

# Chapter II

## Basic Characteristics of the Caspian Sea Region

### 1. *Spatial Confines of the Caspian Sea Region*

In a strict geographical sense the Caspian Sea region is an area located around that huge lake which is called a sea due to its size (it is the world's largest lake) – approximately 371,000 sq. km.<sup>1</sup> Most of the land (some arable land, deserts and mountains) surrounding the lake (the Sea) was a part of the Soviet Union until the end of 1991. The smaller southern part of the region (from Astara to Gassan Kuli) has been and continues to be a constituent part of Iran.

In the process of the collapse of the Soviet Union, following Gorbachev's unskilled and unsuccessful attempts to reform it, all 15 former Soviet Republics proclaimed their independence in 1990-1991. Therefore, the coast of the Caspian Sea is now divided between 5 independent nations: Russia (ironically enough it proclaimed its independence – from the USSR – earlier than the majority of the other former Soviet Republics, on 12 June, 1991), Azerbaijan (independent since 30 August, 1991); Turkmenistan (which proclaimed independence on 27 October, 1991); Kazakhstan (independent since 16 December, 1991) and Iran.

Meanwhile in a wider geopolitical sense (and in the general context of the present research), this region may be understood as an area which also embraces (besides the above-mentioned territories) the adjacent countries: Georgia (independent since 9 April, 1991) and Armenia (independent since 23 September, 1991) in the Caucasus, and Uzbekistan (independent since 31 August 1991) in Central Asia. To some extent (in connection with the existing or proposed pipelines), Turkey and Afghanistan have to be taken into consideration, as well as Tajikistan (independent since 9 September, 1991), Kyrgyzstan (independent since 31 August, 1991) and the north-western part of China.

This region is singled out by the world powers in a worldwide context and by local countries in relation to politics in this part of the Eurasian continent. It is worth mentioning that, for example, Iranian analysts distinguish two main "Iranian Geo-

political Regions, North and South: 1) the Geopolitical Region of Caspian Sea – Central Asia; 2) the Geopolitical Region of the Persian Gulf."<sup>2</sup> Using other terms, Russian analysts put forward a basically similar ideas of a geopolitical region located in the area "between the Black and the Caspian Seas" and in Central Asia.<sup>3</sup>

Within the context of the present article, the geological boundaries of the Caspian Sea region are also important. Oil and gas natural resources in and around the Caspian Sea are located in several basins (which are usually combined into geological provinces or regions): the Near-Caspian (Prikaspiyskaya) oil and gas bearing province, North Caucasus and Mangyshlak oil and gas bearing province (which among other areas includes the territory of Chechnya), South Mangyshlak oil and gas bearing region, South Caspian oil and gas bearing province (it comprises the territories from Baku to Western Turkmenistan), Kara-Kum oil and gas basin, Amu-Darya gas and oil bearing province.<sup>4</sup> These basins have relatively clear boundaries separating them from other adjacent basins, namely: the Black Sea oil and gas bearing region to the West, and basins to the North, in Tatarstan and Bashkortostan, to the East, in Uzbekistan, and to the South, in Iran and Iraq.

Finally, when analysing the contemporary use of the term "the Caspian Sea region," it should be mentioned that the emergence of geopolitics determined by peculiarities of geology (i.e. huge natural resources<sup>5</sup>) of the area located in and around the Caspian Sea has led (under conditions of the demise of or radical change of the USSR administrative structures) to the formation of "a region defined by oil,"<sup>6</sup> a region understood in terms of powerful hydrocarbon (oil and gas) energy potential. The two separate adjacent regions of the former Soviet Union – Central Asia and the Transcaucasia – which have been singled out on the basis of geography, now (within the wider international context) constitute in the minds of many policy-makers one world region – the Caspian Area. This means that "a geo-economic and geo-strategic model, characterised by the importance of oil, gas, and pipelines"<sup>7</sup> has superseded the logic of a model defined mostly

by regional (i.e. internal Soviet) politics and economics.

## 2. *Legal Status of the Caspian Sea and Related Contemporary Political and Legal Disputes*

Before the collapse of the Soviet Union in 1991, most of the Caspian Sea coastline belonged to the Soviet Union, and only its Southern coast to Iran. There have been no physical changes of the border-lines on the coast of the Caspian Sea since then. The only changes which took place in this respect were connected with the change of status of the borders: some of those which prior to 1991 were just administrative borders within one federal state (the USSR) became inter-state ones.

The legal status of the Caspian Sea was defined by the Soviet-Iranian Treaties of 26 February 1921 and 25 March 1940.<sup>8</sup> The exclusive 10-mile fishing zone was established, and the Caspian Sea was given the status of an enclosed sea,<sup>9</sup> under joint sovereignty of the USSR and Iran. Its legal status has been covered by Articles 122 and 123 of the 1982 UN Convention on the Law of the Sea (which entered into force on 16 November, 1994), defining enclosed and semi-enclosed seas.<sup>10</sup> The Soviet-Iranian treaties did not pay particular attention to the issues of use of the underwater resources of the Caspian Sea. No extra-regional country has challenged the established status of the Sea as an enclosed one. No foreign (i.e. third country) vessels have been present in it. In theory the USSR and Iran observed the principle of joint exploration of Caspian biological resources, even though in practice nobody has tried to enforce a 50/50 approach to sharing. At the same time Iran has given tacit recognition of the right of the Soviet Union to extract oil from the Caspian Sea shelf near Baku (Azerbaijan), and has never condemned such practices or officially claimed a share in the profits resulting from the sea oil exploration.

Within the USSR, which was in fact a unitary state (at least as to the right of use of natural resources), and only nominally a federal state, the issue of division of sovereignty over the Caspian Sea between the littoral Soviet Republics was virtually ignored, even though formally "the Union Republics composing the USSR have been exploiting the riches of the Caspian according to the principle

of division through the middle, and this practice has existed since the 70s"<sup>11</sup> (first of all regarding Azerbaijan and Turkmenistan). The collapse of the Soviet Union has made this unresolved issue a topical one. Quite soon after their independence, the new independent states started preparation for a de-facto division of the Sea, which is rich in natural resources. This process of Caspian Sea partition was accelerated in September, 1994, when Azerbaijan signed the so-called "Contract of the Century" with Western companies to develop Azeri, Chirag and Gunashli oil fields in the Caspian Sea.<sup>12</sup> Azerbaijan has passed national legislation that contradicts and even undermines the international treaties and previous legal practice related to the Caspian Sea.

