

## Realism on Caspian Energy: Over-Hyped and Under-Risked

By Maureen S. Crandall\*

### Introduction

The Caspian region's oil and gas potential has attracted a lot of interest since the breakup of the Soviet Union. The U.S. and other major oil consuming countries focused on the idea that the Caspian would become a major alternative to oil supplies from the volatile Middle East, postponing the days of higher prices or demand restraints. The region is often termed strategic, without specifying the strategic nature of the links to either U.S. foreign policy or to energy policy. The area was hailed as having as much as 200 billion barrels in oil reserves. Before these overstatements were challenged, the Caspian's oil potential was likened to a new Middle East. While the region is rich in gas, there are as yet only limited markets for natural gas.

The themes of this paper are two. The first is that the Caspian's energy promise has been overstated, and that production from the area will not make a major or lasting contribution to the world's energy supplies and its energy security. Moreover, development will proceed more slowly than anticipated. The second is that the political fragility and instability of this region are great. Poor governance and political risk are already diminishing foreign investor interest, and are ultimately likely to slow oil and gas development rather than advance either. In addition, production forecasts of both oil and gas are inseparably linked to and dependent upon transport options and challenges across these landlocked countries. Several states could implode into civil wars that spread across borders, increasing the risk foreign investors face. In these "one-bullet" regimes, one needs a large dose of caution in evaluating the Caspian's hydrocarbon potential.

We consider energy and related developments in Azerbaijan, Georgia, Kazakhstan, Turkmenistan, and Uzbekistan, with an eye also on the interests of China, Iran and Russia. After 13 years of independence, the Caspian states are for the most part highly authoritarian, poor, and thoroughly corrupt, still run by Soviet-era leaders, who pay little notice to democratic norms. Their goal is to preserve and consolidate their power. In our view, democracy and accountability are unlikely to take root. Azerbaijan has the Aliyev dynasty, with rising oil revenues providing the means to buy support. Georgia is important for oil and gas transport, but is nearly a failed state. Kazakhstan probably has the best energy prospects for improving its citizens' living, but it is hardly a model of par-

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<sup>1</sup> See footnotes at end of text.

ticipatory democracy, freedom of expression or responsible governance. Turkmenistan is a failed state. Uzbekistan is the linchpin of Central Asia, containing key pipelines and the largest population. It dreams of becoming the political and military power in Central Asia, and like the others has no qualms in suppressing internal opposition. China closely watches both political and energy developments, given its rapidly rising energy consumption. Iran and Russia see themselves as long-term players in the Caspian, and each wants a role in energy developments and/or transport flows.

The regional leadership has not successfully implemented rules of law or independent judiciaries, has not moved to defuse ethnic and regional tensions or conflicts, has become increasingly intolerant of dissent, and widely abuses human rights. The risks of dissidents' turning to extremism are high and can feed potential terrorism. Moreover, oil and gas monies rolling in to public purses now and in the future are at risk of being siphoned off or otherwise misused.

### The Caspian in Context: Reserves and Production

Oil reserves estimates have varied from 25 billion barrels to nearly 10 times that much. Much of the range is due to equating estimates of oil in place with proved, probable, or possible reserves, with no regard to the degree of certainty or the impacts of oil prices. According to the Department of Energy's Energy Information Agency (EIA), proved oil reserves range from 17 to 33 billion barrels. Most of these are in two countries: Kazakhstan and Azerbaijan.<sup>1</sup> For natural gas, there is agreement that proved reserves are about 6.5 trillion cubic meters (tcm), with Turkmenistan holding the largest deposits (outside of Russia). Proved gas reserves in the near term are of lesser interest than oil, since they matter only if there are established markets and transport capacity, or are likely to be.

