The Caspian, A Giant In The Making

Sitting astride the continents of Europe and Asia and covering an area of 149,200 square miles, the Caspian Sea is the largest inland sea in the world. With more than 240 billion barrels of proven and possible oil reserves and 463 trillion cubic feet (Tcf) of gas, the Caspian region contains 15% of the world's hydrocarbon resources.

These figures put the region in the world's limelight as, according to the U.S. Energy Information Administration (EIA), the area is home to the second-largest proven reserve of oil and third-largest reserve of gas.

Although these figures are intended to impress, total production for the entire region has yet to reach the table of the top 20 global producers. Today's numbers do not fully reflect the historical importance of the region let alone the future potential, which draws many an international E&P company to these shores.

Azerbaijan, the smallest of the five nations on the Caspian, was one of the pioneers of modern oil production. The first well was drilled in 1848. Subsequently, the country has been home to the industry in areas such as drilling and in transportation methods. By the turn of the last century the country was the world's largest producer of crude oil with an annual production of 11.5 million tons per annum (48.6% of world's total) while the U.S. was producing a relatively modest 9.1 million tons. At one stage in the 1940s Azerbaijan was producing 95% of the Soviet Union's crude oil requirements.

Maersk's recently launched *DSS20*, the region's most sophisticated semisubmersible and ExxonMobil's hope for a successful result on the Zafer Marshal Field.

Today, the presence of proven reserves is no longer restricted to the Azeri sector, with the Kazakhstanis and Turkmens aggressively conducting geological surveys and exploration projects on an ever-increasing scale. To date, 35 fields have been discovered in the Caspian Sea: 28 fields in the Azeri sector; five in the Turkmen; one in the Kazakhstani; and one in the Russian sector.

The number would have been greater if it had not been for the inefficiencies of a centrally planned economy that was employed by the now-defunct Soviet Union. As an example, Azerbaijan's share of world crude oil production fell from the highs described above to barely 0.5% in 1996.

The fall of the Soviet Union and the creation of three newly independent states around the Caspian Sea opened a floodgate of interest towards the region. Although a number of engineering and peripheral operators existed prior to independence, loss of control by Moscow over these nations ensured that the newly "elected" governments would now be in control of their own destiny.

This was not lost on local politicians and international operators, with the first project-sharing agreement (PSA) being signed with the Azeri government in September 1994, followed shortly by similar contracts in 1995 and 1996. To date Azerbaijan has signed more than 20 major field developments with approximately 30 companies from more than 15 countries.

Similarly, Kazakhstan was quick to invite foreign companies, with the arrival of Chevron in 1993 that swiftly established a local operating company (Tengizchevroil) in conjunction with the local incumbent.

By comparison, Turkmenistan has been the black sheep of the Caspian family, finding it difficult to create relationships and often bickering with partners. Although, the region is typified by a single party state, in Turkmenistan, the president has a vice-like grip over the country.

As is typical with many newly developing regions, each country is more or less cheer-led by one or two majors. In Baku, it is the presence of BP, which is the lead operator in AIOC (Azerbaijan International Operating Co.), a consortium comprised of 10 different operators. AIOC was established as part of the "contract of the century" to exploit the Azeri-Gunesli-Chirag (ACG) Field, which is by far Azerbaijan's leading field with 4.3 billion barrels of oil in reserve.

According to David Woodward, president of AIOC, "Having been developing the Chirag Field for more than five years, we have produced in excess of 200 million barrels of oil." Production from the remaining Azeri and Gunesli fields should come onstream at the beginning of 2005 and mid-2008 respectively; altogether total production for ACG by 2009 is targeted at 1 million barrels per day.

Unfortunately, not since the discovery of gas condensate in the Shah Deniz Field in 1998, has there been much good news emanating from this side of the Caspian. Nobody doubts that there is a wealth of resources below the surface, it is a matter of locating economically feasible amounts that seems to be the most pressing issue.

ExxonMobil will be the next batter at the plate as it deploys the recently launched DSS-20 in the Zafar Marshal Field in the latter part of 2003. The DSS-20 is the first semisubmersible rig to be built to Western specification and will be the most sophisticated rig in the region.

As Drew Goodbread, ExxonMobil's venture country manager, forecasts, "Zafer-Mashal Block has the potential to be a world-class discovery, so we are optimistic, but at the end of the day we are in the exploration business and they don't always come in."

