

MUSINGS FROM THE OIL PATCH

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Note: *Musings from the Oil Patch* reflects an eclectic collection of stories and analyses dealing with issues and developments within the energy industry that I feel have potentially significant implications for executives operating oilfield service companies. The newsletter currently anticipates a semi-monthly publishing schedule, but periodically the event and news flow may dictate a more frequent schedule. As always, I welcome your comments and observations. Allen Brooks

Bolivia – A Sign of the Times or the Future?

Who should benefit from the development of a country's natural resources?

Bolivia, one of South America's poorest countries, is mired in a political and social struggle with significant implications for its local energy industry. The struggle could also create problems for Bolivia's neighbors: Argentina, Brazil, Chile, Paraguay and Peru. It could also create concerns for the United States. The struggle could be a template for future internal struggles for numerous countries around the world. At the root of these struggles is the issue of who should benefit from the development of a country's natural resources.

Exhibit 1. Bolivia and its Neighbors



Source: CIA

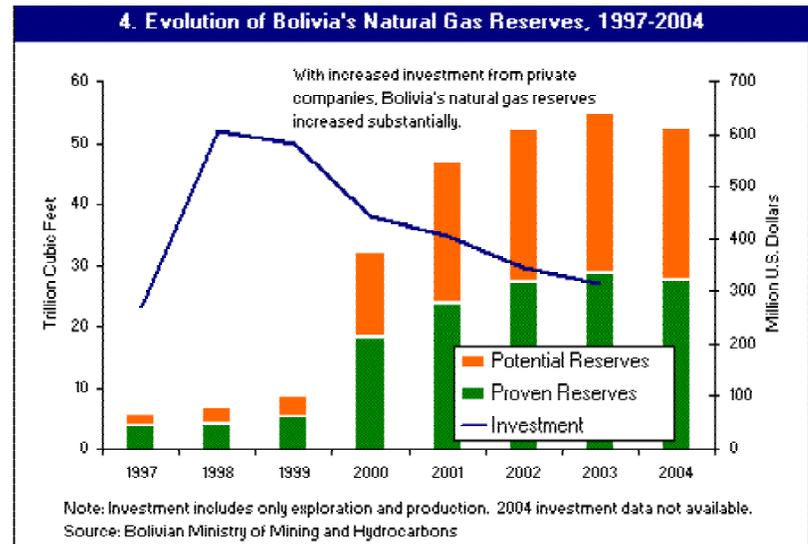
Bolivian left-leaning groups are fomenting anti-government feelings among the people

Starting months ago, but flaring into public view a little over a week ago, Bolivian left-leaning groups began fomenting anti-government feelings among the people, especially the native Indians. These feelings reflect fears among the masses of poor indigenous natives that Bolivia is headed for another re-run of special interests benefiting from government policies to their detriment. These fears have evolved over hundreds of years. They represent the never forgotten memory of how the Spanish and numerous corrupt governments plundered the country's silver, tin and gold resources, leaving the natives more poverty-stricken than before. Matched against these poor peasants are better-off citizens living in Santa Cruz, the more conservative, pro-globalization and relatively prosperous eastern part of Bolivia. They are pushing the Bolivian Congress for approval of a referendum on whether the region should have greater autonomy, including control over its nature gas fields.

Bolivia has Latin America's second largest gas reserves

Significantly, Bolivia has Latin America's second largest gas reserves behind Venezuela when both proven and probable reserves are included. According to BP's Statistical Review of World Energy, at year-end 2003, Bolivia had 28.7 Trillion cubic feet (Tcf) of gas reserves. The U.S. Energy Information Agency (EIA), quoting Bolivian government figures, estimates Bolivia's proved reserves at 27.6 Tcf. When potential reserves are included, the EIA estimates total reserves of 53.3 Tcf. Bolivia's gas reserves are owned by about 12 Western oil companies. The largest holder is Petrobras with 43.2%, followed by Repsol YPF's 26.0% and Total's 14.9%.

