

By Simon Clark and Stephen Voss

◀ As snipers watched from rooftops and an orchestra played national anthems, the presidents of Azerbaijan, Georgia and Turkey inaugurated in July the 1,768-kilometer Baku-Tbilisi-Ceyhan pipeline pumping oil from the landlocked Caspian Sea to the Mediterranean. John Browne, chief executive officer of BP Plc, which built and operates the \$3.9 billion pipe, joined in the celebrations at Ceyhan, on Turkey's Mediterranean coast. "BTC is the first great engineering project of the 21st century," Browne said.

Maybe not so great, says Derek Mortimore, an engineer who's spent the past 45 years protecting pipelines from corrosion. "It's got an in-built flaw," says Mortimore, 62, who worked as a consultant on the pipeline while it was being planned.

That flaw—a coating paint on the buried pipeline's welds that's subject to cracking—could allow corrosion that may result in leaks, Mortimore says. Even before the pipeline began pumping oil, the coating had already cracked once in 2003—something London-based BP didn't disclose to its lenders at the time and that caused construction delays and contributed to a cost overrun of almost \$1 billion. A leak would pollute the environment and halt the flow of a million barrels of oil a day. When BP said it would stop the flow of half as much oil last summer after a corroded pipe leaked at its Prudhoe Bay, Alaska, field, the price of oil soared as much as 3.4 percent to \$77.30 a barrel the next day. BP's market value fell by 2.7 billion pounds (\$5.3 billion), and the U.S. government offered to open its emergency stockpile.

"The BTC pipeline is strategically important to the West as a new source of much-needed oil," says John Dingell, chairman of the U.S. Congress's Energy and Commerce Committee. "Nonetheless, serious allegations about potentially flawed workmanship that may result in above-normal corrosion rates have been made. While there has been considerable public attention to these concerns, it is not clear how they were ultimately resolved and put to rest. Our most-recent

Engineers say the British oil company's new Caspian pipeline risks corroding and leaking, after accidents in North America that killed workers and polluted the environment.





John Browne, who says in a BP video that the company adopted a culture of making do during the 1990s.

LIVING DANGEROUSLY

experience with BP in Alaska suggests more probing may be needed.”

BP says it solved the coating issue on the Caspian pipeline in 2004, and the company has used the same paint on the 680-kilometer (420-mile) South Caucasus Pipeline, which carries gas and runs underground alongside the BTC pipeline through Azerbaijan and Georgia. “I have absolutely no concerns that we have a defective field joint coating,” says David Woodward, who led BP’s operations in Azerbaijan for eight years until November.

BP’s fix wasn’t sufficient; the coating still cracks, exposing the pipe to corrosion and leaks, according to a 2005 report obtained by Bloomberg News and commissioned by the contractors that built the Azeri pipe sections for BP, Athens-based Consolidated Contractors International Co., and Burnley, England-based Pipeline Induction Heat Ltd. Bureau Veritas SA, an independent Paris-based inspection company, monitored the tests for the report. “There seems to be a cultural problem at BP resulting in a state of denial,” says pipeline engineer John Leeds, who holds a doctorate in electrochemistry and has 40 years of experience and more than 70 published technical papers. “Let’s call it an ostrich policy.”

The controversy over the BTC pipeline is another in a list of woes to haunt Browne, 58, during the past year. In March, a corroded, above-surface pipe at BP’s Prudhoe Bay oil field, the largest in the U.S., leaked about 5,000 barrels of oil onto the tundra. In August, a second leak at Prudhoe Bay forced BP to shut the field.

Then, in October, the U.S. Chemical Safety and Hazard Investigation Board said BP knew about safety concerns at its Texas City, Texas, oil refinery years before a March 2005 explosion that killed 15 workers at the plant. BP has settled about 1,000 suits, including all death claims, and set aside \$1.6 billion to compensate all victims of the explosion. The company is scheduled to begin trials in January and February over some injury-related lawsuits. “BP has publicly accepted responsibility for the March 23 explosion and for the

staff is recommending civil enforcement actions against the company for improper trading of unleaded gasoline in 2002. BP spokesman Scott Dean denied any wrongdoing in an interview with Bloomberg News. The commission also alleged in June that BP attempted to corner the propane market in the northeastern U.S.

