



The Caspian Oil Reserves

The political, economic and environmental implications of
“Black Gold” in the world market

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Come 'n listen to my story 'bout a man named Jed
Poor Mountaineer barely kept his family fed
An' then one day, he was shootin' at some food,
An' up thru the ground came a bubblin' crude.
Oil that is! Black gold! Texas tea!

Well, the first thing ya know, Jed's a millionaire
Kin-folk said, "Jed, move away from there." Said
Californy is the place y'oughta be, so they
loaded up the truck, and they moved to Beverly.
Hills that is! Swimmin' pools, Movie stars!

- From *The Ballad of Jed Clampett, The Beverly Hillbillies*

The Ballad of Jed Clampett bears a striking resemblance to the story of the discovery of oil in the Caspian Sea region. With the discovery of “Black Gold” in the Caspian Basin came visions of unimaginable wealth, a modern day El Dorado. But little did investors in the mid-nineteenth century know of the political, economic and social turbulence that would surround the Caspian oil industry in the century to come. In this paper we give a history of the oil trade in the Caspian Basin, including the environmental damage that the oil industry had caused up through the breakup of the Soviet Union. We then describe the projected benefits of western intervention at this pivotal moment in history, but then the reality of what the West actually had in store for this struggling region of the world by the year 1998. We conclude with a brief follow-up of how things have changed in the Caspian Basin since 1998, both for better and worse.

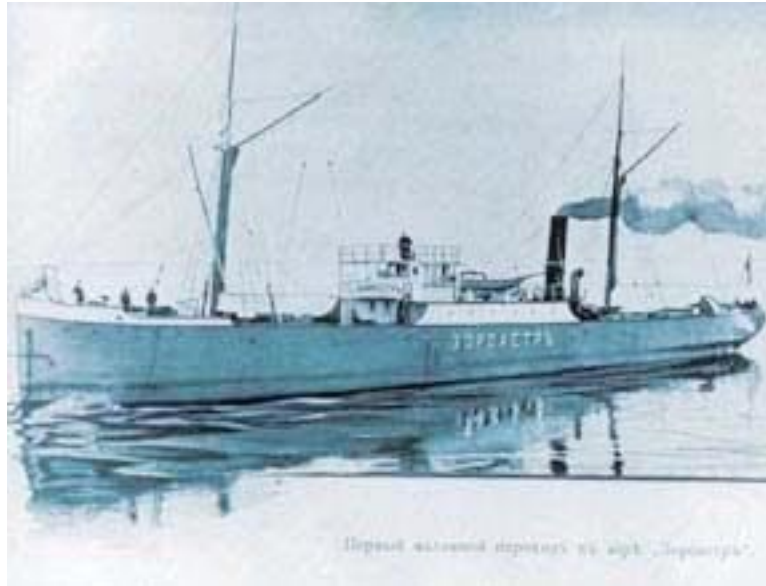
A history of oil production in the Caspian Basin

The notion of the immense value of oil is not a modern one. As early as 2600 years ago, ancient peoples were using the “fire water” for attack and defense. During Alexander The Great’s siege of Persia in 331 BC, the natives of the Caspian shore, trying to defend their homelands, lit the invaders’ tents on fire with pots of flaming oil. The

Ancient Greeks used the flammability of oil to destroy the naval fleets of their enemies. Soon thereafter hot oil was used as a defense mechanism in fortresses to hamper enemy invasions. The first documented evidence of oil extraction dates back to the 7th and 8th centuries, when oil was drawn naturally or through primitive extraction methods in the western shores of the Caspian Sea in what is now the capital of Azerbaijan, Baku. The Arabian traveler Marudee reported in the 10th century that both black and white oil were being extracted in the Baku region. In his exploits of central Asia, Marco Polo later wrote of oil's medicinal and religious uses by the people of Baku. Oil was exported out of Baku into the Middle East as early as the 14th century. However, large-scale commercialization of oil did not occur until the mid-19th century, when the world's first oil well was drilled near Baku in 1846 at Bibi-Aybat. Thus began the modern-day oil industry. Between 1850 and 1891, world oil extraction rose dramatically from 300 million tons to 22.5 million tons. Of this 22.5 million tons, 9.5 came from the U.S. while the other 11.4 million tons was supplied by Russia, 95% of which came from Azerbaijan. By the end of the 19th century, Azerbaijan had established itself as the "Black Gold Capital" of the world, prompting a massive inflow of skilled workers and specialists into the Azerbaijani capital.