Exhibit 2. Bolivia Natural Gas Reserve Growth

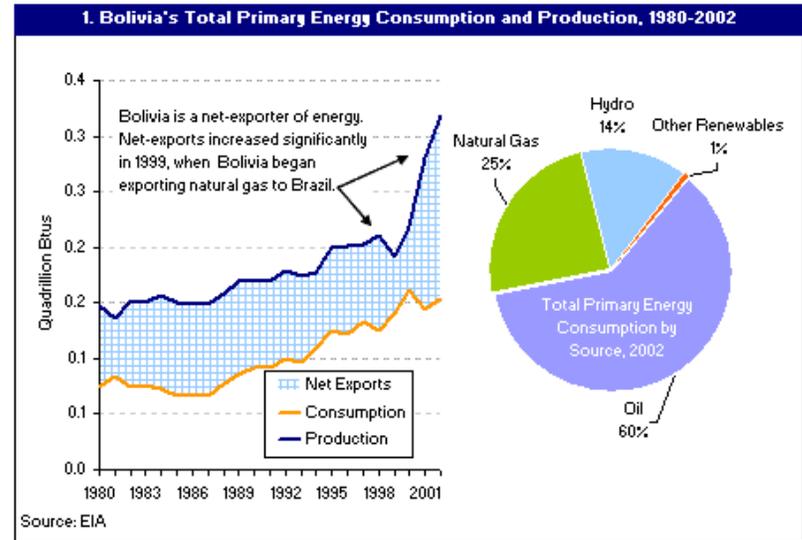


Source: EIA

Crude oil continues to account for about 60% of Bolivia's energy consumption with natural gas accounting for 25%. The balance of energy supplies come from hydropower and other renewables. The government is attempting to boost the consumption of natural gas by

installing 230,000 new natural gas retail hookups by 2007, converting automobiles to burn gas and sponsoring the possible construction of two gas-to-liquid (GTL) plants. Gas exports, however, remain the primary thrust of the country's energy policy.

Exhibit 3. Bolivia's Energy Picture

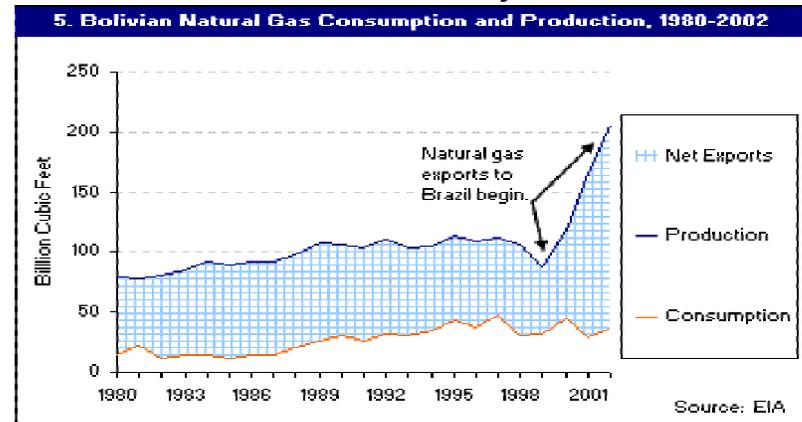


Source: EIA

After the mid 1990s privatization of the energy industry in Bolivia, Western oil companies became more active in developing the country's reserves

The EIA estimates Bolivia's gas production at 205 Bcf in 2003 with about 35 Bcf consumed locally and 170 Bcf exported. After the mid 1990s privatization of the energy industry in Bolivia, Western oil companies became more active in developing the country's reserves. At the present time, there are two export pipelines from Bolivia. One goes to Brazil and the other to Argentina. Brazil has been a problem because its economy has not been able to consume the gas volumes it contracted under a take-or-pay agreement. The Brazilian and Bolivian governments have restructured the contract by granting a lower gas price in return for higher throughput.