**Table 1**  
**Projections of Future Caspian Oil Production ('000 b/d)**

	2010	2015	2020
Azerbaijan (AZ)			
Azeri-Chirag-Guneshli	1,000	700	380
Kazakhstan (KZ)			
Tengiz	700	750	750
Karachaganak	400	300	225
Kashagan	450	1,050	1,200
Other KZ*	300	400	400
Total KZ	1,850	2,500	2,575
Total KZ & AZ, - key fields	2,850	3,200	2,955
Uzbekistan (UZ)	200	200	200
Turkmenistan (TU)	200	200	200
Russia and Iran (Caspian area)	Negligible	Negligible	Negligible
<b>Total</b>	<b>3,250</b>	<b>3,600</b>	<b>3,355</b>

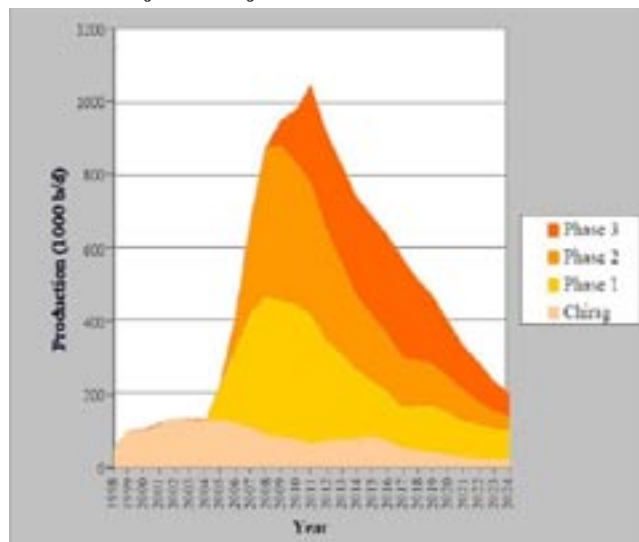
\* Estimate includes other existing Kazakh fields/areas and possibly new offshore areas.

There are a variety of projections as to how much oil will be produced and when. By 2003, Kazakhstan alone accounted for just over 60 percent of the total of 1.8 million barrels per day (mmb/d) for the region as a whole. This level of production, however, accounted for only 2.3 percent of world oil production, based on BP figures. Five major projects cur-

rently underway will drive future oil and gas output. These are the offshore Azeri-Chirag-Guneshli (ACG) oil fields and the Shah Deniz gas field in Azerbaijan, the Tengiz and Karachaganak onshore oil fields in Kazakhstan, and Kazakhstan's offshore Kashagan oil field. While other prospects exist they are not likely to make a major impact on regional production in the next 10 to 15 years. Moreover, old onshore production in Azerbaijan is declining, and no new large fields have been found there. Table 1 shows our best estimate of future Caspian oil output.

These estimates are lower than some provided by other observers. We believe EIA is overly optimistic, projecting regional oil production as 3.1, 4.4, and 5.2 mmb/d, in 2010, 2015, and 2020, respectively.<sup>2</sup> These forecasts assume that everything moves ahead with no delays, but development plans are likely to slip in the future as they have in the past. The Kazakh government announced that its oil production alone will amount to 2.3 mmb/d in 2010 and 3.5 mmb/d in 2015, but these are levels which international oil companies have publicly doubted. The drop in ACG production in Azerbaijan after 2010 (Figure 1) is unlikely to be offset by substantial new finds there, and Kazakh future production profiles remain uncertain.

**Figure 1**  
Azerbaijan's Projected ACG Production Profile



Source: BP, "Azeri, Chirag & Gunashli Full Field Development Phase I."

Our estimates reflect the recurring tendency for oil and gas development projects in this region to slip behind schedule. There were delays in the realization of the Tengiz oil export pipeline from Kazakhstan through Russia, in the refurbishment of the line from Azerbaijan to Georgia, in the rerouting of the line from Azerbaijan through Russia to avoid Chechnya, and in the Baku-Tbilisi-Ceyhan (BTC) oil pipeline project, which was originally proposed in 1997 and should have been operational by now. Tengiz's and Kashagan's development schedules slipped in the face of environmental and fiscal issues between the government and the consortia, as did Karachaganak's production schedule due to technical issues. Shah Deniz gas development was also delayed. Rus-

sian-Kazakh partners in other offshore and shared fields are in no hurry to start committing capital in the face of higher taxes and unsatisfactory production-sharing agreements. Moreover, the geology of these deep and high-pressure fields is complex and challenging, requiring sulfur and mercaptans removal and using the associated sour gas. Finally, a number of oil and gas pipelines run through regions of civil unrest, and are at risk of sabotage and disruption, potentially affecting both output levels and their timing.