With a further well to be drilled in Zafer-Mashal and a final well in Nakhchivan there are plenty of crossed fingers throughout the land.

Situated at the other end of the Caspian, Kazakhstan is a country of truly enormous proportions. As a country, it covers a total area of 2,717,300 square kilometers, with a population of 16 million. Kazakhstan is also recognized as being the largest player in the region both today and in the future.

With annual production estimated at just over 52 million tons in 2003 (roughly two-thirds of the region's total production), total oil

Onshore Azeri wells, a sore reminder of a bygone era when the environment and economics were not top priorities.

extraction is earmarked to grow to more than 100 million tons by 2010 and nearly 140 million by 2015. With 26.6 billion barrels of proven oil reserves and 1.6 trillion cubic meters of gas, Kazakhstan represents a significant percentage of the total regions' potential.

Although foreign investment, through joint ventures, has not been as quick to have an effect on local production, the country's future aspirations are very much linked to the successes of the likes of major players like ChevronTexaco, Agip and British Gas.

Arriving in 1993, Chevron was the first foreign production company in country; becoming part of the Tengizchevroil which is responsible for the onshore Tengiz Field. After various restructurings, the patchwork quilt that is Tengizchevroil is split between ChevronTexaco (50%); Kazmunaigaz (20%), ExxonMobil (25%); and Lukarco (5%).

With daily production averaging 285,000 barrels per day, which accounts for roughly a third of the country's total daily output. Consortium members are looking to increase this figure to 450,000 by 2006 through a $3-billion investment plan, initiated earlier this year.

Two other fields have attracted significant attention of Western companies: Karachaganak and Kashagan. Karachaganak, which is being developed by the Karachaganak Integrated Organization (KIO), is led by consortium members British Gas and Agip (both hold 32.5%). According to KIO, the field holds 2.4 billion barrels of oil and 16 Tcf of gas, recoverable over a 40-year period.

The other field, Kashagan, operated by the Agip Kazakhstan North Caspian Operating Co. (Agip KCO), is the only offshore field of the three. Agip KCO estimates potential recoverable reserves to be anywhere between 7- and 13 billion barrels of oil, if secondary recovery techniques are used.

The field is of particular interest, because not only does it represent one of the country's largest, it is also in extremely shallow water. Agip KCO Rig #2, located off the Kazakhstani coast, stands in only 2.5 meters of water; not only does this water freeze during the winter months, but can drop considerably if there is a constant westerly breeze.

The political stability of the region is a subject that many have naturally raised, mainly in a positive light. There is general consensus that Kazakhstan is the most stable as doubts over the health of the president of Azerbaijan, Heydar Aliyev, have risen dramatically during the past year as the president has been rushed to a hospital on a number of occasions.

With an election scheduled for later this year, there is some concern in the country that there will be a smooth transition of power, should the need inevitably arise. For all its stability, Kazakhstan retains its own political problems with its international image, particularly tarnished earlier this year with regards to the well-publicized Giffen case.

James Giffen was charged earlier this year with bribing two Kazakhstani officials in conjunction with oil concessions in the country. The situation is more embarrassing given Kazakhstan's desire to build closer links with the U.S.

Nevertheless, Paal Eitrheim, responsible for government and public affairs for Statoil in Azerbaijan, feels he speaks for the rest of the industry when he says, "If you compare the perceived risk level in 1992 to what you see today, there has been a significant improvement.

"The PSA regime that has been developed here is a success story, not only as a piece of paper but also as the spirit and the letter of the PSA have been respected by all parties. This is a real success for the country."