The story of how BP built the BTC pipeline using an inappropriate coating, despite repeated warnings that it wouldn’t work, points to companywide flaws, says Matthew Simmons, founder of Houston-based oil and gas investment bank Simmons & Co. “There are clear parallels between what happened here and what happened in Alaska and Texas City,” Simmons says. “When you get a problem at BP, you get massive denial.”

Some investors agree. “Whenever you have these types of failures, you go back and find out that a lot of people realized something was wrong but just didn’t do anything about it,” says Karina Litvak, head of governance and socially responsible investment at London-based F&C Asset Management Plc, which has \$200 billion under management, including BP shares.

Investors have soured on BP’s stock in the past year. BP started 2006 as the world’s second-largest publicly traded oil and gas company by market value, behind Houston-based Exxon Mobil Corp. By Dec. 13, it ranked fifth, having been surpassed by Moscow-based OAO Gazprom, Beijing-based PetroChina Co. and Royal Dutch Shell Plc of The Hague. BP’s shares fell 6.4 percent to 579.5 pence in the year to Dec. 13, while Exxon’s soared 37.7 percent to \$77.36 and Shell’s rose 1.8 percent to 1,802 pence.

“BP has lost a huge amount of respect in the U.S.,” says Neil McMahon, a London-based analyst at Sanford C. Bernstein & Co. who once worked as a geologist for BP. “If they have another problem, I would expect the board and shareholders to turn increasingly negative on BP and its executives.”

The environmental mistakes are all the more jarring because BP’s Browne has wrapped himself in a cloak of pro-environmentalism, says Doug Norlen, policy director at U.S.-based Pacific Environment. In 2000, BP changed its logo from a shield to a flowerlike sunburst design and adopted the slogan “Beyond Petroleum.” BP’s advertisements often focus on solar and wind operations, and some inform motorists how to pay for trees that will offset their cars’ carbon emissions. “BP says it’s a green company, but its lack of oversight on projects like BTC risk having terrible effects on the environment,” Norlen says. “How can they square their green objectives with reality?”

Browne might have prevented the Alaska spill had he listened to whistle-blowers, says Chuck Hamel, a retired oil broker and lobbyist for oil workers in Alaska. “BP was repeatedly warned about corrosion problems in Alaska,” he says.

BP made Woodward, 60, available for an interview in the Azeri capital, Baku, in October to discuss the pipeline. Toby Odone, a spokesman for the company, declined to comment further.

Until recently, shareholders weren’t complaining at all

Even before it started pumping oil, the BTC pipeline had cracks in its coating.

management system failures and employee mistakes which contributed to or caused it,” Robert Malone, BP’s U.S. chief, said in September at a U.S. congressional hearing on the Alaska oil spill. “We have fallen short of the high standards we hold for ourselves and the expectations that others have for us. We have stumbled operationally.”

BP’s mishaps extend beyond safety. In December, BP said the U.S. Commodity Futures Trading Commission’s

about Browne, who became CEO in 1995, 29 years after joining the company as a university apprentice. Under his watch, BP's shares have more than doubled, giving the company a market value of £113 billion. He's led more than \$100 billion of takeovers and joint ventures, from the \$56 billion purchase of Chicago-based Amoco Corp. in 1998 to a \$7.7 billion investment in Russia's TNK-BP oil company in 2003. Browne has returned more than \$70 billion to shareholders in dividends and buybacks since the beginning of 2000. Profit at BP rose 31 percent in 2005 to \$22.3 billion, a record for the company.

The record earnings followed years of cost cutting in the 1990s that sapped the company of infrastructure investment and engineering expertise, Simmons says. "If you are trying to cut costs, the first thing you do is cut on maintenance," he says. "Corrosion protection, and experts on corrosion protection, went out of oil majors by the back door."