Exhibit 4. Bolivia's Natural Gas Industry



Source: EIA

Several years ago, two competing plans to export gas as LNG were proposed – one through Chile and the other through Peru. In a referendum in July 2004, the proposal to export gas to Chile, a long-hated rival, was voted down by the people.

In 1985, the price of tin collapsed causing the economy to collapse and inflation to hit 25,000%, the 7th highest rate ever recorded

The battle over the development of Bolivia's gas reserves has brought the country to the brink of civil war. Why? And why now? The answer lies in Bolivia's history. In 1985, the price of tin, Bolivia's primary export commodity, collapsed, which caused the economy to collapse and also caused inflation to hit 25,000%, the seventh highest rate ever recorded in history worldwide. The natives, who had been making economic progress before the tin market implosion, became poorer than before.

In 2003, Bolivia's former president proposed the plan to build a gas pipeline into Chile enabling gas as LNG to be exported to the United States or other American countries. The Highland Indians rioted against the plan of President Gonzalo Sanchez de Lazada and in the resulting violence 50 natives were killed. Sanchez de Lazada abandoned the presidency as a result of these developments.

Since Sanchez de Lazada left office and was succeeded by President Carlos Mesa, he has been struggling to hold together the government. The issue is developing a consensus of how best to develop Bolivia's natural resources and use the wealth to improve economic and social conditions in the country.

The Bolivian Congress added a new 32% flat, non-deductible tax on gas production

Recently, legislation was passed by the Bolivian Congress that added a new 32% flat, non-deductible tax on gas production. This tax is in addition to the current 18% royalty rate the producers pay. Certain political forces in the country believed the bill did not go far enough because they wanted a higher tax, or even nationalization of the reserves. Mesa was highly critical of the bill and vowed to veto it. In the end, he allowed the bill to become law without his signature. The new law mandates that Western oil companies sign new contracts by Nov. 20. This law abrogates the 40-year contracts the companies had entered into in the late 1990s.

During the time between the proposal of the new energy legislation and its enactment, Mesa's opposition to the bill galvanized attitudes among the left-leaning and more conservative factions in the country. Protesters took to the streets of the capital La Paz and paralyzed the country. The left-leaning factions tried whipping up the protests to the verge of civil war.

On May 25, two army lieutenant colonels revealed the existence of a clandestine military movement demanding the resignation of President Mesa

On May 25, two army lieutenant colonels revealed the existence of a clandestine military movement demanding the resignation of President Mesa and the dissolution of Congress to make way for a "government of the people." The existence of this previously unknown movement came in a television broadcast, but it confirmed a split within the Bolivian armed forces that could signal a greater potential for a civil war.

The new energy legislation has caused and outcry from Western oil companies

Just prior to this television broadcast, a leading left leaning-movement head had called for a military figure “like Venezuelan President Hugo Chavez” to lead the nationalist Bolivian government. Later on the day of the television broadcast, Bolivian armed forces commanders issued a nationally televised statement declaring the military’s institutional support for President Mesa. Against this background, the Congress also has to deal with a referendum request from the wealthy, conservative Santa Cruz lowlands region in the east to allow it greater control over its gas fields.

Already, the new energy legislation has caused an outcry from Western oil companies. Brazil’s Petrobras, who operates a major gas pipeline exporting gas from Bolivia, announced that its joint venture with Repsol YPF would re-consider a planned \$1 billion investment in a gas-chemical complex that would have required boosting gas production by between 30 and 40 mmcm/d.

On Monday, while demonstrations were underway in La Paz following a four-day holiday, representatives of the Bolivian government announced they would go to Europe to talk with Western oil companies about the new energy legislation. The representatives plan to meet with officials from BP, Repsol and Total, among others.

If a civil war develops, Bolivians fleeing into neighboring Brazil, Argentina and Peru could prove a de-stabilizing force in those countries

Is there a lesson from the current political turmoil in Bolivia? While it appears this is merely another example of a country hurt by its natural resource development policies, the Bolivian situation could have greater ramifications. If a civil war develops, Bolivians fleeing into neighboring Brazil, Argentina and Peru could prove a de-stabilizing force in those countries. As a result, Brazil is considering the possibility it may have to lead a peace-keeping force into Bolivia. Brazil would most likely try to get an international body such as the Organization of American States (OAS) to certify the action. Another concern from a civil war is the possibility that attention would be deflected from the war on narcotics and that the coco growers in Bolivia might expand their operations. This could create a problem for the United States.