#### The Caspian in Context: Forecasts of World Oil Consumption and Production

Whatever ones' projections of Caspian reserves and production, one can estimate what fraction of world oil demand and capacity they might account for in future years. We use the estimates of EIA and the OECD's International Energy Agency. Table 2 below provides estimates of each. Production in 2003 from the four Caspian countries amounted to 1.8 mmb/d, according to BP, or 2.3 percent of the world's actual production. Using the previously projected levels of Caspian oil production, we show the Caspian contributing about 3-3.5 percent of the world's total oil supply and demand in the years ahead.

**Table 2**  
World Oil Consumption and Production, 2010-2020,  
and Caspian Oil as Percent World Consumption and  
Production ('000 b/d)

Year	2010	2015	2020
World Consumption - EIA	91.4	100.5	110.3
- IEA	88.8	n/a	104.0
World Production Capacity - EIA	95.1	104.7	114.9
Caspian Oil Production	3.2	3.6	3.4
Casp. as % World Consumption	3.5-3.6%	3.6%	3.1-3.3%
Casp. as % World Production Capacity	3.4%	3.4%	3.0%

Thus, from an energy security perspective, the Caspian region is a source for diversification of world oil supplies, but it remains only a small player on the world scene. As one international oil executive remarked privately, it is nice to know the Caspian is there, since the region offers an alternative should there be production problems in Venezuela, Nigeria, Angola, parts of the Middle East, or elsewhere.

#### Pipelines and Other Transportation: Critical Keys to Future Production

Forecasts of production often invite differences of opinion, but there is no controversy on the landlocked nature of the Caspian producing states and the challenges of getting oil to markets. Companies and governments alike must solve simultaneous equations incorporating projected outputs and appropriate transport options timed to be ready when production builds. There have been a plethora of pipeline and other transport proposals. Caspian oil today moves by pipeline, rail, tanker, and barge, and is likely to continue to do so for some time to come. Barge transport and swaps are on the rise, and environmental concerns, taking on a greater role, may both advance some new pipeline construction projects and retard others.

We divide pipeline proposals into four categories: those that have been built or are under construction, those that

might be constructed or rehabilitated over the next 10 years or so, those that are unlikely to be built in that period, and those unlikely to be built at all. Key interest today focuses on the second category. Built or under construction pipelines include:

- The BTC pipeline, scheduled for completion in 2005. It is the favorite of the United States since it avoids both Russia and Iran and helps an ally, Turkey. Its capacity will be 1-1.2 mmb/d for production from the ACG fields. Capacity could expand in the future to 1.6-1.7 mmb/d, if warranted. Its predecessor western pipeline route from Baku, Azerbaijan to Supsa, Georgia, will continue in use while the northern pipeline route from Baku to Novorossiysk, Russia, will serve as a BTC backup, or could be reversed to carry Russian oil to BTC.<sup>3</sup> The literature is unanimous in concluding that BTC was not the least-cost alternative. The debate continues as to whether there is sufficient Azeri oil to justify the project. Kazakhstan has expressed interest in barging production to BTC in the years after 2010, but has made no commitment. This pipeline and its companion South Caucasus Project (SCP) gas pipeline may be at future risk of sabotage or interruption.
- Also under construction, the SCP will deliver 6.6 bcm annually of Azeri Shah Deniz gas to Turkey, beginning in 2006 or later. Project design permits expansion to at least 16 bcm per year.
- The Caspian Pipeline Consortium (CPC) pipeline from the Tengiz field in Kazakhstan to Novorossiysk, Russia. Opened in 2001, its initial capacity is 565,000 b/d, with eventual expansion to 1.3 mmb/d. It could further expand to about 2.0 mmb/d should demand conditions merit. This line also carries liquids from the Karachaganak field, and from other fields east of Tengiz.<sup>4</sup>
- The Odessa-Brody pipeline, completed in 2001. Originally proposed as a Bosphorus bypass to carry Caspian oil north, it lay vacant for several years. It now carries Russian oil south for shipment through the Bosphorus. This arrangement could be only a temporary one for a period of three years.
- The expansion of the Atyrau, Kazakhstan to Samara, Russia pipeline to 300,000 b/d, completed in 2001. Its capacity could rise to 500,000 b/d by 2006. Historically used in a northerly direction, it could carry Caspian volumes in the future, or it could be reversed if the shortage of outlets for Russian exports continues.