Despite the existence of vast and easily exploitable oil fields and an increasing workforce, the Baku oil industry still faced the problem of transporting the oil to the market, which at the time was very difficult and expensive. This changed when the Nobel family in Norway took interest in the industry. Recognizing the potential of oil on the market, brothers Robert and Ludwig Nobel established the Nobel Brothers Oil Extracting Partnership in 1873. They invented many technologies that would modernize

the oil extraction and production industries, most notably the first oil tanker in 1877, which greatly facilitated the transport of oil to western markets.



The Zoroaster, the world's first oil tanker

The tanker was so successful that the Nobel's soon built a whole fleet of ships, and by 1890, Baku had become the busiest port in the world. The Nobel's soon introduced other improvements to the industry including black oil pulverizing systems to make oil better for burning, a pipeline in 1878 that cut transportation costs down to a fifth, and iron oil reservoirs to store oil (before, oil was kept in oil lakes and ponds where the oil could evaporate or simply seep back into the soil). It was no wonder that by 1900 the Nobel Brothers had taken firm control over the industry in the Caspian Basin. The Rothschild Company and Shell also played an important role in the industry, further contributing to innovations in oil transport. In 1880, a railway was constructed connecting Baku to its outlying oilfields. This railway was extended to the Georgian capital of Tbilisi in 1883. Between 1897 and 1907, a new pipeline – the largest of its kind at the time – was put in place between Baku and the Black Sea Coast city of Batumi. All of these improvements

to the industry helped these three foreign companies gain as much as 75% of the control over oil commerce in the region.

All of this began to change in 1917 when the Russian Revolution nearly brought oil production to a standstill. Matters were only made worse when the Communist Party nationalized the oil industry in 1920. Protesting the action taken by the Communist Party, most western companies sold their holdings in the region and pulled out their financial support. Despite the dwindling interest of the West, however, enough funds still flowed in that the Soviets were able to revitalize the industry; exports were back to their pre-revolutionary levels by 1923.

More oil discoveries in Western Siberia made Russia the 2nd largest producer of oil in the world in the 1960's, and the low-priced Russian oil flooding the western markets drove down the price of oil on the world market. Watching their revenues drop, the oil-producing nations of the Middle East formed the Organization of Petroleum Exporting Countries (OPEC) to help stabilize the world market against the explosion of the Soviet industry. By this time, however, the Soviets had already sown the seeds of their own demise, as extraction efforts thus far had been focused only on short-term oil recovery rather than long-term. As a result, oil fields were over-produced to meet production quotas, reservoirs were managed improperly, too many wells were drilled, and too much water was injected into the ground. There were also no incentives to boost efficiency or to invest in better technology. All of this guaranteed a fall in productivity and oil production as a whole. Major declines in production plagued the Soviet company in 1977 and between 1982 and 1986. The Soviet government, failing to recognize the reality of the matter, was able to boost production but only by injecting more cash into

drilling activity. With a complete disregard to the bad production practices being employed, the Soviet government thus only dampened the prospects of the future success of the industry.

While increased spending from Moscow was able to revamp the industry in 1988 to record-breaking production levels, the continued poor management of the oil reservoirs soon after made the thought of higher productivity a thing of the past. The Soviet-backed industry would decline over the next 10 years to its death in 1997. The fall of the Soviet Union in December of 1991 was one of the largest contributors to this decline, as the resulting collapse of the Caspian Region's economy meant a large drop in the domestic consumption of oil. At that time it appeared that the industry was a dying cause in the Caspian Basin.