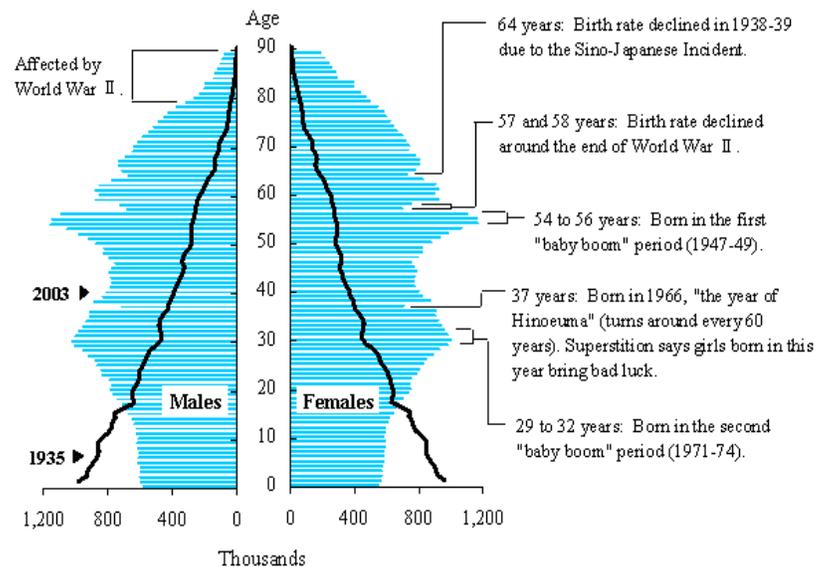
Lastly, if the left-leaning, nationalistic movement gains greater traction in Bolivia, it would further the effort of Venezuelan President Hugo Chavez’s to spread his Bolivarian revolution throughout Latin America. So while many eyes are focused on the Middle East, Russia and Central Asia for direction on energy markets, what is unfolding in Latin America might also have a significant impact.

Japan's Economy Shows Signs of Life

The April retail sales figure for Japan showed a 3.9% increase, the best monthly performance for the country in almost eight years. While the performance doesn't signify that Japan is coming out of its 15-year economic funk, increased spending does suggest something positive might be developing. Increased retail spending could signal an emerging stronger Japanese economy. That has implications for global energy consumption since Japan is the world's third largest consumer of oil.

Exhibit 5. Japan's Population History

Figure 2.1
Population Pyramid



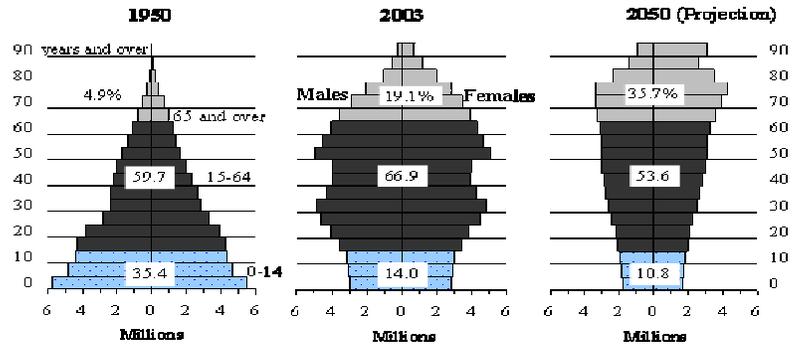
Source: Statistics Bureau, MPHPT.