Russia and Iran have expressed the wish to preserve the validity of the 1921 and 1940 treaties. Russia is universally recognised as a legal successor to the Soviet Union and its international treaties. Nevertheless regarding the Caspian Sea and the relevant Soviet-Iranian treaties this approach is not adequate and needs corrections (even if these treaties are still valid). Meanwhile Azerbaijan and Kazakhstan consider that because the USSR has ceased to exist, the 1921 and 1940 Soviet-Iranian treaties have automatically lost their validity.<sup>13</sup> Iran's official positions are quite flexible, and it avoids such interpretations of the joint use of the Caspian Sea which would lead to (1) Iran's claims for 50% of the Sea's resources (or incomes resulting from their use) and (2) the limitation of the share of the rest of the littoral countries – the four Soviet-successor states – to the remaining 50% of the Sea resources. Russia has shown the political will to reach compromises regarding the tough positions of its neighbours and partners in the Caspian.

In the final analysis, all countries of the region recognise the need for a new treaty defining the status of the Caspian Sea. No extra-regional power has openly declared that the issues of the Caspian have to be internationalised, i.e. that they should be settled in a wider context than by an agreement of Iran and the former Soviet republics; even though there may be such latent objectives, as well as attempts to manipulate the behaviour of some countries of the region.

Almost all important legal and political issues in the Caspian Sea region are drawn together when considering the problem of the practical application of sovereignty of the new independent states, and their legal succession to the international trea-

ties signed by the USSR which the post-Soviet republics (while dissolving the USSR and creating the CIS) have pledged (in the Alma-Ata Declaration of 21 December, 1991) to observe.

The theoretical positions (related to the legal status of the Caspian Sea) in support of the particular interests of each littoral country may be summarised in the following way:

- (1) The Caspian Sea has to be treated as an enclosed sea, and thus divided into: the territorial seas, the exclusive economic zones and the continental shelves of each coastal state.<sup>14</sup>
- (2) It may be turned into an open sea.<sup>15</sup>
- (3) The Caspian Sea is not a sea, but a lake, and thus the 1982 Convention does not apply to it, and therefore this area should be divided between the states by agreement, either in accordance with their borders as they intersect the lake, or at the lake midpoint.<sup>16</sup>
- (4) As a lake it should be turned into a "condominium" under an international authority of the littoral states.<sup>17</sup>
- (5) Some "mixed" legal solutions can be envisaged: either with different approaches to the division of undersea resources (and therefore of the profits from mineral resources exploration), control over the underwater pipelines, and the use of biological resources of the Sea; or with (very improbable) interim arrangements establishing a so-called "put off" of the final legal status of the Caspian Sea based on (a) either freezing all present and future national claims over that territory (in a way similar to the solution of the Antarctic problems), (b) or a recognition of the status quo (primarily in relation to the present stage of development projects in the seabed) and avoidance of further unilateral steps.

The official positions of the littoral states in support of a certain legal theory related to the status of the Caspian Sea are determined by their Government's immediate and strategic economic interests to control oil extraction in particular parts of the Sea. The interests of the present Governments of the post-Soviet countries differ, and therefore they have proposed different legal arrangements.

The clearest positions are those of Azerbaijan and Kazakhstan: they both would like to exercise exclusive sovereign rights in the oil-rich areas adjacent to their coasts. These are the best oil-bearing

sections of the Caspian Sea. Their positions are better served by the application of the concept of the Caspian Sea being a "border lake" or an "open sea." Both of these concepts are claimed to be acceptable to Azerbaijan.<sup>18</sup>

For historical academic reasons, Azerbaijan (like Russia and Ukraine) has a number of well-trained specialists in international law, so it has been better prepared (than Turkmenistan and Kazakhstan) to provide a strong, well-reasoned legal basis for the political position of its government in international negotiations.

According to the "lake" concept that has been put forward by Azerbaijan, each littoral country will acquire its own sector of the Caspian Sea formed by an area stretching from the coast to the "central line" – a line equidistant from each shore. In such sectors the relevant countries would exercise exclusive sovereign rights to use the waters, undersea resources and all biological resources. (Under such arrangements, Iran's Caspian sector would embrace the area located to the south of the line connecting Astara on the border with Azerbaijan with Gassan Kuli on the border with Turkmenistan – a limited area which differs from what is usually unofficially depicted by Iranians (e.g. on popular geographic images of their country) as Iran's sector of the Caspian.)

The "open sea" arrangements are acceptable to Azerbaijan because, in accordance with the 1982 UN Convention on the Law of the Sea, they would lead to the recognition of not only the 12-mile territorial waters, but also the 200-mile exclusive economic zone. In the particular case of a much narrower (less than 200 miles) distance between the Western and Eastern coasts of the Caspian Sea, national sectors of a similar shape (as under the above-mentioned "lake" arrangements) would be created, characterised by the same exclusive sovereign rights of relevant littoral states as to the use of the sea bed resources. The only significant difference in the sector's legal status would be the freedom of navigation in the "open sea."

Though essentially quite similar, Kazakhstan's positions are weaker (compared to Azerbaijan's) in terms of the existing doctrine and practice of international law: it claims that the Caspian Sea should not be treated in accordance with the concept of a "border lake" or an "open sea," but the Sea should be partitioned into economic zones according to a "central line," thus securing each state's exclusive

rights to exploit natural resources within its own economic zone.<sup>19</sup> In understanding Kazakhstan's interests in this region, one must take into account not only the issues of oil exploration in the north-eastern part of the Caspian Sea (in what is Kazakhstan's virtual sector) but also the issues of underwater oil and gas pipeline routes across the Caspian Sea from Kazakhstan, the need to secure maximum control over them and returns from their use, and realising the vulnerability of the natural environment of the Caspian and the necessity of protecting its biological resources.

For quite a long time, opposing (to Azerbaijan's and Kazakhstan's) positions have been expressed by Russia. It has insisted on the Caspian Sea being treated as an enclosed sea with a 20-mile territorial sea and 20-mile exclusive economic zone. The remaining area should be a "condominium" for all Caspian Sea countries. As a "compromise" it has been ready to recognise a 45-mile (instead of 40-mile) "near-shore, and the littoral states jurisdiction over the oil fields whose development has already started or is about to start."<sup>20</sup> In this way, Russia has been trying: (a) to get a bigger share in the deals with Western companies in developing oil fields in the areas located far from its coast; (b) to secure its exclusive use of oil fields near its shore (in its own virtual sector which would have to be created if Azerbaijan's and Kazakhstan's theoretical positions were accepted); (c) to preserve its positions in an international deal with Azerbaijan concerning the Azeri, Chirag and Gunashli oil fields; (d) to (possibly) guarantee priority use of the rich biological resources of the Northern Caspian, whose present value is often assessed as no smaller than that of the huge oil resources of this part of the Sea.