The exposure of environmental damage caused by the Soviet oil industry

During the Communist regime of the Soviet Union, it was never apparent to the western world to just what extent the Soviet drilling industry was harming the environment. After the Soviet collapse in December of 1991, western scientists were finally able to measure the magnitude of the damage caused. The environmental degradation of the Caspian Basin was best characterized by the pollution of the water and soil. The Caspian Sea was polluted throughout the Soviet drilling era by the runoff of chemically polluted rivers, rises in sea levels, and the offshore oil industry. Much of this could be attributed to old and outdated drilling equipment. The declining sturgeon populations perhaps best demonstrated the effects of the water pollution – sturgeon being the fish that produced eggs for the infamous Caspian caviar industry. The sturgeon catch

decreased dramatically from 30,000 tons in 1985 to 13,300 tons in 1990 to as low as 2100 tons in 1994.



Caviar production and sturgeon fishing

Caspian seal populations have also plummeted due to the pollution - as many as 11,000 dead seals have been picked up off the Caspian Shores of Kazakhstan and incinerated by workers. Even today, one can see a thin oil slick covering the surface of the sea.

Also of great concern to western environmentalists was the deterioration of air quality in the region. Along with the rusty derricks and pools of oil scum, they found well fires that had been burning for years, releasing toxins into the air. Natural gas flares emitted from Soviet drilling equipment further exacerbated the existing air pollution problem, as 4.5 million cubic meters of harmful gases from the flares were being released into the air every day.



Natural gas flare (left) and a well fire (right)

After 100 years of oil drilling in the Absheron Peninsula of Azerbaijan, the soil has been left highly contaminated. Much of the peninsula is now a barren wasteland, riddled with standing oil ponds, high concentrations of sulfurous residue, and a shoreline painted black by the oily tides. Indeed, one of the main concerns about the pollution of the landscape has been the rising water level of the Caspian Sea. As the water level rises, the sea pollutes itself with the surface contamination it draws in from the surrounding landscape.

The effects of water and soil contaminations have not just been confined to local animal populations. Human populations have also suffered from the poor environmental conditions brought about by the Soviet drilling industry. The death rate of pregnant women and newborns has risen steadily over the years. Drinking water supplies in the region have been vastly reduced, and even then the drinking water that remains often does not pass government safety regulations. The peoples inhabiting the Kazakh shores of the Caspian Sea have faced disease rates three times higher than the Kazakhstan average, and average life expectancies decreased by as much as four to five years. The

decline of animal populations has also taken its toll on the economic well being of Caspian Basin inhabitants. As sturgeon yields decreased, workers who depended on this resource in the caviar extraction and fishing industries found it harder to make the money necessary to provide for their families. Also, as more and more of the Caspian shoreline was being taken up by the oil industry, it became increasingly difficult just to take part in the fishing practices they were accustomed to. Most forms of agriculture in the region no longer have a chance of success in the region due to the poor soil conditions, threatening the livelihood of those who depend on agriculture for food and commerce.



An aerial shot of part of the Tengiz oil field in Kazakhstan. Notice the oil ponds (above right) and the sulfurous residue (yellowish areas).

Could the West help avert the environmental and economic crises at hand?

Amidst this environmental chaos, five independent nations bordering the Caspian Sea rose out of the ashes of the Soviet Union: Armenia, Azerbaijan, Georgia, Kazakhstan and Turkmenistan.



Political map of the Caspian Basin region after the Soviet breakup

The governments that sprung to power were handed an economic disaster, an environment torn to pieces by their Russian predecessors, and the biting question of what they could do to pull themselves out of the ruins. Without the financial support from Moscow, the impoverished nations had to look elsewhere for aid. While oil had been extracted from the region for the last 150 years, the sheer quantity of the Caspian oil reserves was not discovered until the mid 90's. Oil production, though having hit rock bottom in these harsh economic times, once again appeared to be the saving grace of the Caspian nations: the new discovery had all eyes on the Caspian Basin, with western companies, no longer discouraged by Communist rule in the region, eager to grab a share in the industry. At the time it became apparent that a mutual business relationship with the west was exactly what the struggling Caspian nations to pull themselves out of their strife. For one, with western intervention came foreign investment – money that could help them get back on their feet again, establish a viable economy, and thus give them the