The second category of pipelines includes those that have a chance of being built between now and 2015. It is comprised of a new export pipeline for Kashagan production if needed, of competing proposals for a Bosphorus bypass, one of which is likely to be built in this time period, and of oil and gas export pipelines to China, which may require rehabilitation of existing Central Asian gas pipelines.

- Much has been written about the expected size of Kashagan, and its peak production level of 1.2 mmb/d in 2016 if it stays on schedule. Will there be a new export

pipeline for this field? Some would argue there is sufficient expandability in existing lines, be they BTC, CPC, Odessa-Brody, Samara, and the northern and western routes from Baku, to accommodate Kashagan, provided there is a quality bank at Russian termini. Others suggest that additional fields will be found nearby, that a new line will be needed, and that a likely route will be to China or through Iran, regardless of the U.S. political posture toward Iran. We have serious doubts that such a new crude oil export line will be needed, let alone built, before 2015.

- Bosphorus bypass pipeline ideas abound but none have been built. The Turks are ever more concerned about the risks of tanker accidents and pollution in the Bosphorus. In 2003 about 3 mmb/d of crude and products passed through the Bosphorus, and some observers project a level of 4.0 mmb/d by 2010. There is no fixed capacity limit to the Straits; it is what the Turks say it is, and that will depend on regulations governing length, size and spacing of ships, tug escorts, required Turkish pilots, refusal to permit nighttime passage, and other stipulations the Turks succeed in imposing under the Treaty of Montreux. The 2004 winter weather delays and demurrage charges generated rethinking on whether and when a bypass pipeline makes economic sense. There is, however, a free-rider problem: why should a shipper incur an additional bypass tariff of about \$1 per barrel so as to permit competitors to use the now less-congested Straits for free?

When the opportunity costs resulting from delays become too great for Bosphorus tanker passage, a bypass is likely. Of the various proposals, we judge that the line across Turkish Thrace from Kiyikoy to Ibrikbana/Saros will be built within the next five years, for it is the shortest in distance and offers the greatest capacity at 1.0-1.2 mmb/d. Russia's Transneft supports this proposal and may ultimately finance and build it. TNK-BP has allegedly guaranteed oil for the \$900-million line. Despite Turkey's interest in reducing congestion in Straits, Ankara has yet to commit funds.

- An oil pipeline across the Caspian Sea to link Kazakh oil production, and perhaps Russian as well, to BTC. Insufficient volumes, together with the absence of agreed seabed delimitation, estimated costs, and environmental challenges from earthquakes and mud volcanoes have put this proposal on the back burner for now. When barged volumes begin to approach or exceed 400,000 b/d, however, industry experts agree that a trans-Caspian oil pipeline becomes preferable to ship transport. This project is likely to go forward but closer to 2015 rather than sooner.
- China already buys Central Asian oil, and its rapid energy demand growth has led to a revival of interest in projects to deliver both oil and gas. In 2004 construction began on an oil pipeline linking Kazakhstan and China; capacity estimates range from 200,000 to 400,000 b/d. A previous proposal in the 1990s for a 400,000 b/d oil

pipeline from Kazakhstan to China was abandoned due to insufficient reserves and high costs. The new oil pipeline would have appeared in the third category in this author's view, had not China's energy demand become so strong and had not the idea of a Russian oil pipeline from Angarsk to Daqing seemingly fallen victim to the proposal for a larger oil pipeline from Russia to Japan. In addition, the Central Asian countries hope to export gas to neighbors and to China, but pipelines from Turkmenistan, Kazakhstan, and Uzbekistan to and through Russia need substantial repair. Turkmenistan, however, agreed to sell gas to Russia and Ukraine in volumes that lead one to question not only how it will be transported, but also whether the reserves are sufficient, regardless of Chinese interest. China's agreement to buy gas from Russia's Kovytko gas field may once again squeeze Turkmenistan's hopes of selling gas to China. Nonetheless, China's West-to-East gas pipeline could in the future link in the west to a gas pipeline from Kazakhstan.