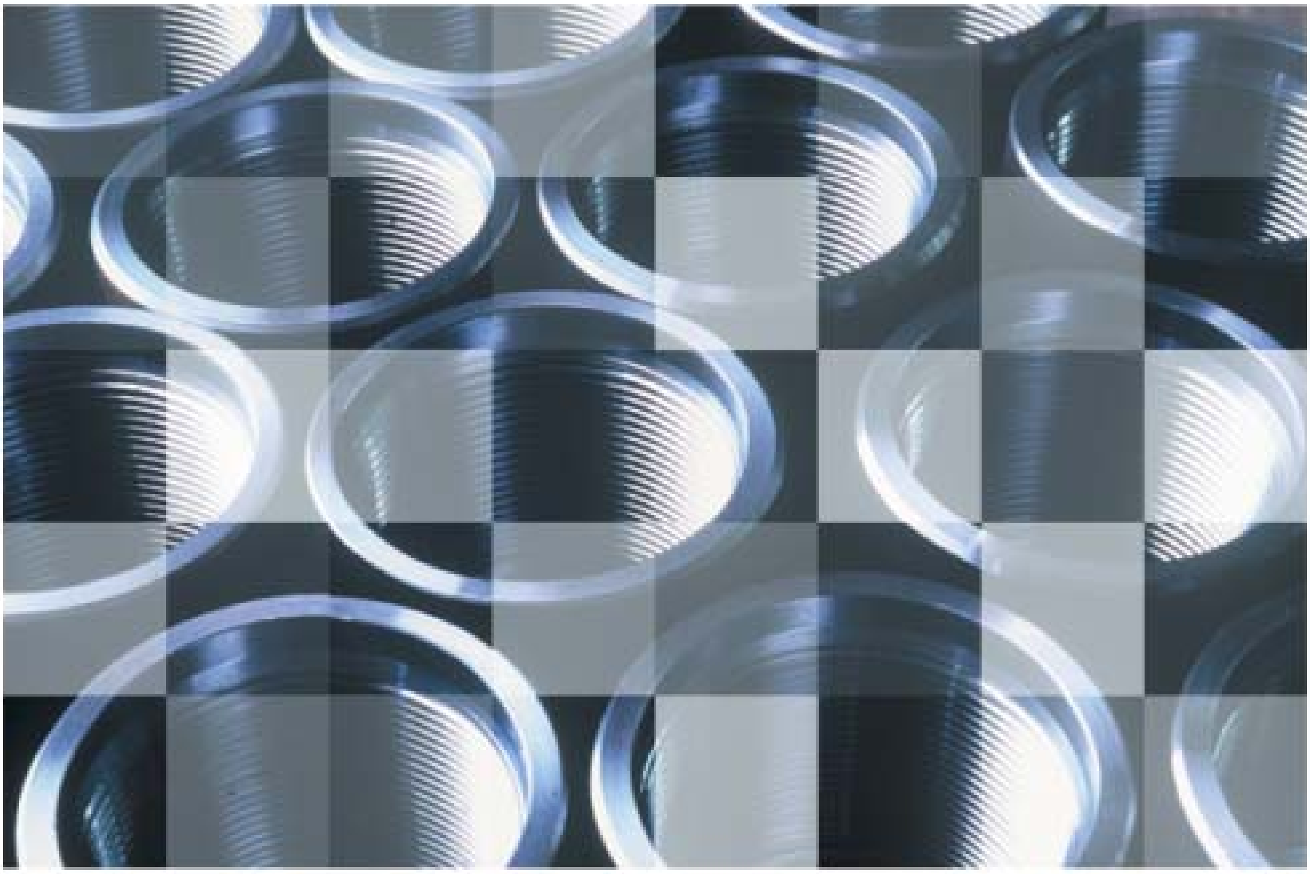
This is certainly a factor when considering the problems that Tengizchevroil (TCO) have recently faced with the Kazakhstani government, disputes which have threatened both current production and future expansion plans.

However, in a world where the majority of today's production comes from unstable environments, the Caspian can be considered one of the better locations. Expatriates interviewed with regards to this report rate their location as one of their favorites and the potential underground certainly helps for a lively environment.

Exciting exploration projects abound as do pipeline projects which look to transport these proven barrels and cubic meters to markets both east and west. Times have changed and both the Azeri and the Kazakhstani governments are keen to point out that their state oil funds are based on the Norwegian model rather than going down the route that many West African states have chosen.

As Samir Sharifov, executive director of the Republic of Azerbaijan State Oil Fund (SOFAZ), puts it, "You have Norway at one end of the spectrum and Nigeria at the other; we are definitely aiming for the Norwegian end."

Many will have heard similar words before, however, it is only through time and proven acts that one can judge the area on the success of its hydrocarbon extraction. There is no doubt, however, that the region, with its abundant supplies and commitment to increasing access to export markets, will become an important supplier to consumers eager to broaden their access to oil and gas sources. ■



Caspian Service & Supply Opportunities

Sitting in the offices of Caspian Wireline Services (CWS), one cannot miss the buzz in the air. The company, founded in Baku by Tom Dunlap and two associates some four years ago, has been going from strength to strength, riding on the tidal wave of activity in the region.