means to tackle the other problems hampering their progress. Western intervention also meant an inflow of western technology – technology that could improve the quality of life for the native inhabitants, but more importantly, technology that could replace the rusty outdated equipment currently populating the oil fields. Indeed much of the environmental degradation that had occurred up to this point was directly linked back to the inadequacy of Soviet equipment. With the latest of western drilling equipment, the Caspian nations would have the satisfaction of knowing that the means by which their “black gold” was drawn from the earth would no longer be at the cost of the environment. The local environment would also benefit simply from the environmental standards brought in by the West. Under the scrutiny of western environmental law, oil production would be environmentally safe – a vast improvement over the hasty and careless methods employed by the Soviets. Ultimately, western intervention would lead to a shift in Caspian nation environmental goals – namely that of focusing on cleaning up the existing mess rather than devising new ways to minimize damage.

The thought of environmental amelioration would also raise the spirits of the Caspian peoples, who could look forward to days of improved health, agriculture and fishing – more simply, a return to the lifestyle they once knew. But an end to environmental damage and an introduction of better technology were not the only things that western companies would bring to help the locals. The establishment of western industry in the Caspian Basin guaranteed a vast array of job opportunities for the locals, giving them the chance to better their financial situations under western labor practices. Those who lost their jobs in the foundering caviar and fishing industries would now have another chance, even if it were only in another line of work.

Aside from how the peoples of the Caspian nations would benefit directly from western intervention, western industries could argue that their presence in the region was a benefit to the native people because it would expose them to western ideologies. Indeed, following the fall of the Communist Soviet Union, the United States was not looking forward to local authorities picking up the pieces and creating smaller Communist regimes of their own. Thus the West had a vested interest in the region other than the strictly economic/commercial one – namely their presence in that region of the world would help discourage the revitalization of Communism in the post-détente era. Moreover, to establish contracts with these nations would assert their financial dependence on the western companies, and would thus discourage them from venturing to reject western practices being employed by these companies.

Aside from the purely economic and political motives of the West, there was also a sense of urgency held by western companies to intervene in the Caspian oil boom, especially once the full extent of the quantity of oil that could be extracted from the area was realized. Many of the world's oil reserves were steadily drying up; the San Francisco chronicle reported “all but a handful of the globe's current oil-producing giants will have emptied their proven reserves during the next two decades”(Vinono). Indonesia and Canada's reserves were estimated to last another 9 years, those of the United States were projected to run dry in 10 and Russia and Nigeria's in 20. Therefore, the western world knew that in order to continue development and industry at its current rate, the tapping of the Caspian oil reserves would be essential. The reserves of the Caspian basin were estimated to be at least the second richest in the world. This also meant that the Caspian area stood to make a fortune: even by the prices of the 1990s the total estimated

oil and gas reserves had a value of roughly \$5 trillion. Factor into that the inevitable soaring oil prices as reserves became scarce and consumption levels continued to rise and it becomes apparent that the countries of the Caspian area were sitting on a (black)goldmine.