In the third category are pipelines that are not likely to move forward in the next 10 years or so, but could occur beyond 2015, if production profiles and demand conditions warrant:

- A new main export line for peak Kashagan output and for other north Caspian oil, of approximately 1-1.5 mmb/d capacity, running south to an Iranian port and onward to Kharg Island. Kazakhstan's President Nazarbayev favors this line. It could also carry Turkmen oil, and displace swaps. This idea faces legal and environmental challenges similar to those of a trans-Caspian line from Kazakhstan to Baku. Moreover, as long as relations between the U.S. and Iran remain strained, American law will prohibit U.S. participation.
- A second Baku-Tbilisi-Ceyhan line, or an increase to 1.7 mmb/d of the present one. There is a certain first-mover advantage, in that once the current pipeline is operating successfully, it may be simpler to expand existing facilities than to plan and execute a *de novo* pipeline project.
- A trans-Caspian – Turkmenistan to Baku – gas, and perhaps oil pipeline. This project was proposed some years ago, but was abandoned in the face of Turkmen intransigence, the decision to build the SCP line, and the recognition that the Turkish gas market was oversupplied. When Turkish gas demand recovers and grows, and gas pipeline links to Greece and elsewhere in Western Europe are realized, this project could yet revive.

A final category is pipelines that are not likely to be constructed:

- Construction of a second pipeline parallel to the CPC line. We rule this out for reasons of overdependence on Russia as a transit country, and of vulnerability to Turkish limitations on tanker passage through the Bosphorus.
- The proposal to Russia by Georgia's leader for an oil pipeline from Novorossiysk, Russia through Georgia to join the BTC pipeline. While this was an attempt to appeal to Russian interests to find additional oil export

options, it is a Georgian ploy to increase its role and importance as an oil transit country.

- A gas pipeline from Turkmenistan through Afghanistan to Pakistan and possibly to India. The Asian Development Bank is considering whether to support this project. Regardless of Pakistani-Indian political differences or recent warming in relations, neither country faces any acute future shortage of gas, and has other options from Iran and Qatar.

While actual and proposed pipelines attract the lion's share of attention and financing, Caspian oil moves as well by rail and barge. Kazakhstan ships by rail to China, and also by rail from Baku to the Black Sea. In the absence of an oil export pipeline through Iran, swaps of both Caspian and Russian oil to the Iranian port of Neka are rising. So far this has not drawn noticeable ire from the U.S. government. Iranian refineries in Tehran and Tabriz are being reconfigured to utilize Caspian oil, and swaps make economic sense. Further expansion of Neka's capacity may not occur, however, should BTC offer a more convenient method to market.

#### Costs and Prices

Cost information on development efforts in Azerbaijan and Kazakhstan is for the most part proprietary. Some estimates drawn from company data have been published, nonetheless, indicating that fully built up costs for the newer offshore areas fall in the \$15-20 per barrel range, well above those in the Middle East. Built-up costs include all the costs of development, transportation, and operation. Costs should decline once capital expenditures are recovered, and interest charges no longer included.

In a period of robust oil prices of \$30-40 per barrel, these costs look extremely attractive, although the opposite was true in 1999 when prices fell as low as \$10 per barrel. If the government's typical profit share is 80 percent, with a 20 percent share for the investors, then at a price of \$30 and a cost of \$15, the latter are left with \$3 per barrel as their return. Alternatively, at a price of \$20, and the same profit-share split, company profits are \$1 per barrel, which is probably not enough to justify the investment. Most estimators conclude that a price of above \$20 per barrel is needed to justify overall Caspian investment. Should prices fall below this level, new development and production activity is likely to halt, and production could not compete with output from the Middle East.

Flow rates and well productivity, however, may be as important as world prices in estimating costs and returns. Flow rates have been as great as 5,000-10,000 barrels per well, with one well setting a record of 18,000 b/d in 2002; these rates are comparable to some from the most prolific wells in the Middle East.<sup>6</sup> This geologic advantage, together with technology likely to drive costs down even further, indicates that Caspian oil, at least from the more prolific deposits, can likely be profitable at from \$15 to \$20 per barrel.

Further evidence on costs, based on conversations with company representatives, indicates that:

- In Azerbaijan's offshore, production from the ACG

fields remains profitable at a per-barrel wellhead price of \$12, but generally not below that level.