Russia's official announcement (in 1997) of a tender for the exploration of the shelf in the Northern section of the Caspian Sea<sup>21</sup> was to a large extent interpreted as its acceptance of a sectoral partition principle, despite its Foreign Ministry continuing to condemn the "unilateral seizure of oil and gas fields."<sup>22</sup> In February 1998, Russian President Boris Yeltsin stressed in his interview to the Italian newspaper *Corriere della Sera* (8 February 1998) that his country would not tolerate the attempts of its neighbours (with the support of Western companies) to marginalise Russia in the Caspian, and to impose upon it an unfavourable partition into sectors.<sup>23</sup> Nevertheless, in February 1998, experts from Russia and Kazakhstan agreed at a meeting in

Astrakhan to divide the Kazakh-Russian part of the Caspian sea-bed on the basis of the principle of equal distance of the separating line from the opposite shores, and to preserve the water surface in common use.<sup>24</sup> Later an agreement on delimitation of the Northern part of the Caspian Sea (aimed as it is stated in its Preamble at "exercising sovereign rights for the use of entrails") was prepared for signing by the Presidents of Russia and Kazakhstan in Moscow on the 28 April 1998, but the signing procedure was postponed until the official visit of President Yeltsin to Kazakhstan.<sup>25</sup>

The "open sea" legal arrangement for the Caspian Sea (meaning a free passage to the world's oceans exempted from taxes) is totally unacceptable for Russia – both for pure security and for financial reasons. Russia would not accept cancelling the tariff (at international rates) on all international vessels passing through the Volga – Don Channel (which connects the Caspian Sea with the Black Sea via Russian rivers) that was introduced in the spring of 1994.<sup>26</sup>

Turkmenistan's major objectives involving the issue of sovereignty over the Caspian Sea waters and the sea bed may be summarised in the following way: (a) to get a share in the exploration of any oil fields located outside the 40 or 45-mile zone; (b) to secure the maximum returns from possible underwater gas pipelines.

Until recently, Turkmenistan has supported Russia's and Iran's positions rejecting the sectoral partition of the Caspian Sea. In early 1997, the Foreign Minister of Turkmenistan, Boris Shikmurov, reported that Russia, Iran and Turkmenistan "agreed on a 45-mile national limit, inside which they would have exclusive rights to any oil or gas. The remaining area in the middle of the Caspian Sea would be common territory."<sup>27</sup> Nevertheless in February 1997, in response to Azerbaijan's programme of exploration of oil 200 km away from its coast – in the Chirag and Azeri fields, Turkmenistan President Saparmurad Niyazov (Turkmenbashi) passed a Decree defining the limits of his country's jurisdiction over the Caspian Sea, covering some of the areas claimed by Azerbaijan. Thus a "diplomatic confrontation" between Turkmenistan and Azerbaijan began, and Turkmenistan has been threatening to submit a complaint against Azerbaijan to the UN. Many analysts consider those moves on Turkmenistan's part to be a strategic error signifying de-facto support for a sectoral partition of the Caspian Sea.<sup>28</sup>

The lack of real Russia support for Turkmenistan (especially through its denial of free access to European gas markets via its pipelines network) has led Turkmenistan to search for a deal with Azerbaijan which now seems to be quite possible. If a de-facto deal between Azerbaijan and Turkmenistan is reached, the implementation of the sectoral principle of delimitation of national jurisdictions in the Caspian Sea will become almost inevitable, and this will leave no room for any “condominium” arrangement.

The latter option is becoming still weaker because the US – the only superpower in the contemporary world – does not favour it. The fact is that due to the Presidential Executive Order, The Iran and Libya Sanctions Act of 1976, “US companies could be precluded from participating in any hydrocarbon exploration or development contracts in the Caspian Sea basin, which involve Iran or Iranian companies, including joint-use arrangements in the Caspian,” and therefore “US companies will be blocked from participation in any project for Caspian development if the littoral states adopt the so-called ‘condominium’ approach to ownership of Caspian’s resources.”<sup>29</sup> In spite of some initial steps towards a “rapprochement” with Iran, and better understanding in the US that a tough and inflexible anti-Iranian policy is further pushing Iran towards strengthening a Russian-Iranian strategic alliance, the interests of American oil and gas companies in the region have not yet been able to prevail over the already traditional and deeply-rooted anti-Iranian orientation of the US Administration and Congress. At the same time, some prominent US public opinion-makers and policy advisors (traditional advocates of anti-Russian policy) like Zbigniew Brzezinski “realise that Iran and America have certain fundamental interests in common,” and “that both the United States and Iran share a common interest in the stability and economic development of the region immediately to the north of Iran,” and “a geopolitical interest in the continued independence of the newly sovereign states”<sup>30</sup> of the region.

Iran continues to insist on a condominium, protest against the plans to construct underwater pipelines, and favours the transportation of oil by tankers and the use of existing and construction of new pipelines through the territory of Iran and Russia. Nevertheless it is clear that Iran can accept a sectoral principle of the Caspian Sea division if its

interests are taken into account, primarily in the Azerbaijan-Turkmenistan deal concerning the partition of the Southern Caspian, and in present and future international contracts on the exploration of oil in other countries’ sectors of the Caspian Sea.

In any case, a final decision on the legal status of the Caspian Sea has to be found, and a relevant international treaty between the five littoral states must be elaborated and signed. The internationalisation, i.e. direct involvement of the trans-regional powers in this issue seems to be undesirable.

### 3. *Oil and Gas Reserves, Production, Local Consumption and System of Transportation in the Caspian Sea Region*<sup>31</sup>

The Caspian Sea area is believed to rank third in the world (after the Persian Gulf and Siberia) for the volume of already discovered and potential (estimated) hydrocarbon resources.<sup>32</sup>

According to various estimates, the oil resources located under the Caspian Sea amount to some 13 billion tons.<sup>33</sup> Russian researcher V. Shorokhov quoted data that “the total sea reserves in the region of the Caspian Sea amount to 10 billion tons of oil and 6 billion cubic meters of gas.”<sup>34</sup>

A recent US Administration report to Congress stated: “With potential (recoverable) reserves of as much as 200 billion barrels of oil, the Caspian region could become the most important player in the world oil market over the next decade,” and according to the estimates of the Energy Information Administration of the US Department of Energy, “by 2015 Caspian region oil exports will be in the 2-4 million b/d range.”<sup>35</sup>

According to American expert estimates, strategic hydrocarbon resources in the Caspian amount to US\$4 trillion, but remain locked in the region.<sup>36</sup>

The full development of the reserves of the Caspian Sea region is only at its initial stage now. The oil and gas potential of this region has attracted much attention since the breakup of the USSR. The former Soviet republics in the Caspian Sea region – Azerbaijan, Kazakhstan, Turkmenistan and Uzbekistan (the latter is considered to be in the Caspian region not only because it shares several of the region’s hydrocarbon basins, but also because it shares with other Caspian countries existing and

**Oil (billion barrels) and Gas (trillion cubic feet) Reserves in the Caspian Region**

Country	Proven Oil Reserves	Possible Oil Reserves	Total Oil Reserves	Proven Gas Reserves	Possible Gas Reserves	Total Gas Reserves
Azerbaijan	3.6-11	27	31-38	11	35	46
Iran*	0	12	12	0	11	11
Kazakhstan	10-16	85	88-101	53-83	88	141-171
Russia*	0.2	5	5	N/A	N/A	N/A
Turkmenistan	1.4-1.5	32	34	98-155	159	257-314
Uzbekistan	0.2-0.3	1	1	74-88	35	109-123
<b>Total</b>	<b>15.4-29</b>	<b>163</b>	<b>171-179</b>	<b>236-337</b>	<b>328</b>	<b>564-665</b>

\* Only the regions near the Caspian are included.