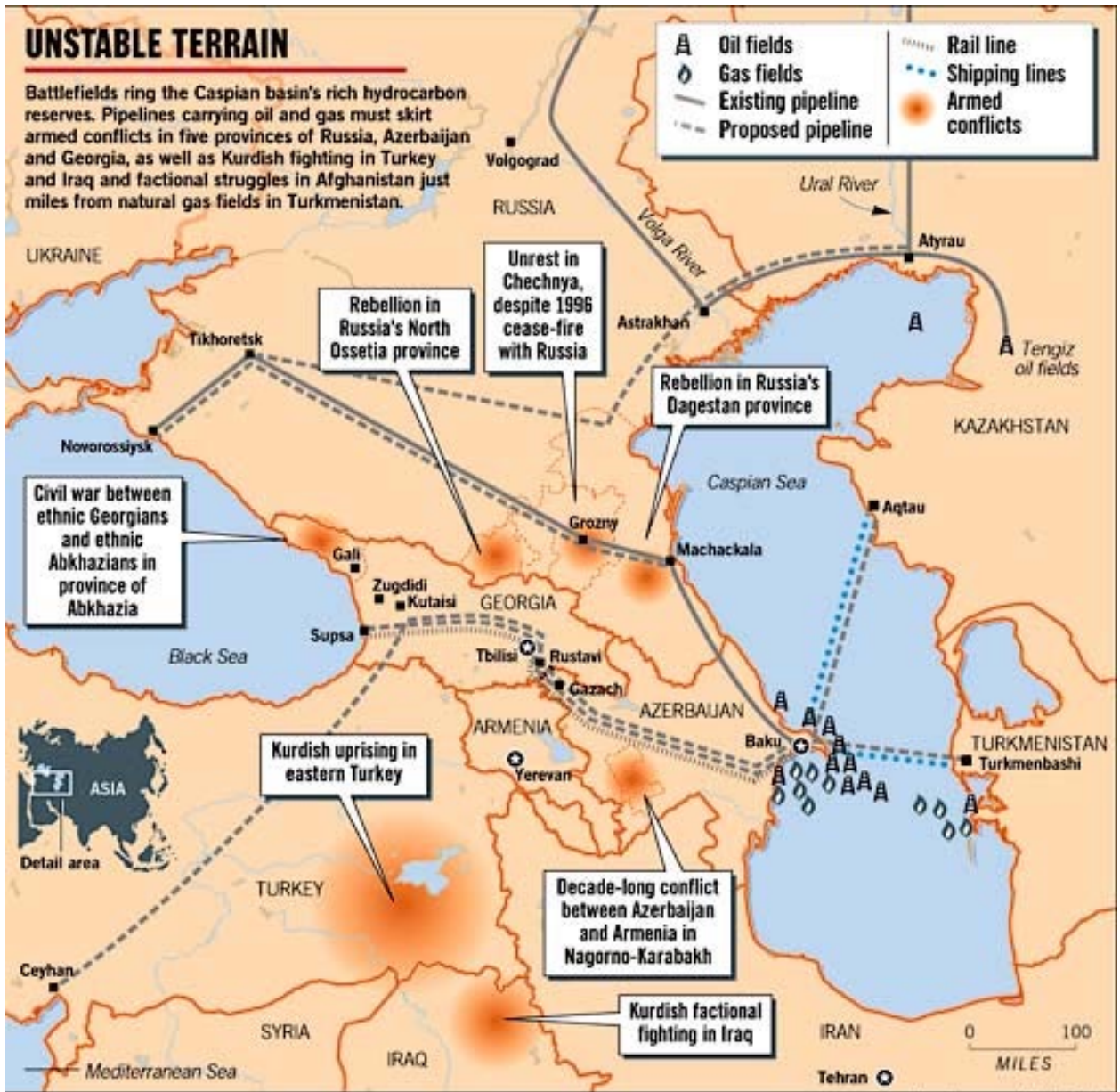
Pipeline Politics

Almost every major oil company in the world was involved in the battle to gain access to the Caspian oilfields. The early investment alone caused a massive boom in the economy of countries such as Kazakhstan and Azerbaijan. With annual production of oil set to increase immensely it was clear that new pipelines would need to be built in order to transport such large quantities of oil to the ocean so that it could be shipped to the western world. The paths of any new pipelines would be extremely significant, as any countries that a pipeline passes through would receive huge revenue in transportation fees. Inevitably this caused a conflict between countries that proposed different paths for their pipelines. The countries surrounding the Caspian were keen to ensure that any proposed pipeline would pass through their land so that they could benefit from transportation fees. The proposed route of the Main Export Pipeline (MEP) was a source of much disagreement between countries. As the map below shows the Russians were keen to ensure that any new pipelines would pass through Russia so that they would receive transportation fees. As the map shows none of the United States backed pipeline routes pass through Russia and therefore, Russians were keen to ensure that these did not receive the backing of investors.