- In Kazakhstan's onshore Tengiz field, the estimated price needed for profitability is about \$15-20 per barrel. Lifting costs are low, however, at less than \$3.25 per barrel. Capital investments in new developments in the northern Caspian region are unlikely at prices of \$9-10.
- In Kazakhstan's offshore Kashagan field, costs are as yet speculative, since production has not begun. Development costs will be steep, however, and transportation costs an issue, depending on whether a new export pipeline is required. Characteristics making for high costs are the depth of the structure (4,000-5,000 meters), extreme reservoir pressures of 1,000 atmospheres, the high ratio of hydrogen sulfide gas, and the shallowness of the sea. The latter requires both artificial islands to serve as drilling platforms and specially designed icebreakers and tugs to avoid environmental damage.
- In a Kazakhstan onshore field operated by PetroKazakhstan and LUKoil, production costs are low, about \$2 or less per barrel, but transportation costs – primarily by rail – east to China or west to join existing pipelines are estimated in the \$12-14 per-barrel range. New pipeline connections, however, have brought down these costs.

#### Shaping the Course: Political Issues and World Markets

While the recoverable resources of the Caspian regime are not negligible, they are located in a politically unsettled and risky area. For the most part, we see political developments slowing and holding back energy development rather than advancing it. These include a number of considerations:

- Ongoing regional, ethnic, or religious tensions, if not outright conflict and civil war. These include the Nagorno-Karabakh dispute involving Azerbaijan and Armenia; Georgian difficulties with secessionists in Abkhazia and South Ossetia, and with Chechen dissidents finding refuge in the Pankisi Gorge; recurring Russia-Chechnya problems; disputed borders between Central Asian countries; and the strengths of the Islamic Movement of Uzbekistan (IMU), Hizb al-Tahrir, or other religious or extremist groups in the Fergana Valley and throughout the region. These all pose risks of varying degrees to present and future foreign energy investment. The BTC pipeline as well as other existing western oil facilities make attractive targets for dissidents.
- The need for well-defined production-sharing agreements, clear national regulations on environment and local content, and appropriate tax and fiscal regimes. This means that there must be a rule of law and an effective court system. The investment climate has markedly deteriorated, particularly in Kazakhstan, as the government imposed fines, sought to make changes in previous agreements, tightened fiscal terms and local content regulations, and prohibited gas flaring. While companies might be hard-pressed to consider walking away from billions of dollars in investments, their capital is scarce and has other competing uses, which may limit their

commitment to these countries.

- Absence of political agreement on seabed and water column delimitation among all five Caspian littoral states. Three – Russia, Kazakhstan, and Azerbaijan -- have struck agreements, but until all five do, investment proposals for development of some borderline fields, future cross-Caspian pipelines, and cooperative environmental measures are likely to be postponed, awaiting an enforceable legal framework to govern future capital expenditure commitments. Disputes over sea demarcation, backed by force, may escalate, interfering with production and transportation operations.
- Succession issues, and those of continuing corruption and strongman dictatorial governance, once the current Central Asian leaders depart. A generation or more may be needed before any of these countries begins to function as a democracy. The change in Georgian leadership sent a chill through Central Asia's leaders, as they toughened restraints on the opposition and consolidated all their levers of power. Azeri-style dynasties are likely to occur in both Kazakhstan and Uzbekistan, while Turkmenistan is likely to slide into civil war. Political upheavals heighten the risk energy companies face, increase the potential for arbitrary changes in the regulations governing their investments, and generally raise the costs of doing business.
- Social and economic unrest arising from human rights abuses and continuing corruption and poverty. Impoverished peoples under repressive regimes often react by embracing militant Islam and rabid anti-Americanism. Foreign energy companies are also a target, should the population perceive little improvement in living standards from oil revenues as the corrupt and unaccountable governments line their pockets, fail to diversify the economies and engage in grandiose projects. The U.S. is increasingly identified with supporting corrupt and authoritarian governments in its war against terrorism. We cut aid to Uzbekistan due to human rights abuses, but aid the Uzbek military. What happens to western energy investments when the cauldron boils over?
- Lastly, what will oil prices be in 2010 and beyond? By the end of this decade a number of new projects are expected to be on stream worldwide. The estimates vary, with EIA projecting an increase of 11 mmb/d in production in 2010 over 2002 levels, and one private forecaster suggesting the 2010 increment relative to 2004 production is likely to be closer to 20 mmb/d. About 1.5 mmb/d of these amounts is Caspian production; depending on how demand increases and OPEC behaves, these capacity increments could put severe downward pressure on oil prices, perhaps pushing them down to non-economic levels for cost recovery.