"We were all working in operations in Oklahoma with $8 oil, wondering what we could do about the situation. Having all worked overseas at one time or another, we looked at a number of prospective areas and the Caspian Sea looked the most promising," explains Dunlap.

Kicking off their stint in Azerbaijan with a share in an onshore production-sharing agreement (PSA), the group quickly discovered that many operational services one would expect in more developed areas were too costly, unavailable or unsuitable to their needs. This discovery led to the creation of CWS and sale of their interest in the PSA.

CWS' current president and chief executive officer Calvin Wilson says, "This is where CWS comes in; we are trying to provide services that fit the operator's purpose cost-effectively."

Operations in the Caspian benefit from the introduction of some of the latest engineering technology. Shown here is *Israfil Husseynov*, McDermott's pipe-laying barge.

The Caspian Sea story is dominated by the majors, which have sunk hundreds of billions of dollars into PSAs and joint ventures. Venturing into these battered countries, Azerbaijan had a particularly bloody battle for independence, many of the basic services were lacking and the concept of a five-star hotel was nonexistent.

During the height of Soviet exploitation of the hydrocarbons in the region, Baku was central to all hydrocarbon projects in the area. The city contained the only academy dedicated to the industry with many of the today's Russian industry players having received their education there. Located on the coast of the Caspian Sea, Baku was also the engineering hub for all offshore exploration and production, providing all that was needed to service the industry.

Like the actual production facilities that extracted the oil, either onshore or offshore, these manufacturing and support facilities suffered from years of neglect and lack of investment. All this was made worse by the fact that sitting in these dead and decaying yards were thousands of highly skilled and experienced workers whose forefathers were involved in the industry for decades.

That was more than a decade ago and it is the likes of CWS that have helped the country regain its position within the region as a major manufacturing and support facility. As Wilson points out, "The original reason CWS was able to come and break into the market was because operators were not receiving the level and variety of service that was possible. We were able to act as a niche player and provide the kind of services that others were not able or willing to."

In 1994, when the BP-led Azerbaijan International Operating Co. (AIOC), a consortium comprised of 10 operators, was established to exploit the Azeri-Guneshli-Chirag (ACG) Field, a plethora of other PSAs was signed with international majors for both onshore and offshore concessions.

As the majors arrived, so to did the usual list of supporting companies. Companies such as Halliburton and Baker-Hughes have been in the country for at least as long as the likes of BP; and in turn, these contractors have attracted a further gaggle of subcontractors. A situation not unlike what you will find in West Africa and the Arabian peninsula evolved where one had all the usual suspects working hand in hand in the exploitation of the fields.

However, what is interesting to note is the extent to which much smaller operators have shunned these locations and have concentrated their operations on the

Caspian.

PCH, an Australia-based contractor took the plunge in 1999 and today controls over 90% of the scaffolding and painting market. "At the beginning we took an incredible bet on Azerbaijan," explains Craig Dunn, PCH director, Caspian region. "We were not covered by a PSA, so we did not receive the same kind of tax and VAT exemptions that other companies enjoyed."

Trucking in more than 3,000 tons of scaffolding through Iran, the company needed the equipment in-country to assure it could bid credibly for tenders which would have been beyond their reach if the equipment had been kept outside Azeri borders. "After a few painful years, I can say that today, our Azeri operation is an extremely important contributor to the company's balance sheet."

CWS and PCH are only two examples highlighting the bets that have paid off. Others include the likes of BUE, which as the No. Two operator in the North Sea is the largest provider of marine supply and support services to offshore rigs from Azerbaijan to Kazakhstan. Starting operations in 1990 with three Soviet-era tugs, BUE's fleet has increased to 13 and will increase further in the future. With exploration and production increasing constantly in the region, BUE's Caspian operations are likely to overtake their more mature operations in the North Sea.

With international companies providing the expertise, Azerbaijan is once again the region's offshore engineering support center. Shown here is McDermott's drilling derrick manufactured in Baku.

There is no doubt that the presence of majors in the country has led to a trickle-down effect, with the producers attracting their contractors who, in turn, attract their contractors and so on. Similarly, it is country leaders such as BP who actively encourage and require their suppliers to increase the level of local content within their operations. Given the supply of experienced workers, it is a situation of which many are eager to make use, not only in the face of social responsibility, but also economic sense.