Existing and proposed pipelines in the Caspian Basin

The Russians were in desperate need of the income an endorsement of their pipeline route would generate. It was estimated that the pipeline could bring Russia \$5.5 billion in dividends, \$18.4 billion in taxes and an annual \$900 million in transport fees. This meant that they would go to any lengths to convince investors to back their proposed route over the US route. At the time that the debate over the pipeline route was raging there was a sudden resurgence in half a dozen wars in the area surrounding the Caspian basin, as is shown in the map below.



Armed conflict in the Caucasus

One such war was the 6-year Georgian civil war between the ethnic Georgians and the ethnic Abkhazians. The Russian soldiers, who had been sent in as UN-approved peacekeepers, were doing nothing to resolve the conflict or keep the peace. The Georgians claimed that flare-up in the war in Georgia could be explained by the imminent deadline by which a decision would be made as to the route of the MEP. It was in Russia's interests for Georgia to be unstable. Western countries would not invest in a

pipeline that ran through an insecure area and the US proposed route ran through Georgia. The Russians denied any connection between the war in Georgia and the proposed route of the US backed pipeline. However, the massive amount of Russian weapons being smuggled into Georgia and other surrounding countries provided compelling evidence that there was indeed a connection. “The pipeline: that’s why this is happening”(Vivono) says Gocha Tsurtsunia, a former Georgian militiaman in Abkhazia and now a refugee. “There is no other reason. We are all burying our friends for oil”(Vivono).

The US was aware that any instability in the areas through which its pipeline must pass would seriously damage the chances of its route being supported. They knew that the Kurdish uprising in eastern Turkey must be controlled and the area must be stabilized otherwise they were likely to lose the struggle to have their pipeline route endorsed. With the stability of the area in such an uncertain state the US formulated another possible route for the pipeline that would pass through Afghanistan to the port of Karachi, Pakistan. That route was also unstable due to war in the area. Each country had its own reasons for wanting the oil to travel along a particular route. The sad effect of this power struggle was that it was the people of the area who were used like pawns in a chess game. Russia was prepared to help create widespread warfare and killing in order to sabotage the proposed US pipeline. This is the first of many examples of how it is the people of the Caspian area who suffered as a result of the struggle to produce and transport oil in the region.

The reality of the effects of western influence comes to light

The most conservative estimations of the Caspian basin's energy wealth set it at 200 billion barrels of oil and natural gas. Most reports agreed that it was closer to 200 billion barrels of oil alone. An amount exceeded only by the reserves of Saudi Arabia. The boost that this gave to the area's economy was immeasurable. The effects of the area's newfound wealth were already showing in towns and cities of the countries of the Caspian basin. Five-star hotels, luxury apartments, casinos and nightclubs had appeared almost over night. The people of Azerbaijan and Turkmenistan were now driving Cadillacs and other imported cars. Local millionaires were being made seemingly every day. The massive potential profit to be gained from the oil reserves might seem to have secured the Caspian area's affluence for a long period of time but this was not the case. The countries of the Caspian area relied almost entirely on oil and gas revenues to support their economies. At this time there were still no official guidelines stating who owned which parts of the actual oil fields and the negotiations over pipeline routes were still not resolved. Economists stated that these countries were taking a huge gamble by relying so heavily on such an unproven asset.

Regardless of the risk associated with the revenue generated by the oil reserves one could be forgiven for thinking the boost to the economy resulted in the quality of life for the people of the Caspian basin countries being greatly improved. This however was not necessarily the case for the much of the population. The reality of the situation was that it was the oil executives and expatriates in the Caspian basin countries that benefited from the revenues generated by the oil far more than the natives did. The people who ran the multinational oil corporations were almost all expatriates. They lived in lush apartment blocks dined at the finest restaurants and drank at exclusive bars. Often their

luxury apartments would be within view of the cinder-block slums where many of the locals were forced to live.