Japan has slipped by one place to rank as the tenth most populous country in the world

The Japanese population continues to grow, but it also continues to age. In fact, projections suggest Japan's population may reach a peak in the next several years. Recent projections called for Japan's population to peak at around 128 million, the current 2005 estimate, within the 2005-2007 time frame. Since 2001, Japan's population is estimated to have only increased by about 1 million people to 128 million. Since 2001, Japan has slipped by one place to rank as the tenth most populous country in the world.

Exhibit 6. Japan's Changing Population Mix

Figure 2.3
Changes in the Population Pyramid



Source: Statistics Bureau, MPHPT, Ministry of Health, Labour and Welfare.

We can look forward to Japan's capital flows reversing in order to support the growing aged population

The implication of a stagnant population means faster aging that suggests flattening, or even declining, economic activity for Japan and less investment growth. Japan's overseas assets in 2004 increased 7.5 percent to \$1.72 trillion, making Japan the world's largest creditor for 14 straight years. What this means is that Japan still finds overseas to provide better investment opportunities than at home. As the population peaks, the aging factor becomes more dominant. As of 2003, Japan's population aged 65 years or older totaled 24.3 million, or 19% of the population. Projections call for that age segment to grow to 33 million by 2050 and represent 33-36% of a smaller population. We can look forward to Japan's capital flows reversing in order to support the growing aged population. This condition would lead to stagnating Japanese energy demand growth, easing the pressure on oil and gas demand.

Recent advertisements have shown Prime Minister Junichiro Koizumi dressed in a half-sleeve shirt with no tie

Recently, Japan has undertaken an aggressive program to meet its Kyoto Treaty targets. Under the treaty, Japan needs to cut its greenhouse gas emissions to 6% below 1990 levels by 2012. One step in meeting that goal is to encourage the Japanese to dress more casually this summer and raise office thermostats. Government offices will have their thermostats raised to 82 degrees from the normal 77. To promote this energy saving action, recent advertisements have shown Prime Minister Junichiro Koizumi dressed in a half-sleeve shirt with no tie and urging his cabinet members to follow suit. This is almost heretical in a country that promotes conformity and tradition. Koizumi suggests that as the 250,000 government employees retool their wardrobes there could be an increase in retail spending of \$92 million. Shirt sales in May have increased 17% over last year. If local government and private businesses follow suit, retail spending could climb by up to \$5.6 billion.

Exhibit 7. Japan’s Effort to Promote Casual Clothes



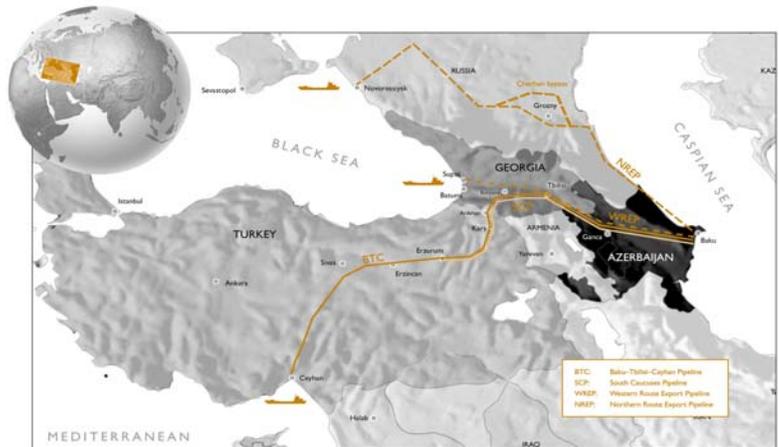
Source: Japan Times

The Energy Conservation Center estimates that if all offices in Japan increase summer temperatures to 82 degrees, the country could save almost two million barrels of oil this summer.

New Central Asia Oil Pipeline to Boost Global Supplies

Last week the new Baku-Tbilisi-Ceyhan (BTC) oil pipeline was inaugurated. The 1,770-kilometer pipeline, designed to ultimately carry one million barrels of oil per day and costing \$3.2 billion, will bring supplies from the Caspian region to the Eastern Mediterranean from where they can be shipped more easily to the world. This pipeline will enable the new oil supply to by-pass the Bosphorus Straits shipping chokepoint.