It is the presence of this skilled workforce that attracted the likes of John Hart, who recently took over the dilapidated Azerboru, a pipe-rolling plant established more than 50 years ago as the region's primary producer of oil country tubular goods (OCTG). An energetic supporter of Azerbaijan and all that the country has achieved, Hart explains, "We have enormous potential here. The capital equipment is in dire need of repair and replacement, but it is the presence of the human factor that has made this investment so interesting to us."

With more than 10 years of experience in the region, Hart was keen to take part in the government's privatization process. "There is incredible potential opportunity in the region, and we are keen to build up our infrastructure in the region to make a success of this venture. I am very excited by this opportunity."

Hart is also particularly keen to promote the openness of government institutions in ensuring that their work with local companies has always been successful. "At every turn of the privatization process, and subsequent to the event, we have received the absolute backing of the government," says Hart.

His investment is based on economic principals that will surely start to filter down to other local service providers. "As a local provider of piping, contractors are obliged to purchase their pipes from us, even if we are up to 10% more expensive."

To underline the point, Azerboru will receive $50 million of investment during the next three years to upgrade its current facilities including the development of API-standard finishing and pipe-rolling. The company intends to turn these investments into real returns by achieving nearly a 20% share of a $1.3-billion market by 2007.

There is no doubt that while major companies source their pipe requirements from outside the region; legal, economic and time constraints will ensure that Azerboru will eventually become the supplier of choice. By harnessing the skills of the local workforce with the new equipment being progressively installed, there is every reason for this Soviet-era relict to regain its former position within the region.

While it has been foreign expertise and money that has spawned a local, albeit foreign-owned, supply and service industry, every level of

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> *—George Whittenburg, Parker Drilling*

the supply chain is keen to point out the level of local content. BP is the obvious leader, financing everything from local training schools to a Caspian Business Center, which helps Azeri businesses compete more effectively for jobs within the hydrocarbon business. The majors’ local workforce is required to be more than 70% Azeri nationals.

Azerbaijan is not alone in this region for promoting local participation. Kazakhstan has also enjoyed an influx of foreign knowledge and finance. However, upon first impression it would be hard not to notice that the Azeris are more welcoming of foreign involvement than the Kazakhstanis. As one interviewee put it, “One is working with willing participants in Azerbaijan, whereas in Kazakhstan, one gets the feeling that they already know it and don’t need your help.”

This may be true, but given the international standards of safety, environmental and social concern that is practiced in the region, locals need the input of international operations to comply with these standards. “There is no doubt that both countries will develop world-class service and support industries, however, they require patience and hard work to ensure that this becomes the case.”

Finally, while the region may be viewed as sewn-up by the early entrants into the market, many are keen to stress that the market is wide open. George Macleod of BUE says, “We may be market leaders in our business, but we have to be constantly vigilant to ensure that our clients know that they are getting a top-class service at a competitive price.”

Speak with the Turks, only a virtual stone’s throw away from the area, and they will assure you that there continues to be a wealth of opportunity in the region, and not just limited to the hydrocarbon industry. Istanbul-based Borusan Makina, the region’s representative for Caterpillar equipment, is already responsible for managing the pumping stations for the Supsa pipeline (from Sangachal near Baku to the Black Sea coast at Supsa).

“We already have a significant foothold in the region,” explains Borusan Makina managing director Tayfun Iseri. “However, we are now realizing plans to take advantage of the growth of opportunities that are presenting themselves, especially in Kazakhstan.”

With a particularly volatile market at home, the company is confident that the Caspian region can provide an engine for growth over the next few years.

Whether investors are small or large, they have been successful in negotiating the bureaucracy and red tape that are slowly disappearing. Now that the businesses have been established in Baku or Atyrau (in Kazakhstan), their focus is now looking increasingly across the sea to opposite shores.

George Whittenburg, with Parker Drilling, which has been operating in the Caspian Sea region since the mid-1990s, puts it, “Sixty percent of our worldwide business originates from the region and with another two rigs being sent down to Turkmenistan, it will continue to be an important part of our future for some time to come.” ■

Getting Product To Markets

After $30 million of investment, Middle East Petrol Farm's newly revitalized port at Dubendi on the Caspian Sea.