During September's Congressional hearings on the Alaskan oil spill, Dingell, 80, a Democratic representative from Michigan, said, "For an oil company of BP's size and reputation to allow two of its most-critical transit lines, in America's largest producing oil field, to reach such a sorry state of affairs is staggering." Bart Stupak, 54, also a Michigan Democrat, said the leak highlighted flaws in BP's management culture. "These problems apparently created a chilling atmosphere for workers to report health and safety issues," he said.

In September, BP said it would spend \$550 million over two years on its Alaskan pipelines and appointed three corrosion experts. BP also hired a former federal judge, Stanley Sporokin, 74, to serve as an ombudsman who could field allegations of wrongdoing from U.S. employees. In 2005, BP appointed former U.S. Secretary of State James A. Baker III—who was also co-chairman of the bipartisan Iraq Study Group that recommended withdrawing U.S. troops from combat by early 2008—to lead a panel of advisers on corporate governance and safety policies.

"We have had time to reflect and learn from the tragic accident at Texas City, the corrosion of the oil transit lines at Prudhoe Bay and the allegations of inappropriate trading," Browne said on Oct. 24 at a press conference at BP's headquarters in London's St. James's Square. "We are incorporating lessons learned."

Browne, who declined to be interviewed for this article, says the company slashed costs to maintain profits during the 1990s when oil fell as low as \$10 a barrel. In a video playing on Oct. 25 at BP's headquarters in Villa Petrolea in Baku, Azerbaijan, Browne said that in the 1990s, the company adopted a culture of making do. "Making do begins to nibble the future away," Browne said.

To ensure its future as oil output dwindles in the U.S. and the U.K., BP is being forced to turn to far-flung developing countries, such as Angola and Azerbaijan. The Caspian coast outside Baku is dotted with rickety communist-era derricks, nodding donkeys and oil lakes.

In 2005, BP's U.K. oil production of 277,000 barrels a day was 43 percent below its output four years earlier. BP's U.S. pro-

duction tumbled 18 percent, to 612,000 barrels a day, in the same period. Meanwhile, Russia became its largest source of oil, producing 911,000 barrels a day, while Angola supplied 128,000 barrels and Azerbaijan, 76,000.

BP first began investigating Azerbaijan's energy reserves just after the end of the cold war. In 1993, Heidar Aliyev, former head of the KGB in Azerbaijan, came to power following a coup. Under Aliyev, Azerbaijan, a secular Muslim nation of 8 million people sandwiched between Russia and Iran, became a staunch ally of the U.S. It has 7 billion barrels of oil reserves, according to BP. Baku had its first oil boom in the 19th century, making fortunes for Europe's Rothschild and Nobel families.

BP is the operator and biggest shareholder in Azerbaijan International Operating Co., or AIOC, the consortium that's drilling oil in the Azeri, Chirag and Gunashli fields in the Caspian Sea. Exxon and San Ramon, California-based Chevron Corp. are also shareholders. The offshore oil is then piped into the BP-operated Sangachal Terminal south of Baku, where the BTC oil pipeline and SCP gas pipeline begin.

The 1999 James Bond movie *The World Is Not Enough* was about the construction of an oil pipeline that follows roughly the same route. The pipe travels across 1,500 rivers, over the Caucasus Mountains to the Georgian capital of Tbilisi, down to Ceyhan in Turkey, where tankers dock at a 2½-kilometer-long jetty to load the oil for Western markets. BP owns 30.1 percent of the pipeline. Other shareholders include Chevron and Paris-based Total SA.

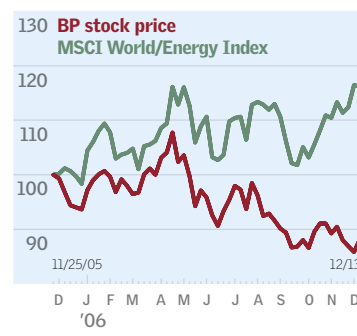
Azerbaijan's renewed oil exploitation has made the country the world's fastest-growing economy, expanding an estimated 25.6 percent in 2006, according to the International Monetary Fund. It's also one of the most corrupt, ranked 130th out of 163 nations in Berlin-based Transparency International's 2006 list, alongside Ethiopia and Zimbabwe.