Exhibit 8. Baku-Tbilisi-Ceyhan Pipeline Route



Lord Browne put this pipeline’s engineering and construction in the same category as the Alaskan oil pipeline

Source: BTC Group

The pipeline will require 10 million barrels of oil and upwards of six months to fill the line. The first tanker from the Turkish port of Ceyhan is anticipated sometime in the fourth quarter of 2005.

The inaugural ceremony occurred at the Sangachal terminal near Baku. Attending and participating in the ceremony included Lord Browne, the head of Bp, the lead company in the construction of the BTC pipeline, who put this pipeline's engineering and construction in the same category as the Alaskan oil pipeline.

U.S. Energy Secretary Samuel Bodman represented the United States, a major sponsor and funding source, at the ceremony. Government leaders of the countries the pipeline directly benefits attended. These leaders included Azerbaijan Republic President Ilham Aliyev, Georgia President Mikhail Saakashvili, Turkey President Ahmet Sezer and Kazakhstan President Nursultan Nazarbayev. All of these countries will benefit from the expanded export capacity. Turkey will benefit from further growth of the country's Eastern Mediterranean oil export port of Ceyhan. Growth of oil supply from this port will help ease the logistical challenges the oil industry faces every winter when weather and the narrow channel of the Turkish Bosphorus Straits restricts the number of oil tankers that can move through this shipping chokepoint.

Central Asia Politics Highlight Growing Importance of Region

With the opening of the BTC oil pipeline, the growing energy supply role of Central Asia is receiving increased attention. The *Sunday New York Times* carried a chart showing the countries in the region and a brief precise on the political challenges for each country. (See Exhibit 10.) The geopolitical struggles involving Russia, China and the United States in this region highlight the importance of the politics of the development of the region's natural resources.

Uzbekistan President Islam Karimov went to Beijing on a three-day state visit to China and signed 14 agreements designed to enhance bilateral cooperation

Last week, Uzbekistan President Islam Karimov went to Beijing on a three-day state visit to China. On the first day, Karimov and Chinese President Hu Jintao signed 14 agreements designed to enhance bilateral cooperation in energy exploration, trade, technology and regional security cooperation between the two countries. These agreements should help the political and economic situation for each country.

Exhibit 9. Central Asia Region

Source: CIA

China wants to establish alternative sources of energy supply outside of the Middle East

Uzbekistan is the only state boarding all the other Central Asia countries

Karimov has come under harsh criticism from the international community, including a group of U.S. Congressional leaders touring the country and the Russian government, over his handling of rioting in the Andijan region of the country. China, on the other hand, finds itself surrounded by U.S.-backed neighbors. As a result of these pressures, and the problems each country is facing in dealing with local Islamist militants, a mutual admiration society appears well founded. China also stated it believes that Uzbekistan did not commit any errors in dealing with the Andijan riots.

One of the agreements between the countries involves the establishment of a joint venture for energy exploration and potential drilling in Uzbekistan. This represents another thrust by China to establish alternative energy supply sources outside of the Middle East. China is upset with the volatile Middle East politics and their dominance by the United States. At the same time, Chinese energy demand growth continues unabated, albeit not at the growth rate experienced last year. This year's Chinese oil demand growth appeared quite weak early in the year, but the recent March and April oil import figures suggest much stronger growth, more inline with the country's recently surging industrial output. Recent estimates suggest China's economy will only grow 9.1% in this year's second quarter, down from 9.6% growth in last year's quarter, and slightly lower than the 9.4% growth in 2005's first quarter. As a sign of the economic growth in China, on Monday, the government

announced it was ending diesel exports as it has raised domestic fuel prices encouraging local refiners to keep supplies at home to meet the seasonal planting and driving needs

Another consideration for this closer relationship is that Uzbekistan is the only state bordering all the other Central Asia countries. Uzbekistan affords China a launch pad for projecting its influence into the region and countering the growing influence of the United States. These bordering states have significant natural resources that China also might like to tap.