Talk to Abdolbari Goozal about transporting oil out of the Caspian region. You will not find the happiest of men. Head of family-owned Middle East Petrol Farm (MEPF), and with routes emanating from Turkey throughout the Persian region, the family has a wealth of local knowledge. Back in 2000, Goozal made the family's first foray into the hydrocarbon field with the acquisition of the Port of Dubendi in Azerbaijan on the Caspian Sea.

"Once I purchased the port, I invested approximately $30 million in upgrading and expanding the capability of the facilities in line with the standards demanded by the likes of BP and ChevronTexaco," explains Goozal. "[However,] although the current capacity at Dubendi is 10 million tons per annum, I have problems with regards to the transportation link between Dubendi and the Black Sea coast, at Batumi.

"Not only are the roads in a bad state, but much of the road in Georgia is single-lane making congestion a problem. This is further exacerbated by the fact that the rail network is in need of renovation. Dubendi is therefore only at 35% capacity at this in time."

Goozal's predicament is a clear example of the sort of challenges that producers face once they have extracted their crude in such an isolated part of the world. The Caspian region may contain some of the world's most exciting reserves, but getting the product to market is a major concern to all involved.

Conversely, it must also be pointed out that as difficult as it is to get oil out of an inland sea, it is even more of a challenge moving the giant rigs and other support equipment into the region. Especially when you consider the water routes into the area are closed for approximately six months a year due to ice.

The transportation of oil and gas has and will continue to be a major point of discussion in the region and will be a major target for investment for the foreseeable future. In Goozal's case, having invested in the port facilities, he is now looking for somebody else to take on the role of improving the transportation link.

MEPF is not alone in its desire to improve the link between the two coasts; privately owned Azerpetrol is in a similar situation. Together both operations have a combined annual capacity of 20 million tons, however, due to the above-mentioned problems and the limited capacity at the Black Sea ports of Poti and Batumi, they can only realize 12 million tons per annum.

Today, there are four other major transport routes for exporting oil and gas to Western markets. The largest and longest of routes is the Caspian Pipeline Consortium (CPC) pipeline from Tengiz Field in Kazakhstan through to the Black Sea port of Novorossiysk.

Utilizing a mix of Soviet-era pipes and green-field lines, this route was opened in 1999 by CPC whose shareholders include the major foreign companies in Kazakhstan. Capacity has grown from just shy of 1.2 million tons in 2001 to an estimated 17 million tons this year. The eventual aim is that this figure will rise to well over 40 million tons by 2015, a sum that will represent 35% of Kazakhstan's envisaged exports for the year.

Kazakhstan's only other alternative export route of note is Kaztransoil's pipeline from Atyrau up to Samara which then connects into the Russian network.

Askar Smankulov, general director of the government-owned Kaztransoil, says of his plans for the Samara route, "We envisage increasing the capacity of the Samara route to between 25- and 30 million tons per annum. Completion is intended for 2007 at a cost of $200 million. This investment in an export line will be second only to our intended Chinese export route which will cost between $750- and $800 million."

The challenge for Kaztransoil is immense, not only is the company managing a network of 6,400 kilometers of pipelines, but it has also had to upgrade an infrastructure that is more than 20 years old. Although, the system has been stabilized, the company is making total investments in excess of $1.5 billion during the next few years to not only increase capacity, but also, and more importantly, increase the connectivity to oil-hungry China.

However, even with these investments, they will not come close to being able to handle the kinds of tonnage that the country is hoping to extract and export by 2015.

The third major route for Caspian oil is again up through to Novorossiysk. It is Azerbaijan's so called Northern Export Route.

Middle East Petrol Farm is currently forced to transport its petroleum products via a creaking road and rail network. Future hopes lie with a feeder pipeline to the BTC pipeline.

Again, using a mix of Soviet-era pipelines and newly laid infrastructure, the route has a capacity of 100,000 barrels per day, although it has had it share of problems in the past due to disagreements over transit fees and the conflict in Chechnya, which forced Russian company Transneft to circumvent the area with a new bypass pipeline.

The majority of Azeri oil, however, is transported through the Baku-to-Supsa pipeline, which links the coasts of the Caspian and Black seas. With operations starting in 1999, the pipeline currently handles approximately 145,000 barrels per day, although plans to increase capacity substantially have been shelved by the operator AIOC, in favor of another option.