The BTC pipeline will reach its capacity of 1 million barrels of oil a day in 2008. As of Sept. 30, the most oil to flow through the pipe in one day was 520,000 barrels. BP plans to boost the pipe's capacity to 1.8 million barrels a day in coming years by adding pumping stations to tap crude from other energy-rich nations in central Asia such as Kazakhstan, says BP's Woodward, whose office at Villa Petrolea, formerly a Soviet Palace of Culture, retains details such as a stucco hammer and sickle.

In 1994, Aliyev agreed to allow a group of Western oil companies led by BP to develop the offshore fields. "By hav-

Laggard

BP's shares trail competitors' amid concerns about safety.



Index: Nov. 25, 2005 = 100. Source: Bloomberg

ing an East-West corridor, you could help secure the independence of countries like Azerbaijan, Georgia and potentially Kazakhstan from Russia,” says Woodward, who retired from BP on Jan. 1. “There was strong backing from the U.S.” says the former BP executive.

As the price of oil slumped, the pipeline looked less economic and the project slowed. In 1998, BP bought Amoco, the fifth-biggest U.S. oil company, uniting two of the biggest shareholders in AIOC and giving new impetus to the project.

'It's totally unacceptable,' engineer Leeds says. 'A major company such as BP shouldn't be in this situation.'

In November 1999, then U.S. President Bill Clinton flew to Istanbul to sign an agreement with the leaders of Turkey, Azerbaijan and Georgia to approve the pipeline. “For centuries, the Caspian region has been critical to the crossroads of human events but never more so than today,” Clinton said.

In 2001, BP appointed San Francisco-based construction company Bechtel Group Inc. to start surveying the route in Azerbaijan and Georgia. Turkish pipeline company Botaş took charge of the Turkish section.

In February 2002, BP hired Mortimore, who's helped build and repair pipes on six continents. The engineer traveled to Baku to develop a coating plant for the undersea pipes linking BP's offshore oil rigs to the Sangachal Terminal.

One evening, Mortimore met up with Paul Stretch, the technical manager for the BTC pipeline. Stretch gave him a two-page note on the so-called field joint coating. This coating was intended to protect the ends of each 12-meter-long section of pipe from corrosion after they were welded together. During construction,

each section of pipe arrived on site coated in a plastic polyethylene protective layer. Bare steel was exposed only at the ends, so they could be welded together.

The note favored covering the exposed ends with an epoxy-based product known as SP-2888, made by Langley, British Columbia-based Specialty Polymer Coatings Inc. “The highest-scoring product is SP-2888,” the note said. It also recognized a flaw: Epoxy-based paints don't stick well to polyethylene. “There is a question regarding the SPC product and its adhesion to polyethylene, which needs to be resolved,” the note said.

Mortimore says the note was written by Trevor Osborne, BP's materials consultant in charge of selecting the field joint coating. Osborne was contracted by London-based John Brown Hydrocarbons Ltd., which in turn was contracted by Bechtel. In what Mortimore says was a deeply flawed selection process, BP, at Osborne's recommendation, picked SP-2888, which Mortimore says had no track record of being used on polyethylene-coated pipes. Osborne declined to comment. Jim Banach, Specialty Polymer Coating's international sales manager, also declined to comment.

