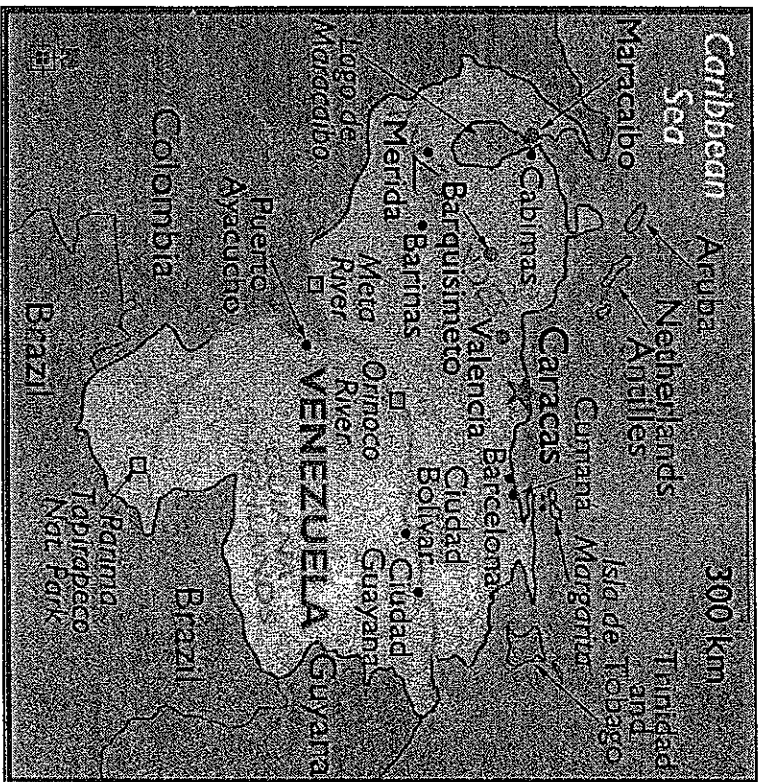
Brazil!



Brazil

- Lula
- Dependence on hydroelectric power
 - Year 2000 drought
- Diversify power sources
 - Proinfa (alternative sources program)
 - Gas fired plants
- Eletrobas Auction Q4 2004/1Q 2005
 - 55,000 MW
- Northeast transportation issues

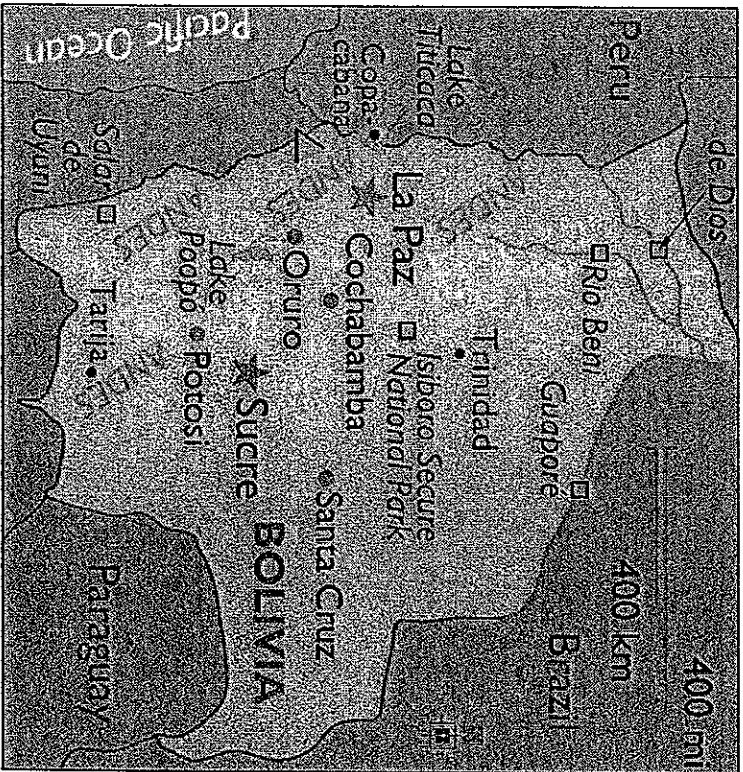
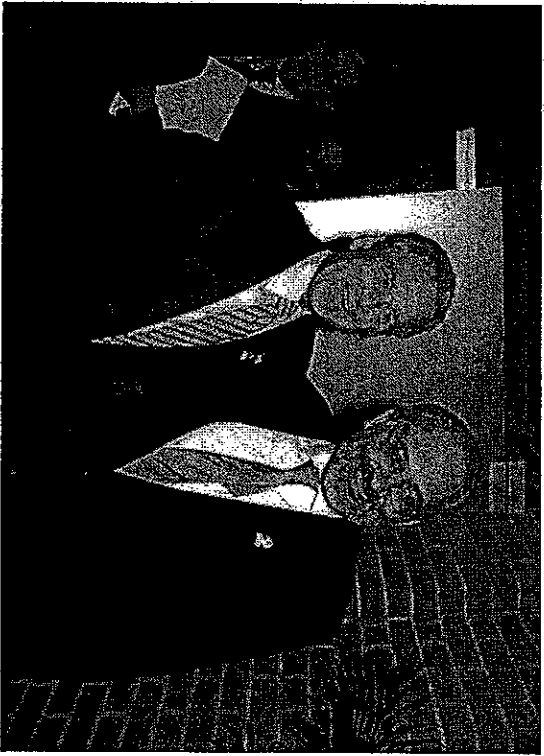
Venezuela