One main problem was that the infrastructure of the countries needed serious investment, the roads, airports, electricity, communications and services all needed improvement. This however, was not a priority for the governments of the Caspian countries. The consequence of this was that native professionals were abandoning their careers to accept menial labor jobs in foreign offices that paid three or four times the salaries they were receiving. Samaya Jafar was an English teacher in a local school in Baku, Azerbaijan; she taught only two days a week and the other days she would work selling chickens in the Central Market. Her monthly income from teaching was what she could make by selling just a dozen chickens at the market. Jafar was immensely frustrated by this situation; she said, “I have years of education and teaching behind me. Why must I sell poultry to give my children a decent life? What does it mean, that there is no better place for me than a market stall, amidst such wealth?”(Vivono).“Our cleaning lady and driver are former physics professors,”(Vivono) said one expatriate oil executive. This story was being repeated in every foreign office; doctors would be making the coffee, teachers would be cleaning the floors. Azerbaijani officials were very aware of the necessity to strengthen the infrastructure of the country but it was such a massive and daunting job that there was no way they could keep up with the economic boom. On the surface western intervention seemed like a good thing, average wages rose 60 percent between 1996 and 1998. However, between 45 and 48 percent of the population lived below the poverty line. The gulf between the richest and the poorest was vast and it was growing, there were at least a million Azeri refugees, they were pitifully poor and yet

money was flowing into their country as a result of the oil fields. The infrastructure of the country was crumbling beneath the glossy veneer of flashy apartment blocks and offices.

The present day environmental situation

It was believed that if western companies took control of the extraction of oil from the oil fields of the Caspian Basin they would help to clean up the horrific environmental damage caused by the drilling by the former Soviet Union. The poor quality of the USSR's drilling equipment and their inferior technology was blamed for a lot of the devastation to the environment caused during this time. Western companies were bringing with them the latest machinery and superior technology and therefore, it was hoped that none of the environmental problems of the past would reoccur. Furthermore the companies were expecting strict international sanctions to be enforced as to which practices they could use in order to extract oil. Unlike the former Soviet Union run oil rigs the international rigs would be open to scrutiny by environmental inspectors. Ten years ago hopes were high that international oil companies would not only bring wealth and economic stability to the countries of the Caspian Basin but that they would also help rectify the environmental devastation of the area. Today's reports from the area suggest that western involvement has fallen disappointingly short of fulfilling these expectations.

Environmentalists have voiced concerns about a number of issues surrounding the Caspian oil fields. It is not just the flora and fauna of the Caspian basin that is suffering; the people of the region are feeling the effects of the pollution too. Many environmentalists claim that the oil extraction in the area is completely at fault for the health problems of the people of the Caspian basin and the pollution of the sea itself. Oil

officials defend themselves by stating, correctly, that their safety standards far exceed those of the former Soviet Union, this may be true but the USSR's environmental concern was so low that this claim does not prove that the companies are caring nearly enough for the environment. However much the western companies are to blame for the current pollution levels it is certain that in the majority of the Caspian area western influence has not improved the environmental situation anywhere near as much as was hoped.

Earlier this year British Petroleum (BP), the biggest investor in a multi-billion-dollar project to build a new oil and natural gas pipeline, was accused of ignoring important environmental issues when plotting the course for the proposed new pipeline. The concern environmentalists have is that the proposed route for the pipeline runs dangerously close to the Kura River. The plans for the route have caused confusion among environmentalists as BP have not given any reason for their choosing to place the pipeline in such a precarious position. "BP gives no data proving that this route is the best"(Mekay), said Manana Kochladze, Coordinator for The Central and East European Bankwatch Network, "when you are going to put an oil pipeline right next to a river, you better be able to show a good reason for doing so"(Mekay). The pipeline route has caused even more concern because it passes through a proposed national park, the Gobustan Semi-desert Sensitive Habitat) and also a World Heritage site, the Gobustan Cultural Reserve. The pipeline is set to run through Borjomi, Georgia, this is a protected area and it also is home to a mineral water company. The threat of oil spills in such an area is of great concern. BP claims to have carefully considered all the environmental risks of this particular pipeline route however, international and local environmental groups assert

that BP's assessment did not comply with World Bank guidelines and is therefore, extremely suspect.