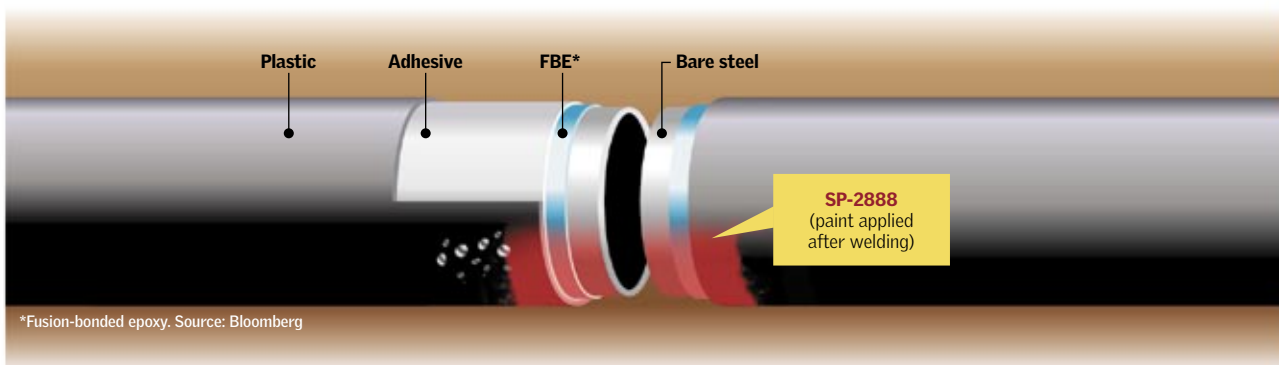
“The ideal situation is to have a pipe and a joint coated in the same material,” says Brian Leis, a senior research leader at Columbus, Ohio-based Battelle, the world's biggest independent nonprofit research and development organization.

Europe's second-largest utility by market value, Düsseldorf-based E.ON AG, wraps a polyethylene and butyl rubber tape around the joints of polyethylene-coated pipes. “This system has more than 25 years of operational experience,” says Helmut Roloff, a spokesman at E.ON's Ruhrgas unit.

In July 2002, BP asked Advantica Laboratories Ltd. in Loughborough, England, to run tests on field joint coatings made by Specialty Polymer Coatings and two other companies. SP-2888 came in first in a weighted test in which certain properties earned more points than others, according to the report,

Corrosion risk

Areas of BP's BTC pipeline may corrode because SP-2888 paint doesn't stick well to the plastic coating, potentially allowing groundwater to seep onto the steel, engineer Derek Mortimore says. BP says it has fixed the problem.



*Fusion-bonded epoxy. Source: Bloomberg

a copy of which was obtained by Bloomberg News. Even so, the report was critical of all the products.

"Since no single coating material consistently performed well in all tests, it was difficult to identify materials that would be best suited for use," the report said. Protegol, the product that came in last in the test, was used on the Turkish section of the pipeline. Mortimore says the selection process didn't adequately test the coatings and didn't consider the full range of possible options.

In October 2002, BP published a document specifying SP-2888 as the sole product to be used on the pipeline. The specification paper allowed SP-2888 some unusual leeway in performance tests, says Leeds, 66, who in 2004 wrote a report on the BTC pipeline's coating defects for a U.K. parliamentary committee. The BP document says the product could pass a performance test on the pipe, even if it was found that it peeled in large pieces from the polyethylene substrate, according to a copy.

Using the product left the pipe vulnerable to corrosion in an environment that could provoke explosive stress corrosion cracks, a form of deterioration that can cause pipelines, particularly those carrying gas, to rupture, Leeds says. "It's totally unacceptable," he says. "A major company such as BP, with its huge resources, shouldn't be in this situation."

In November 2002, Mortimore wrote a memo to BP trying to prevent them from using the paint. "It is utterly inappropriate as it does not confirm a protective system that can be successfully applied in all the conditions that this pipeline will be constructed," he wrote. "The potential for claims against the company is open-ended."

Mortimore wasn't the only one objecting to the choice of SP-2888. Chris McDonnell, managing director of E Wood Holdings Plc, a Northallerton, England-based competitor to SPC, believes the selection process was rigged. He complained to BP in October 2002. "We were very reluctant to raise this concern for fear of damaging our relationship with BP, but we felt an injustice had been done and that people at the top didn't know what was going on," McDonnell says.