Central Asia has become a focal point of United States international strategy, especially in its war on terrorism, due to the region's location in relation to Russia, China and the Middle East. Equally important is that Central Asia contains potentially large new energy supplies that will be important for the future global supply and demand balance, an issue of critical importance. These new supplies may offset the growing dominance of the Middle East, and potentially Russia, in the future oil supply/demand balance, but who has access to them is becoming a much more important issue.

Exhibit 10. Central Asia Hotspots

U.S. Interests in a Treacherous Neighborhood

■ **GEORGIA**

PRESIDENT Mikheil Saakashvili, who was elected after nonviolent protests ousted Georgia's first president in 2003.

U.S. INTEREST: The orderly flow of oil through the Caucasus pipeline, and access to Azerbaijan.

POLITICAL MINEFIELD: Azerbaijani and Armenian minorities in three autonomous regions promote secessionist movements, and President Saakashvili has lately taken a harder nationalist line. During a visit by President Bush this month, a grenade was found near a podium he was standing on.

■ **KAZAKHSTAN**

PRESIDENT Nursultan Nazarbayev, in power since 1991.

U.S. INTEREST With oil and gas reserves and good relationships with Western oil companies, Kazakhstan is by far Central Asia's largest country, although its population is thinly dispersed.

POLITICAL MINEFIELD Some experts worry that corruption and sycophancy in the Nazarbayev government could undermine this strategically located country, where Russia and China are vying for influence. President Nazarbayev may respond to turmoil in Uzbekistan by becoming increasingly authoritarian.



■ **AZERBAIJAN**

PRESIDENT Ilham Aliyev, who succeeded his father, a former K.G.B. general, in 2003.

U.S. INTEREST A new pipeline linking the Caspian Sea to the Mediterranean to carry oil to the West through Azerbaijan, Georgia and Turkey

POLITICAL MINEFIELD Stability in the Caucasus could collapse if war resumes between Azerbaijan and Armenia; chaos could invite Iranian interference. Azerbaijan is largely Shiite Muslim; Armenia is largely Orthodox Christian, like Georgia. Ilham Aliyev is considered more likely to keep the peace than the nationalistic opposition, which claims to be more democratic.

■ **TURKMENISTAN**

PRESIDENT Saparmurat Niyazov, in power since 1991.

U.S. INTEREST Gas reserves, proximity to Afghanistan.

POLITICAL MINEFIELD President Niyazov is aging, ill and, said Paul Goble, an expert on former Soviet republics, a "fragile totalitarian" whose rule could end suddenly. He survived an assassination attempt in 2002. The State Department says he governs in a "Soviet-era authoritarian style"; since 2002, he has tightened his grip and acted bizarrely, declaring diseases illegal and closing hospitals, said Martha Brill Olcott, a senior associate at the Carnegie Endowment for International Peace.

■ **UZBEKISTAN**

PRESIDENT Islam Karimov, in power since 1991.

U.S. INTEREST A military base was important during the Afghan war in 2001; has some oil and gas. There is evidence that the U.S. has sent terror suspects to Uzbekistan for detention and interrogation

POLITICAL MINEFIELD The government, which blames Islamic terrorists for all unrest, killed from 167 to 500 people, depending on the source, after armed protesters freed prisoners this month. Experts say Uzbekistan could collapse, risking civil war, which could spread to its neighbors, and disrupt energy exports. Russia has cooled to President Karimov, but he was welcomed warmly last week in China.

■ **KYRGYZSTAN**

PRESIDENT Askar Akayev, in power since 1991, fled the country and resigned after protests in April. New elections are scheduled for July 10.

U.S. INTEREST A military base, useful for operations in nearby Afghanistan.

POLITICAL MINEFIELD The outlook for democracy and stability are unclear. The shape of the new government will likely be decided more by political deal-making than by the voters, says Dr. Olcott. "There's a job for everybody," she said. Meanwhile, Russia and China compete for influence.

Source: The New York Times, Sunday, May 29, 2005

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