Despite massive international protest the United States government is expected to continue its support of the pipeline project. The United States government is the strongest political supporter of the project and its backing of the pipeline is vital to its success. Steven Mann a United States state department senior advisor, said "the pipeline fits squarely into Washington's long-range policy of building a secure oil supply in Eurasia as it steers away from a dependency on Middle East oil"(Mekay). Mann goes on to explain that the project is "the centerpiece of what we call the east-west energy corridor"(Mekay). The alarming truth that can be learnt from this example is that, neither the British based oil company BP, nor the United States government is prepared to make any concessions in their plans to protect the environment. They have made it perfectly clear that when planning possible oil pipeline routes, environmental issues are not seriously considered.

Environmentalists are also voicing serious concerns about the ecological state of the Caspian Sea. The extraction of oil is thought to be responsible for the poor health of the people, and wildlife, of the area. The death rates of Caspian seals have been alarmingly high for some time. Oil companies were keen to support a theory that the mass deaths that occurred two years ago were due to outbreak distemper. However, Russian specialists have now proven that this was not the case. They have instead concluded that the deaths of Caspian seals can be attributed to chemical contamination of the water, caused by oil production. The environmentalists predict that seal numbers will fall lower and lower as long as the oil fields are still active. It is not just Caspian seals

that continue to suffer; sturgeon and sprat (among other wildlife) catches have fallen sharply in recent years. Statistics show that over 240,000 tons of sprats have already died, an amount equal to 40 percent of the total resources. Russian scientists conducted experiments and found large amounts of heavy metals and oil products in dead seals and sprats. They stated that these products affect the immunity of the seals and sprats, and thus they are far more susceptible to disease. Sturgeon populations have fallen as much as 90 percent in the last twenty years and are now in serious danger of becoming extinct

The effects that oil production has upon the health of the human population of the Caspian basin are extremely alarming. Reports show that the same problems that were occurring during the rule of the former Soviet Union are still apparent today. Kazakh environmentalists claim that one of the causes of the health problems is the high level of sulfur in the area. Galina Chernova, head of an environmental project in Kazakhstan, claims the levels of tuberculosis and serious allergies have risen in the area. She says “The region is located in a depression, so the sulfur is blown off the blocks and collects”(Stern). The environmentalists concede that it is hard to find evidence to support their claims; they say that the government restricts access to the appropriate information. This said many experts are certain that it is the oil production, and therefore the oil companies, that is to blame for the low health levels of the local population.

The balance of the environmental evidence shows that western intervention has not, as it was hoped it might five years ago, rescued the devastated environment of the Caspian basin. Disappointingly there are examples of western oil companies and western governments showing a complete disregard for the protection of the environment. The western companies have, at times, made it quite clear that the environmental issue is

nowhere near the top of their list of priorities when they are considering pipeline routes. The outlook for the wildlife of the Caspian Sea is extremely bleak. It was known 10 years ago that unless drastic steps were taken to stop pollution in the Caspian the seal and sturgeon populations would continue to decline, and unfortunately this is exactly what is happening. It was hoped that the western companies might run their oil rigs in a way that stopped pollution and gave the animal populations a chance to recover but this is not the case. Some experts suggest that both these species could become extinct in the near future. The people of the Caspian basin continue to suffer from unusually high levels of ill health much the same as they did when the oilfields were under the control of the former Soviet Union. Of course, more extensive research into the exact causes of all these problems is needed but for the moment many experts place the blame firmly with the oil production companies. Most experts agree that “the Caspian’s ecosystem has already suffered decades of abuse from the Soviets, and is fragile and in need of recovery; not additional stress”(Pollution in Caspian Sea).

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