BP ordered an internal investigation into McDonnell's allegation, McDonnell and Mortimore say. Mortimore gave BP auditors documents written by other companies to support his claim that the choice of SP-2888 was flawed. "Liquid coatings are not compatible with polyethylene style of coatings," an executive at TransCanada Corp., Canada's biggest pipeline company, wrote in one document, a copy of which was obtained by Bloomberg News. Mortimore also handed BP tests by Advantica—the same company that assessed SP-2888 for BP—that were commissioned by ShawCor Ltd., a Toronto-based maker of field joint coatings. The tests showed that SP-2888 failed to meet an internationally recognized U.K. standard known as CW6.

In December 2002, BP wrote to McDonnell to say that no unethical behavior had been found.

A month later, BP's Stretch sent Mortimore an e-mail confirming that his involvement as a consultant on the BTC pipeline was over. "I wish to thank you for all of the help you have

rendered the project and me to date and hope that one day it is recognized that your expertise and guidance has been undervalued," Stretch wrote in the e-mail, which was obtained by Bloomberg News. Stretch declined to comment.

Mortimore didn't give up, convinced as he was that BP was making a serious scientific and engineering mistake. In March 2003, he met BP compliance manager David Winter and corrosion engineer David Fairhurst in London. He brought with him a piece of steel coated with SP-2888. "You think you've got a coating?" Mortimore said as he bent the steel plate in front of Winter, shooting shattered pieces of paint to the ceiling. "That's your coating!" Then he turned the plate over. The other side was coated with another paint, which had remained unfractured.

Meanwhile, BP started building the pipeline. In November 2003, eight months after Mortimore met Winter and Fairhurst, BP found cracks in the coating on a quarter of the pipe joints in Georgia and 2.6 percent of the joints in Azerbaijan, according to a 2004 report by WorleyParsons Ltd., a Sydney-based engineering company that advises the banks that funded the pipeline. Woodward says the paint cracks were caused by BP's contractors, who he says didn't apply the paint properly in cold weather conditions. "It was a mistake that was made by the contractors, who were employed to apply the coating," he says. Once the cracks were discovered, BP ordered the contractors to heat the pipe before and after they reapplied paint to the affected areas, he says. Then they buried it.

"If prudence was invited to the party, you would have considered using an alternative product after the coating cracked," Battelle's Leis says. "But prudence often isn't invited to a party like this, where delays can cost millions of dollars a day."

The pipe coating still cracks even after BP changed the procedure, according to the report commissioned in 2005 by the contractors.

"The frequency of cracking is reduced by pre- and post-heating, but cracking is not eliminated," David Norman, an independent U.K. corrosion expert hired by the contractors, wrote in the conclusion to the report, which was obtained by Bloomberg News. "The SP-2888 coating is susceptible to cracking at the interface with the factory-applied polyethylene regardless of the use or otherwise of pre- and post-heating during application," he wrote.

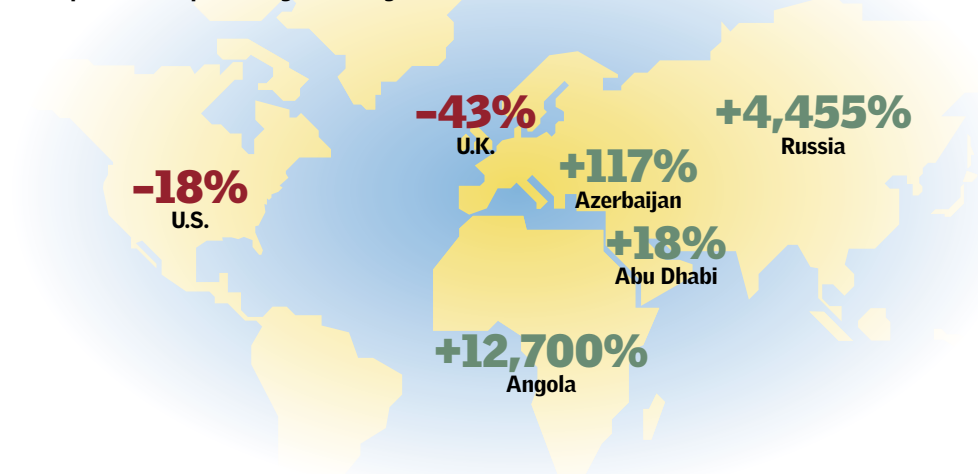
Wael Khoury, a director of Consolidated Contractors, and Philip Bond, managing director of Pipeline Induction, declined to comment, citing contractual restrictions from BP. The contractors made claims against BP disputing responsibility for cost overruns, Woodward says. The claims may not be settled yet, he said, declining to comment further.