Source: United States Department of Energy.

proposed oil and gas export routes) – are already major energy producers. Their production will increase with additional investment, new technology and the development of new export outlets. The majority of gas and oil reserves in this region have not been developed, and many areas remain unexplored, primarily because the Soviet Union has lacked adequate technology to develop its offshore oil and gas reserves, and kept these resources as a “strategic reserve.”

According to the United States Department of Energy, proven oil reserves for the entire Caspian Sea region are estimated at 15-29 billion barrels, comparable to the United States’ 22 billion barrels, or the North Sea’s 17 billion barrels. Proven natural gas reserves are even larger, accounting for over 2/3 of the proven hydrocarbon reserves in the Caspian Sea region. Based upon proven reserves, Kazakhstan, Turkmenistan and Uzbekistan each rank among the world’s 20 largest natural gas countries. Proven gas reserves in the Caspian region are estimated at 236-337 trillion cubic feet, comparable to North American reserves (300 trillion cubic feet).

#### 4. Activities of Companies in the Caspian Sea Region (Major Projects)

##### 4.1 Azerbaijan

###### 4.1.1 Oil

Most of Azerbaijan’s oil is produced offshore in the Caspian Sea. Azerbaijan has 17 offshore oil fields in production. Gunashly (located 60 miles off the coast; currently accounts for more than half of the country’s oil production), Azeri, and the Chirag oil fields are the richest ones. The development of new fields in the Caspian Sea is being conducted primarily through joint ventures and production sharing agreements.

The Azerbaijan International Oil Company (AIOC) international consortium signed an US\$8 billion, 30-year contract (September 1994) to develop Azeri, Chirag and Gunashli fields with total reserves of 5 billion barrels (3.5 billion barrels of

#### Oil production, consumption and export in Azerbaijan (thousand barrels/day)

Year	Production	Consumption	Net Export
1990	255	170	85
1991	240	165	75
1992	225	165	60
1993	215	165	50
1994	195	165	30
1995	185	170	15
1996*	199	156	43

\* According to US Energy Information Administration.

Sources: *BP Statistical Review of World Energy 1996* (British Petroleum Company p.l.c.: London, 1996), 42 p.; US Energy Information Administration.

proven oil reserves). Shares: British Petroleum (UK, 17.1%), Amoco (USA, 17.0%), State Oil Company of Azerbaijan (SOCAR, 10%), Lucoil (Russia, 10%), Unocal (USA, 10%), Statoil (Norway, 8.6%), Exxon (USA, 8%), Turkish Petroleum (Turkey, 6.8%), Pennzoil (USA, 4.8%), Itochu (Japan, 4%), Ramko (UK, 2.1%), Delta-Nimir (Saudi Arabia, 1.6%). The “early oil” production from platforms at the Chirag field was projected to reach 80,000-100,000 barrels/day by the end of 1997. AIOC expects production to reach about 800,000 barrels/day within the next 15 years.

AIOC plans to export this oil via various pipelines such as:

### **1 Baku (Azerbaijan) → the Black Sea port of Supsa (Georgia)**

On 8 March 1996, the Presidents of Georgia and Azerbaijan signed a 30-year agreement. This line will have an initial capacity of 100,000 barrels/day, with the ability to double this capacity. The length of the pipeline will be 550 miles. The Georgian International Oil Company, a subsidiary of the AIOC, plans to have facilities ready by end-1998. The investment in this project is US\$290 million.

### **2 Baku (Azerbaijan) → the Black Sea port of Novorossiysk (Russia), via Chechnya**

This line will have an initial capacity of 100,000 barrels/day, with the ability to double its capacity and oil exports (planned for end of 1997 – early 1998). The length of the pipeline will be 868 miles, including 90 miles in Chechnya. US\$2.4 billion are needed to repair the Chechen line.

Alternatively a Chechnya bypass may be used: Azerbaijan-Russia border-Terskoye (Russia) via Daghestan. The length of the bypass pipeline will be 176 miles (instead of 90 miles in Chechnya); the cost: US\$220 million.

Nevertheless, the expected peak of production will require construction of an export pipeline with a capacity of 1 millions barrels/day.

### **3 Baku (Azerbaijan) → Ceyhan (Turkey)**

This line will have an initial capacity of 1 million barrels/day. The length of the pipeline will be 1,100 miles (if to Ceyhan) for US\$3.3 billion.

Other grand projects have also been approved by Azerbaijan’s parliament: Shakh-Deniz, Karabakh,

Ashrafi, Dan Ulduzu, Lenkoran-Deniz and Talysh-Deniz fields.

**The Consortium which will develop the Shakh-Deniz field** (43 miles offshore Caspian) signed a contract in June 1996. It is worth US\$4 billion, and runs for 20 years for the Shakh-Deniz project which has 700 million barrels of oil reserves. Shares: British Petroleum (UK, 25.5%), Statoil (Norway 25.5%), State Oil Company of Azerbaijan (SOCAR, 10%), Lucoil (Russia, 10%), Elf Aquitaine (France, 10%), National Iranian Oil Company (Iran, 10%), Turkish Petroleum (Turkey, 9%).

**The Caspian International Operating Company (CIOC)** has signed for a US\$1.2 billion project to develop the 900 million barrel Karabakh field. Shares: Lukoil/Agip joint venture LukAgip (Russia/Italy, 50%), Pennzoil (USA, 30%), State Oil Company of Azerbaijan (SOCAR, 7.5%), Lukoil (Russia, 7.5%), Agip (Italy, 5%).

**The North Apsheron Operating Company joint venture** (a US\$1.5 billion project) has been granted the right to explore a block containing the Ashrafi and Dan Ulduzu oil fields. Shares: Amoco (USA, 30%), Unocal (USA, 25.5%), Itochu (Japan, 20%), SOCAR (Azerbaijan, 20%), Delta (Saudi Arabia, 4.5%).