#### U.S. Interests

Does the U.S. have strategic energy interests in this region? We would say no; the Caspian is an area that is not expected to make a major or sustained contribution to the

world's exports, and in that sense is no more strategic than any other small exporting area around the world. This is not to deny that from the perspective of private investors, the region may be hugely strategic to their bottom lines.

It is important to distinguish between foreign policy objectives and energy policy objectives. In foreign policy, various U.S. administrations have stated that the U.S. goal is to prevent conflict and to strengthen pluralism, freedom, democracy, and prosperity in the former Soviet republics. In its July 2000 report, the Commission on America's National Interests set out a U.S. hierarchy of interests considered vital, extremely important, important, and secondarily important. Energy concerns appear only as to ensuring viability and stability in terms of production and trade, in the sense of avoiding disruptions. Nowhere on the list of vital interests (those for which the U.S. is prepared to fight), or of extremely important ones (those that if compromised would "prejudice but not strictly imperil" the U.S.'s ability to safeguard its citizens), or of important ones (those which if compromised would have "major negative consequences" for the U.S.'s ability to protect its citizens) do Caspian energy developments or U.S. interests therein appear.

The Commission's report was published before September 11, 2001. Since then, it is the global war on terrorism that colors U.S. foreign policy. While formerly the Caucasus and Central Asia were viewed through a Cold-War lens as to if and how Russia might try to reassert control, they became, post 9-11, key allies for U.S. actions in Afghanistan and Iraq. Post 9-11 and post-Afghanistan, Central Asia in particular was judged and/or feared as a place where the Taliban could be reconstituted. To say that these states are "strategic" is to acknowledge a collection of post 9-11 foreign policy concerns largely defined by terrorist events, together with the fear that Islamic radicals may repeat terrorist attacks to humble the U.S. and its western allies.

These states are not of strategic importance, however, to world energy markets. The U.S. supports world diversification of energy reserves and producing locations to reduce vulnerability to supply disruptions. Georgia is the one state in this region that can possibly be viewed with some concern for its "strategic" energy role, since as an energy transit state it links Azerbaijan and Central Asia to Turkey and the west. If Georgia implodes, or if war over Nagorno-Karabach between Armenia and Azerbaijan restarts and spills over into Georgia, energy investments in the BTC pipeline as well as Azeri production are likely to be at risk. But this producing region as a whole, while accounting for billions of dollars in investments, is unlikely to be a large and sustained future producer and contributor to the world's energy supplies, and cannot be considered of strategic energy importance to the U.S.

#### **Footnotes**

<sup>1</sup> One frequently hears the region's oil promise compared to that of the North Sea. But this is an inaccurate perception and raises false hopes of significant future production. The North Sea's proved oil reserves are placed at 60-70 billion barrels, of which about 17 billion barrels remain. The two basins should be compared at the same stages of their lives; certainly reserves numbers will change

over time with new discoveries and new knowledge, but the fact remains oil reserves in the Caspian region are less than half those of the North Sea. See A.M. Samsam Bakhtiari, "North Sea oil reserves: half full or half empty?" *Oil & Gas Journal*, August 25, 2003, who gives 60-70- billion barrels of oil reserves for the North Sea basin. Private correspondence of the author with Bakhtiari confirms 60-70 billion barrels for the North Sea, compared with 20-30 billion barrels for the Caspian Sea region.

<sup>2</sup> DOE/EIA, *Annual Energy Outlook 2004*, January 2004, Table A21. See also Cambridge Energy Research Associates' January 2004 estimates for Caspian capacity of 4.5 mmb/d in 2010.

<sup>3</sup> The western route has a capacity of about 150,000 b/d, and the northern route, despite a nominal capacity of 180,000 b/d, currently carries only about 50,000 b/d.

<sup>4</sup> U.S. arguments against using Russia as a transit country, so prominent in the BTC debate, were not voiced in the process of concluding this pipeline project.

<sup>5</sup> See Jeanne M. Perdue, "Technology credited for new records," *Drilling and Production Yearbook*, March 2003, for noting that in March 2002 a Chirag well set a record for that year of 18,000 b/d. See <http://www.eandpnet.com/pdf/Miscellaneous.pdf>.

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