Optimists will see this as all being an incredible opportunity to provide extra capacity to one of the world's most burgeoning oil-producing regions. As the world looks to secure ever more diverse and freely available oil, the Caspian region is working hard to ensure that its oil is effectively and efficiently transported to market.

One hurdle, however, which no amount of extra capacity can overcome is the width of the Bosphorus Straits in Turkey. Although technically an international waterway, Turkey is responsible for managing the safe flow of traffic through the straits and does so effectively with nearly 10% of the world's sea cargo flowing through this route.

A number of people *involved in the BTC project suggest one will not find a pipeline anywhere in the world that is being laid with higher regard for the environment.*

However, there is a limit to the amount of tanker traffic the Turks are willing to stomach. Previous accidents have made the authorities increasingly wary about allowing increasing tonnage to pass through. Today, with approximately 2 million barrels per day passing through the straits, locals are not keen to see this figure increase much further.

Aside from the Samara route through Russia, there is no other practical means of transporting large quantities of Caspian crude to Western markets without relying on the Bosphorus. This is something that has not been lost on the Azeris and for years alternative plans have been tossed about and dropped for one reason or another.

Finally, the long-mooted Baku-Tblisi-Ceyhan (BTC) pipeline was given the go-ahead in 2002. Heavily backed by the U.S., the route was not initially favored by the majors, which saw more economic alternatives.

As Michael Barnes, resident manager and president of Unocal (the largest American shareholder of AIOC), puts it, "The shareholders were not favorable towards the BTC option, however it was the Turkish government's commitment to guarantee to cover a certain percentage of any cost overruns. This element completely altered our perception of the deal."

BP led the charge. "It was really BP's decision that was the catalyst that won the rest of us over." Given the commitment of the governments involved and the environmental benefits gained, the BTC option was certainly the best on offer.

According to figures provided by the BTC operator, BP, the pipeline, which will measure 1,765 kilometers (1,100 miles), should come online at the end of 2004, with the first oil flowing in January 2005. The projected total cost will be $2.95 billion, which is significantly higher than the original forecast of $2.4 billion.

Once operational, the pipeline will transport 1 million barrels per day, which, according to BP, represents 365 tankers per annum. These tankers will not have to pass through the Bosphorus straits, a factor that put the Turkish government firmly behind the project from the start.

The pipeline has a number of important consequences that all interested parties are keen to promote. From a financial aspect, the initial investment has been made by international institutions such as the World Bank, the International Finance Corp. and the European Bank for Reconstruction and Development (EBRD). EBRD's man on the ground, Thomas Moser, sees their involvement in such hydrocarbon projects as a way to ensure best practices are employed.

"The oil companies are better able to ensure best technical practices, however, I see our role as also ensuring best environmental and social practices are employed."

A number of people involved in the BTC project suggest one will not find a pipeline anywhere in the world that is being laid with higher regard for the environment. Laying the pipe two meters below ground has added a significant cost to the project.

Although the economic argument behind the BTC is to transport oil primarily from the Azeri-Chirag-Gunesli Field, the pipeline is also seen as an important export route for other producers. A case in point: Goozal sees the potential of overcoming his transportation problems by linking his Dubendi port to the pipeline, a distance of no more than 10 kilometers.

Furthermore, during this past summer, the Kazakh government has been blowing hot and cold as to whether they wish to take a stake in the BTC. Certainly, the consortium would wish for the participation of such an important potential client, however, the last indication is that the Kazakhs will come back to the table this fall.

While much of the attention has been focused on the BTC pipeline, there is another significantly important line being laid in parallel. The South Caucasus Pipeline (SCP) will transport gas from the Shah-Deniz Field to the Turkish border and then eventually on to Erzurum in the east of the country.

Turkey is seen as a major export market for Azeri gas and such a pipeline, which will start operating towards the end of 2006, will enable Shah-Deniz gas to compete more effectively with Russian gas which will be carried to Turkey through the Blue Stream pipeline.

In many ways the Caspian Sea is one of the most challenging environments to operate in. Now that major projects such as the construction of the BTC, the expansion of the CPC and the new link to China are under way, in question is the infrastructure within the region. While nobody doubts that the Kazakhs will use the BTC export route, the debate surrounds whether Kazakh oil should be transported by tanker or pipeline to the terminal at Sangachal. Previous examples show the region is capable of addressing such issues. ■