There is a **Consortium to develop the Lenkoran-Deniz and Talysh-Deniz fields** which is a US\$2 billion project. Shares: Elf Aquitaine (France, 40%), State Oil Company of Azerbaijan (SOCAR, 25%), Total (France, 10%), OIEC (Iran, 10%), Deminex (Germany, 10%), Petrofina (Belgium, 5%).

**A joint venture consisting of Atilla Dogan (Turkey) and SOCAR** was created in 1996 to revive 740 out of 790 wells in the onshore Neftechala oil field with a US\$12 million investment and another possible US\$200 million additional investment. Sited onshore, 120 miles south of Baku near the Caspian Sea.

In August 1997, President H. Aliyev visited the USA and signed four new agreements. Agreements were signed with Amoco (for the exclusive rights to negotiate for the Inam field), Chevron (South Apsheron field), Exxon (Nakhichevan field) and Mobil (Oguz field).

**The McShelf joint venture consists of McDermott (USA) and SOCAR (Azerbaijan).** This is a joint venture to build, install and repair offshore

oil rigs, construct deep water platforms, sited in Baku.

**A joint venture consisting of Marc Rich, Total and SOCAR (Azerbaijan).** Joint venture to manage refineries and recapture crude oil lost in wastewater, sited in Baku.

**A joint venture consisting of Oman Oil (Oman) and SOCAR (Azerbaijan)** In an onshore oil field development and expansion of Novo-Baku refinery (US\$200 million projects), sited in Baku.

**The Baku-Ponder Services joint venture consisting of Ponder Industries (USA) and the Interbranch Scientific Production Association (Azerbaijan)** for oilfield services, sited in Baku.

#### 4.1.2. Refining

Major Azerbaijan's oil refineries are Baku (capacity: 238,978 barrels/day) and Novo-Baku (capacity: 202,830 barrels/day).

#### 4.1.3. Gas

In the past, Azerbaijan imported natural gas from Russia, Turkmenistan and Iran. Azerigaz (State Gas Company) declared that in order to meet domestic demand and stop these imports, it would develop new gas fields in the Caspian Sea (in particular the offshore Nakhichevan field, with an estimated 900 billion cubic feet of reserves) and produce more natural gas from associated gas from offshore oil fields. Azerbaijan can become self-sufficient in gas within the next 4-5 years.

#### Gas production, consumption and exports in Azerbaijan (billion cubic meters)

Year	Production	Consumption	Net Exports
1990*	9.2	15.8	-6.6
1991*	8.0	15.1	-7.1
1992*	7.4	11.8	-4.4
1993*	6.3	8.7	-2.4
1994*	6.0	8.1	-2.1
1995*	6.2	8.0	-1.8
1996**	7.6	7.6	0

Sources: \* BP Statistical Review of World Energy 1996;

\*\* US Energy Information Administration (data originally presented in trillions of cubic feet was converted here into billions of cubic meters at a conversion co-efficient of 1 cubic meter = 33.3 cubic feet).

## 4.2 Kazakhstan

### 4.2.1. Oil

#### Oil production, consumption and exports in Kazakhstan (thousand barrels/day)

Year	Production	Consumption	Net Exports
1990	550	430	120
1991	570	435	135
1992	550	410	140
1993	490	315	175
1994	435	245	190
1995	440	240	200
1996*	532	278	255

\* According to US Energy Information Administration.

Sources: BP Statistical Review of World Energy 1996; US Energy Information Administration.

Kazakhstan is the second largest oil producer in the CIS after Russia. Kazakhoil, the state oil and gas company, is a partner in almost 75% of Kazakhstan oil production. This reform process has included privatisation of energy concerns, and the encouragement of foreign investment. Kazakhstan sold 85% of its stake in Yuzhneftegas to Hurricane Hydrocarbons (Canada), and 60% of its stake in Mangistaumunaigaz to Central Asia Petroleum (Indonesia).

Almost half of Kazakhstan's oil production comes from three large onshore fields: Tengiz, Uzen and Karachaganak.

Kazakhstan has two separate pipeline networks connected with the Russian network.

**Tengizchevroil.** A US\$20 billion joint venture to develop the Tengiz oil field (6-9 billion barrels of oil), located in the North Sea Basin. Shares: Chevron (USA, 45%), Mobil (USA, 25%), Kazakhoil (Kazakhstan, 25%), LukArco (Russia/USA joint venture between Lukoil and Arco, 5%). Chevron plans to reach peak production of 750,000 barrels/day from the field by 2010.

Tengizchevroil exports about 160,000 barrels/day of crude oil through the Russian pipeline system, by barge and rail to the Baltic and the Black Sea. Test deliveries to China by rail have also been made.

**Caspian Pipeline Consortium (CPC).** Tengiz oil will be exported by CPC to world markets via a 930 mile, US\$2.2 billion oil export pipeline con-

necting to the Russian Black Sea port of Novorossiysk. This pipeline is planned to be completed in 1999 and soon reach the peak index of 1.34 million barrels/day. Shares: Russia (24%), Kazakhstan (19%), Chevron (USA, 15%), LukArco (Russia/USA, 12.5%), Mobil (7.5%), Rosneft-Shell (Russia-UK/Netherlands, 7.5%), Oman Oil (Oman, 7.5%), British Gas (UK, 2%), Agip (Italy, 2%), Kazakh Munaigaz (Kazakhstan, 1.75%), Oryx (USA, 1.75%).

Other export options are also being explored:

1. The governments of Kazakhstan and Iran have agreed to start oil swaps between the two countries: 40,000 barrels/day of Kazakhstan oil will be delivered by tankers via the Caspian Sea to refineries in northern Iran in exchange for the delivery by Iran of a similar value of crude to Kazakhstan clients.
2. Tengiz (Kazakhstan) → Baku (Azerbaijan), a 370-mile underwater pipeline costing US\$2.5-3.0 billion; 0.4-0.5 million barrels/day.

**The China National Petroleum Corporation** has signed an agreement under which China will invest US\$3.5 billion to build an 1,800-mile pipeline (0.4 million barrels/day initially, rising to 0.8 million barrels/day) from Aktyubinsk (Kazakhstan) to Xinjiang (China), and develop the fields in Kazakhstan's Aktyubinsk region in exchange for a 60% interest in the Kazakhstan company developing the fields (Aktyubinsk-munaigaz). The three fields have estimated total oil resources (proven and possible reserves) of 1 billion barrels.