Venezuela

- Revocation election
- Disappearance of non-partisan PDVSA
- PDVSA manpower issues
- Production still below historic capacity
- Currency market
- Opportunities for private investors

Bolivia



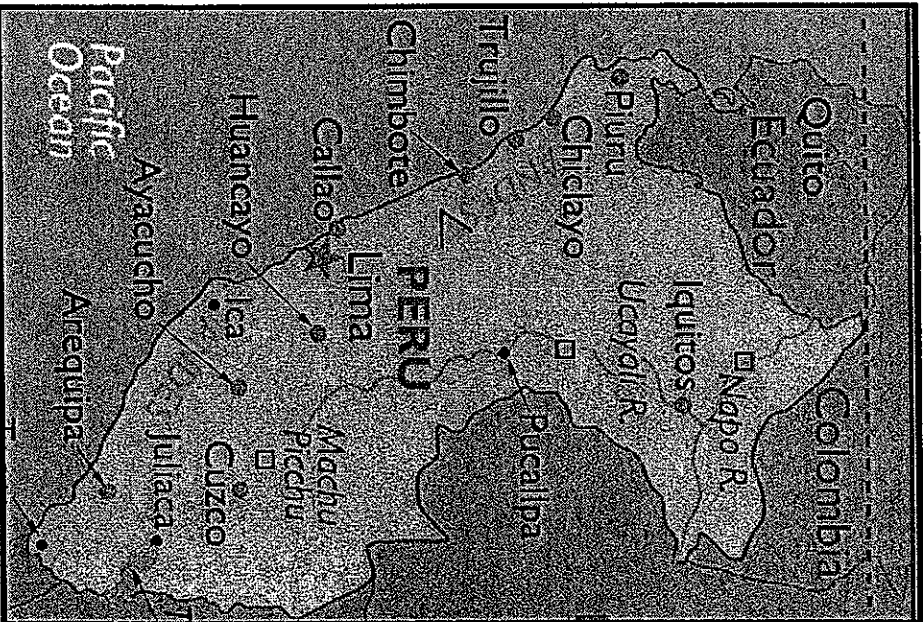
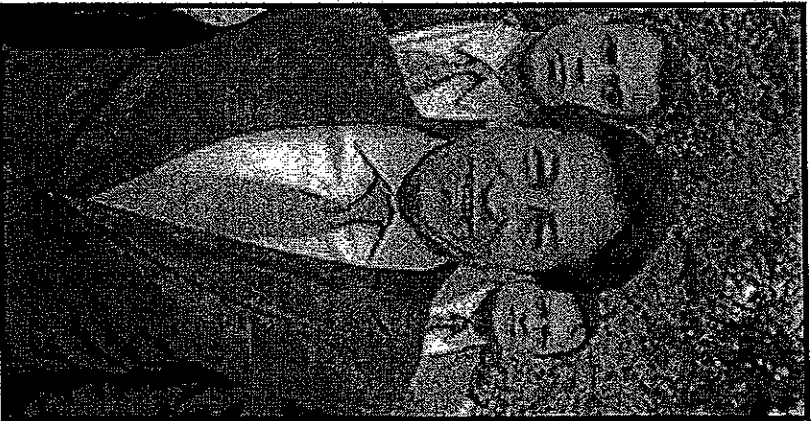
Bolivia