**The KazakhstanCaspisShelf (KCS) International Consortium** is developing offshore fields in the Caspian Sea. The offshore areas could contain as many as 60 billion barrels of possible reserves and cost as much as US\$150 billion to develop. Shares: Agip (Italy, 14.29%), British Gas (UK, 14.29%), British Petroleum/Statoil (UK/Norway, 14.29%), Mobil (USA, 14.29%), Shell (UK/Netherlands, 14.29%), Total (France, 14.29%), Kazakhoil (Kazakhstan, 14.29%).

#### 4.2.2. Refining

Two out of three Kazakhstan oil refineries – Pavlodar (163,000 barrels/day), which supplies the northern regions of the country, and Chimkent (127,000 barrels/day), which supplies the southern

areas, get crude oil mainly from Russia via the pipeline from Western Siberia. The Atyrau oil refinery (104,000 barrels/day), which supplies the western regions, receives only domestic crude from north-western Kazakhstan.

**CCL (USA)** has won rights to a 3-year concession to the Pavlodar refinery.

**Vitol (Switzerland)** operates the Chimkent refinery.

#### 4.2.3. Gas

##### Gas production, consumption and exports in Kazakhstan (billion cubic meters)

Year	Production	Consumption	Net Exports
1990*	6.6	12.5	-5.9
1991*	7.4	13.2	-5.8
1992*	7.6	13.5	-5.9
1993*	6.2	13.0	-6.8
1994*	4.2	10.3	-6.1
1995*	5.5	10.8	-5.3
1996**	5.0	8.6	-3.6

Sources: \* *BP Statistical Review of World Energy 1996*;

\*\* US Energy Information Administration (the data originally presented in trillion cubic feet was converted here into billion of cubic meters at a conversion co-efficient of 1 cubic meter = 33.3 cubic feet).

More than 40% of Kazakhstan's natural gas is located in the giant Karachaganak field (north-west Kazakhstan).

In 1995 **the International Consortium for the Karachaganak field** signed a US\$7-8 billion final production sharing agreement to develop the field over 40 years. Shares: Agip (Italy, 32.5%), British Gas (UK, 32.5%), Texaco (USA, 20%), Lukoil (Russia, 15%). This field produced 50,000 barrels/day of oil and 67 billion cubic feet of gas in 1996. The field's potential production is 200,000 barrels/day of oil and 700-900 billion cubic feet per year of natural gas. The consortium plans to process and dispose of gas in Kazakhstan, because at the moment there is no large gas pipeline available for this field other than the Russian gas export system.

Other major fields (Tengiz, Zhanazhol, Uritau) do not have access to export pipelines at all. Thus, either the existing Russian gas pipeline system has to be expanded, or a new route to China must be developed, a proposed US\$12 billion, 3,800 mile pipeline.

Kazakhstan has two separate gas pipeline networks. Western gas producing areas of the country are not connected to the south-eastern and northern gas consuming areas. Kazakhstan exports its gas production to Russia, and most of the country's natural gas consumption needs are covered by imports from Turkmenistan, Russia and Uzbekistan. Kazakhgaz is responsible for gas distribution in the west of the country, and Alaugaz in the south-east.

In June 1997, Kazakhstan awarded Tractabel (Belgium) a 15-year contract to manage its natural gas network. Tractabel pledged to spend: (a) US\$600 million on investment, infrastructure repair and construction, planning costs, and (b) US\$100 million to build a gas pipeline in the south of the country to bypass Kyrgystan.

## 4.3 Turkmenistan

### 4.3.1 Oil

Attracting foreign investment in the country's oil and gas sectors (primarily through joint ventures) is a key strategy of Turkmenistan. By the year

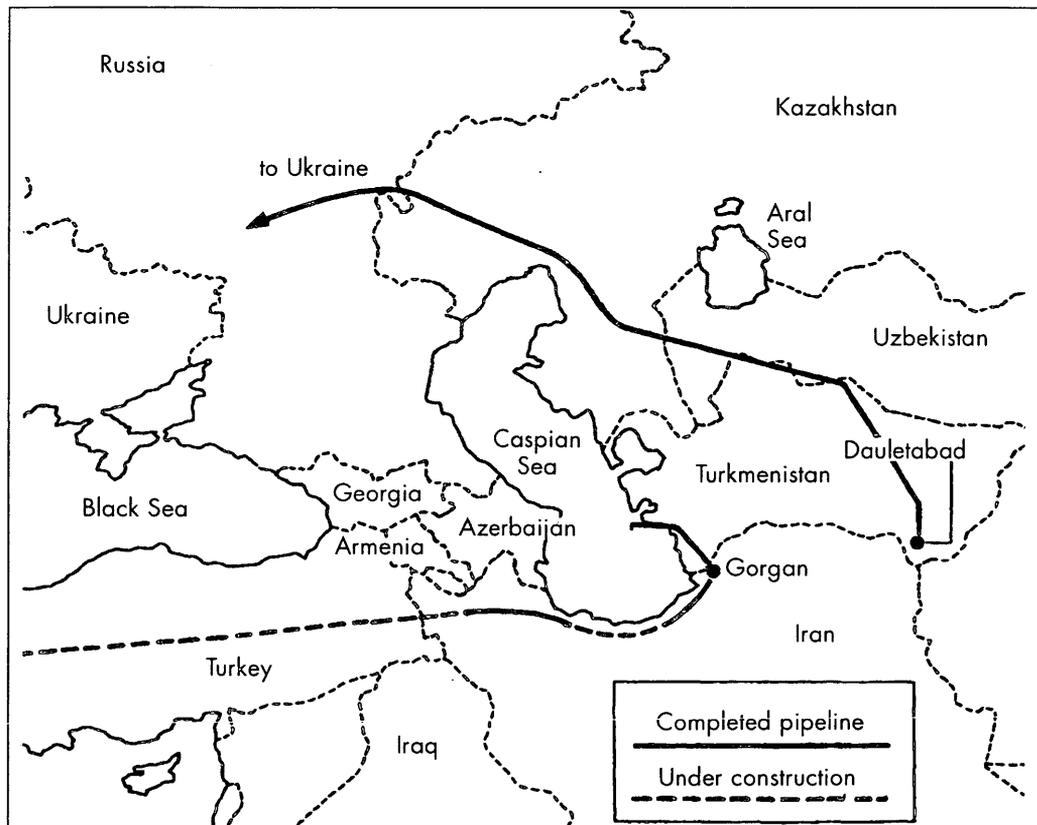
2000, Turkmenistan plans to increase its oil production to about 560,000 barrels/day.

**Monument Oil and Mobil Corporation (USA)** have signed a memorandum of understanding with Turkmenistan for the exclusive right to negotiate a new oil production-sharing contract (7,712 sq. miles, in western Turkmenistan from the Cheleken Peninsula to the southern borders with Iran) in January 1997. Another production-sharing contract covers the Nebit Dag (western Turkmenistan).

**The Bridas Corporation (Argentina) joint venture** covers the Keimir, Ekpatlaukh and Chikishlyar oil fields, located in the southern Caspian Sea region, for production (15,000 barrels/day in 1995) and exports. Bridas has invested US\$400 million in Turkmenistan since 1991. In November 1995 its export license was suspended by the Turkmenistan government.

**The Larmag Energy Assets (Netherlands) joint venture** will develop and produce 8,000 barrels/day (potential 85,000 barrels/day) from the Cheleken oil field Kotur-Tepe and export 6,000 barrels/day across the Caspian Sea to Iran, where it will be trucked to the Persian Gulf. This will involve an investment of US\$90 million.

### Turkmenistan's gas: under Russia's shadow



Source: *Financial Times*, Jan. 21, 1998

### Oil production, consumption and exports in Turkmenistan (thousand barrels/day)

Year	Production	Consumption	Net Exports
1990	N/A	90	N/A
1991	N/A	100	N/A
1992	N/A	100	N/A
1993	N/A	65	N/A
1994	N/A	75	N/A
1995	N/A	80	N/A
1996*	104	65	N/A

\* According to US Energy Information Administration.

Sources: *BP Statistical Review of World Energy 1996*; US Energy Information Administration.

At present, three projects for export pipelines are being considered by the Turkmenistan government.

- 1 Charjou (Turkmenistan) → Afghanistan → Gwadar (Pakistan).  
A 1,000-mile oil pipeline for US\$2.5 billion with a capacity of 1 million barrels/day.
- 2 Turkmenbashi (Turkmenistan) → Baku (Azerbaijan).  
A 190-mile underwater oil pipeline for US \$2.5-3.0 billion with a capacity of 0.4-0.5 barrels/day.
- 3 Turkmenbashi (Turkmenistan) → Kharg Island (Iran).  
A 930-mile pipeline for US\$1.5 billion with a capacity of 0.2-0.4 barrels/day.

#### 4.3.2 Refining

Turkmenistan has two major refineries: Turkmenbashi (116,500 barrels/day) and Chardzhou (120,500 barrels/day).

**Merhav Corporation (Israel)** has signed a US \$ 500 million deal to upgrade the Turkmenbashi refinery, involving construction of a new tube oil facility and catalytic reforming and catalytic cracking units.

#### 4.3.3 Gas

Turkmenistan is the second largest natural gas-producer in the CIS after Russia. The largest natural gas fields are located in the Amu-Darya

### Gas production, consumption and exports in Turkmenistan (billion cubic meters)

Year	Production	Consumption	Net Exports
1990*	81.9	9.8	72.1
1991*	78.6	9.6	69
1992*	56.1	9.3	46.8
1993*	60.9	9.3	51.6
1994*	33.2	10.2	20
1995*	30.1	8.0	22.1
1996**	39.9	5.7	32.2

Sources: \* *BP Statistical Review of World Energy 1996*;

\*\* US Energy Information Administration (the data originally presented in trillion cubic feet was converted here into billion of cubic meters at a conversion co-efficient of 1 cubic meter = 33.3 cubic feet).

basin, with half of the country's gas reserves in the Daulatabad-Donmez field, and large gas reserves (estimated 27 trillion cubic feet) in the Murgab basin (Yashlar deposit).

**Bridas (Argentina)** and **Unocal (USA)** are involved in developing the Yashlar gas deposit in the southeastern Amu-Darya basin and the Keimir oil and gas field in southwestern Turkmenistan. Both companies are also involved in plans to construct a proposed natural gas pipeline through Afghanistan to Pakistan.

In March 1997, the **Dutch subsidiary of the South Africa-based Bateman Project Holdings** signed a US\$180 million deal to reconstruct and develop Turkmenistan's gas infrastructure.

At present, all Turkmenistan gas exports must use the Russian pipeline network. Several options to bypass this system are under consideration, but all of them face potentially large difficulties.

#### 1 Ekarem (Turkmenistan) → Iranian border

This is a 90-mile pipeline linking the gas field in western Turkmenistan with the gas distribution system in Iran's industrialised north (283 billion cubic feet/year 2005; 530 billion cubic feet/year 2020). The US\$190 million pipeline will be ready to export in early 1998.

#### 2 Ekarem (Turkmenistan) → Tabriz (Iran) → Ankara (Turkey)

A 1,350-mile pipeline will eventually continue onto Europe. The US\$1.6 billion project would fulfill the terms of the memorandum signed in May 1997 by Turkmenistan, Iran and Turkey to provide

about 1 trillion cubic feet/year of Turkmenistani natural gas to Europe via Iran and Turkey. Snamprogetti (Italy), Gas de France (France), Royal Dutch Shell (UK/Netherlands) all expressed interest in forming a consortium to construct the proposed pipeline.

### 3 Yashlar Fields (Turkmenistan) → Afghanistan → Pakistan

In July 1997, officials from Turkmenistan and Pakistan and representatives from Unocal (USA) and Delta Oil (Saudi Arabia) signed an agreement to build this gas pipeline. Shares: Unocal (USA) and Delta Oil (Saudi Arabia) (85% combined), Gazprom (Russia, 10%), Turkmenrusgaz (Turkmenistan, 5%). The 900-mile pipeline is estimated to cost US\$2-2.5 billion and will carry up to 2 billion cubic feet of gas per day (about 700 billion cubic feet/year). The construction will start in December 1998 and is to be completed by 2001. Unocal (USA) has also proposed to add a 400-mile spur to Delhi, the capital of India.

There are other natural gas projects under consideration:

1. Turkmenbashi (Turkmenistan) → Baku (Azerbaijan).  
Undersea project across the Caspian Sea.
2. Dauletad field (Turkmenistan) → Uzbekistan → Kazakhstan → Xinjiang (China) → Japan.  
3,800 miles to China or 5,000-mile pipeline if to Japan for US\$12 billion (if to China), or US\$23 (if to Japan) with a capacity of 0.7-1 trillion cubic feet/year.

## 4.4 Uzbekistan

### 4.4.1 Oil and Gas

Almost two thirds of Uzbekistan sits on hydrocarbon deposits. 32 new oil and gas fields are identified to be developed, 18 to be rehabilitated and 9 to be explored. A promising region is the Fergana basin. According to estimates, this basin (shared by Uzbekistan with Tajikistan and Kyrgystan) contains approximately 4 billion barrels of oil and several trillion cubic feet of natural gas. Most of the Uzbekistani gas production is concentrated in south-eastern regions of the country in older fields,

### Oil production, consumption and exports in Uzbekistan (thousand barrels/day)

Year	Production	Consumption	Net Exports
1990	70	255	-185
1991	70	220	-150
1992	80	185	-105
1993	95	165	-70
1994	125	145	-20
1995	175	135	N/A
1996*	182.6	178.8	3.8

\* According to US Energy Information Administration.