- 55% of territory has hydrocarbon potential
- Only 23% of such potential area is currently being explored
- 2nd largest natural gas reserves in South America (second only to Venezuela)
 - 17% of region's reserves
- Proven reserves at 54 trillion cubic feet
- 4 natural gas fields
 - San Alberto
 - San Antonio
 - Itau
 - Margarita

Bolivia (cont'd)

- Each field estimated at over 5 trillion cubic feet
- Eastern and south eastern part of country
- Estimated 100 years of reserves
 - US/Canada – 23 years of reserves
- October 2003 President Gonzalo Sanchez de Lozada ousted from office
 - Failed negotiations with Chile for LNG Facility
 - Effect of Chile-Bolivia war in 1800s
 - Peruvian alternative more expensive
- Replaced by VP Carlos Mesa Gisbert
- July 2004 referendum
- Pending new Hydrocarbons Law

PERU



Peru

Camisea Gas Fields

- August 2004 exploitation commence
- 8.7 trillion cubic feet (TCF) proven reserves
- 6.8 TCF estimated recovery
- Developed by international consortium headed by Pluspetrol and Hunt Oil
- www.camisea.org (Spanish)

Peru (cont'd)

Lack of local gas market (historic)

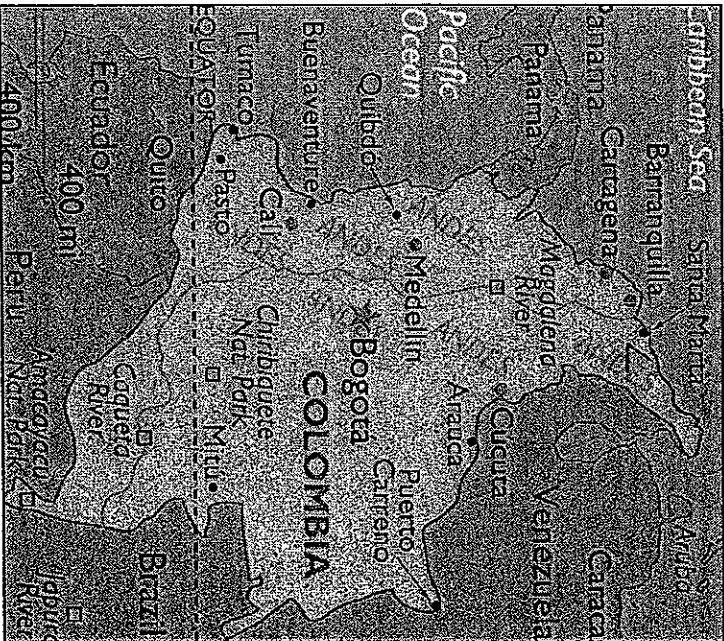
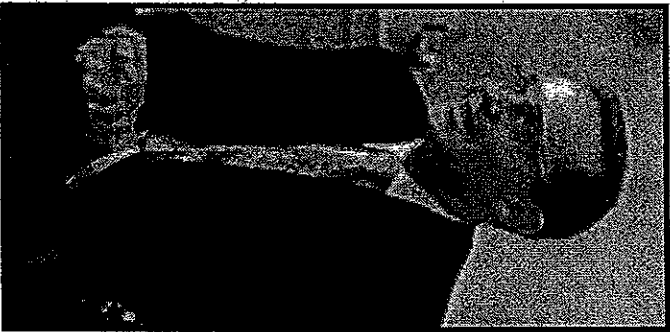
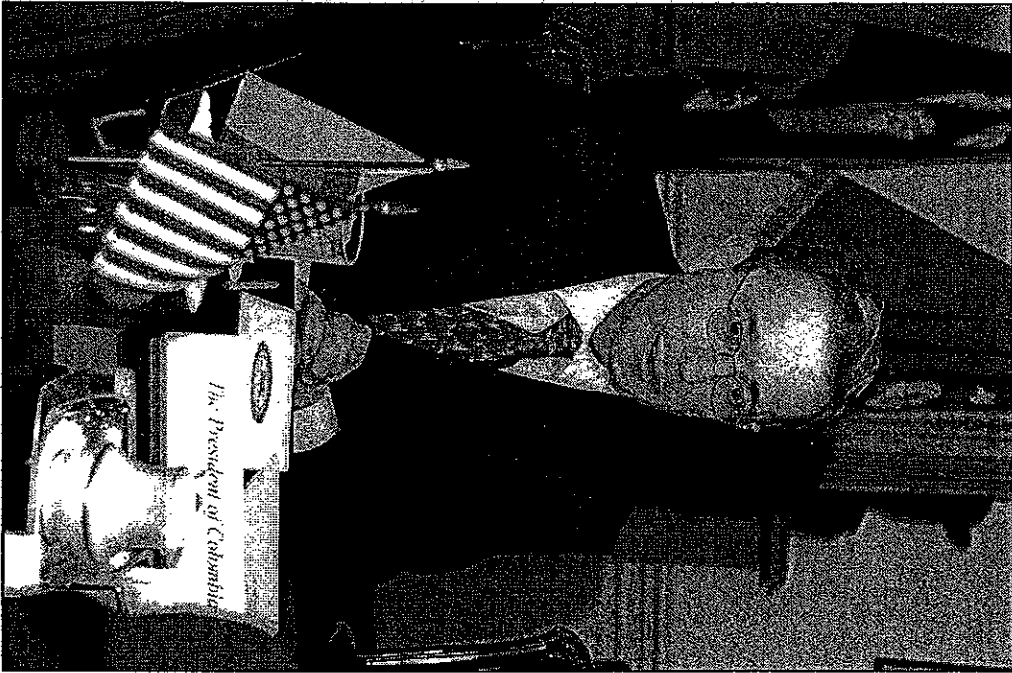
- Hydroelectric dependence
- ElectroPeru sign “take or pay” contract for gas
 - Local companies buying interest
- LNG Plant (ICA)
- Historic shift in Peruvian society

Possible extension of pipelines to other large population center

Arrequipa power privatization

- Lessons learned
- Formation of trust for public works

Colombia



Colombia

- President Uribe
- Security situation
- Constitutional amendment to allow re-election
- 2003 Amendment to Hydrocarbons Law
 - Agencia Nacional de Hidrocarburos (www.anh.gov.co)
- Offshore Production – Northern Colombia/Caribbean
 - Petrobras/ExxonMobil/Ecopetrol awarded contract

Colombia (cont'd)

- **Cartagena Refinery (Ecopetrol)**
 - \$620 million estimated project size
 - Expand capacity/double
 - Public v. private resources
 - Prequalification process is pending
- **Ecogas Privatization**
 - May 2005 completion date
 - www.ecogas.com.co
- **Ecopetrol**
 - www.ecopetrol.com.co

III. Conclusion

Conclusion

- ❖ Despite regional volatility, area still presents numerous opportunities
- ❖ Gas and power investments are most needed
- ❖ Regional integration
- ❖ Opportunities for savvy investors

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