Sources: *BP Statistical Review of World Energy 1996*;  
US Energy Information Administration.

### Gas production, consumption and exports in Uzbekistan (billion cubic meters)

Year	Production	Consumption	Net Exports
1990*	38.1	36.8	1.3
1991*	39.1	37.1	2
1992*	39.9	37.3	2.6
1993*	42.0	40.7	1.3
1994*	44.0	41.3	2.7
1995*	45.3	42.4	2.9
1996**	56.6	44.3	2.9

Sources: \* *BP Statistical Review of World Energy 1996*;  
\*\* US Energy Information Administration (the data originally presented in trillion cubic feet was converted here into billion of cubic meters at a conversion co-efficient of 1 cubic meter = 33.3 cubic feet).

such as Shurtan and Kokdumalak.

**The Uzmaj joint venture** consisting of Pro-badi Sdn. Bhd's (Malaysia) and Uzbekneftegas (Uzbekistan) develops and operates the Karaktay field in Amu-Darya basin with 10-20 million barrels oil reserves.

**A joint venture consisting of Uzbekneftegas (Uzbekistan) and Lukoil (Russia)** for exploration, development and production of the Gissar gas field intends to have its production reach 2 billion cubic meters of natural gas in 1998.

Enron (USA), Agip (Italy), Mobil Oil (USA), Japan National Oil Company (Japan), Unocal (USA), Petramina (Indonesia) have negotiated with the Uzbekistan government on development oil and gas projects.

#### 4.4.2 Refining

Uzbekistan has two major refineries, located at Fergana (capacity: 108,000 barrels/day) and Altyaryk (66,000 barrels/day).

#### Notes

- 1 In 1929, before a considerable reduction of its level in comparison with the World Ocean, its size was 422,000 sq. km. (See: *Bolshaya Sovietskaya Entsiklopediia*. (Sovietskaya Entsiklopediya: Moscow, 1973), Vol. 11, p. 499.)
- 2 See: Pirouz Mojtahed-Zadeh, "The Challenging World Order and Iran's Geopolitical Regions," in *The Iranian Journal of International Affairs* (IPIS: Tehran), Vol. V, No. 2, Summer 1993, p. 325-331.
- 3 See: Alexandr Dugin, *Osnovy geopolitiki. Geopoliticheskoie budushcheie Rossii. (Arktogeia: Moscow, 1997)*, p. 349-359.
- 4 See: *Gornaia Entsiklopediia*. (Sovietskaia Entsiklopediia: Moscow, 1984), Vol. 1, p. 113-114; *Ibid.* (1986), Vol. 2, p. 55, 453; *Ibid.* (1989), Vol. 4, p. 231, 504-505; *Ibid.* (1991), Vol. 5, p. 524-525.
- 5 That have been discovered and (due to the contemporary level of technology) are now accessible for their industrial exploration.
- 6 Graham Fuller, *Geopolitical Dynamics of the Caspian Sea Region*. S.I., s.a., p. 1.
- 7 Mohsen Mohamadi, "The Caspian Region in the International Concept," in *Central Asia and the Caucasus Review* (Foreign Ministry of Islamic Republic of Iran: Tehran), No. 20, 1998, p. 4.
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- 9 See: *Mezhdunarodnoye pravo. Pod redaktsiiei N.T. Blatovoi, L.A. Modzhoryan.* (Yuridicheskaiia literatura: Moscow, 1979), p. 313.
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- 11 Vladislav Shorokhov, "Energy Resources of Azerbaijan: Political Stability and Regional Relations," in *Caucasian Regional Studies* (Centrum voor Politieke Wetenschappen), Issue 1, 1996.
- 12 Chirag-1 Early Oil. (Baki, 1997), p. 2,4; Oleg Dudkin, "Nemnogo morskoi boi, nemnogo igra v karty," in *Gaz & Neft. Energeticheskii biulleten*, No. 9 (21), September 1997, p. 4.
- 13 "Kamilzhan Kalandarov, Na Kasp'ii stolknulis interesy mirovyh dierzhav," in *Nezavisimaia Gazeta* (Moscow), 4 June 1997, p. 5.
- 14 Christopher J. Pittinger, "Boundary Delimitation in the Caspian Sea," in *Central Asia and the Caucasus Review* (Foreign Ministry of Islamic Republic of Iran: Tehran), Vol. 6, No. 17, Spring 1997, p. 15.
- 15 Oleg Dudkin, *Op. cit.*, p. 7.
- 16 Christopher J. Pittinger, *Op. cit.*, p. 16.
- 17 *Ibid.*, p.16; Mohammad-Reza Dabiri, *Op. cit.*, p. 39-40.
- 18 See: Oleg Dudkin, *Op. cit.*, p. 5,7; Kamilzhan Kalandarov, *Op. cit.*, p. 5.
- 19 See: Kamilzhan Kalandarov, *Op. cit.*, p. 5.
- 20 See: Oleg Dudkin, *Op. cit.*, p. 5.
- 21 See: Sergei Leskov, "Razygryvaietsia uchastok neftianogo Kaspiia," in *Izvestiia* (Moscow), 10 December 1997, p. 2.
- 22 Boris Vinogradov, "Razdel Kaspiia sostoialsia?" in *Izvestiia* (Moscow), 25 December 1997, p. 2.
- 23 See: "Tochka zreniia 'Izvestii'. Kasp'ii nie mozhet byt 'moriem razdora,'" in *Izvestiia* (Moscow), 11 February 1998, p. 5.
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- 25 Boris Vinogradov and Igor Tsukanov, "Na kaspiiskom dne Moskva i Akmolala luchshe vidiat drug druga," in *Izvestiia* (Moscow), 29 April 1998, p. 1.
- 26 Vladislav Shorokhov, *Op. Cit.*
- 27 Robert Corzine, "Turkmenistan Lays Claim to Disputed Caspian Oil," in *Financial Times*, 13 January 1997.
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- 32 See: Mohammad-Reza Dabiri, Op. cit., p. 40.
- 33 Kamildzhan Kalandarov, "Na Kaspii stolknulis interesy mirovyh dierzhav," in *Nezavisimaia Gazeta* (Moscow), 1997, 4 June, p. 5.
- 34 Vladislav Shorokhov, "Energy Resources of Azerbaijan: Political Stability and Regional Relations," in *Caucasian Regional Studies* (Centrum voor Politieke Wetenschappen), Issue 1, 1996.
- 35 See: John H. Lichtblau, Op. cit., p. 19.
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