Neither the cracks nor the change in application were reported to BP's lenders at the time they occurred, according to parliamentary testimony in 2004 by the U.K.'s Export Credits Guarantee Department. The banks, which include ABN Amro Holding NV, Banca Intesa SpA, Citigroup Inc. and Royal Bank of

Farther afield

BP is relying more on developing countries as its traditional fields decline.

BP oil production, percentage of change from 2001 to '05



Countries shown were BP's biggest sources of oil in 2005. Figures are rounded. Source: BP

Scotland Group Plc, agreed on Feb. 3, 2004, to lend to the project. Valter Serrentino, head of social and environmental policy at Intesa, says the Milan-based bank decided to sell its \$60 million stake in the loan. "Mortimore raised a doubt in our minds about the integrity of the pipe's coating," he says.

The cracks weren't disclosed to the public until the Sunday Times of London published an article about them on Feb. 15,

The cracks in the coating weren't reported to BP's lenders at the time they occurred, according to testimony in Parliament.

2004—four months after the fissures were found. Mortimore, who suffered a heart attack days before the news article was published, says he felt compelled to write to Browne. "I have never before witnessed a situation where the client proceeded with construction when he knew that a significant element of the works was going to fail," Mortimore wrote on Feb. 17. In reply, Mortimore got a letter from the head of the BTC pipeline saying nothing could be gained from a meeting.

That same year, BP began building the SCP pipe, which started operating in December. It also uses SP-2888 as a coating.

Leeds says BP's massive effort to bring Azeri crude to the global market makes its pipeline coating problem all the more significant. "A pipeline is only as strong as its weakest link," he says. "For the BTC and SCP pipelines, from day one, that will be corrosion at field joints due to cracking and lack of adhesion of SP-2888."

The pipeline has a second protection against corrosion called cathodic protection. In this process, an electric current is run through the earth to the pipeline and prevents corrosion by turning the metal surface into an electric cathode. The trouble is, it doesn't work well on a poorly coated pipe, says Gordon Bierwagen, professor of coatings and polymeric materials at North Dakota State University. "If there is a failure of the coating, it won't protect it," he says.

BP installations elsewhere had flaws at about the same time. At the company's refinery in Texas City, managers commissioned consulting firm Telos Group to find out why morale was low in late 2004. Their survey asked more than 1,100 workers what they perceived the plant's priorities to be. "Making money" came first and "people" ranked last, according to a copy of the report, which was dated Jan. 21, 2005.

"The equipment is in dangerous condition, and this is not

taken seriously,” one unidentified worker was quoted as saying in the report. Two months later, a cloud of flammable vapors escaped from a tank known as a blowdown drum and exploded at the plant, killing 15 workers.

Woodward says the BTC pipeline coating dispute is a distraction from the scale of BP’s achievement in Azerbaijan. “We have set new standards with regards to the technical aspects of the project and in the way we dealt with communities and the environment,” he says. “It does make it another major new profit center for us,” he says. And the government of President Ilkham Aliyev, who succeeded his late father in 2003, may reap \$150 billion from oil and gas revenues during the next 20 years. Aliyev promises to spend funds on improving education, and he’s rebuilding his army, which lost a war with neighboring Armenia in 1994. “We understand from history that if you are strong, if you have power and have the ability to achieve goals, then your position in negotiations also becomes stronger,” the president said in an interview with Bloomberg News at his palace in Baku on Oct. 27.

Now that the pipe is in the ground, BP must accept responsibility for its mistake by publishing a monitoring process, which it should keep in-house, instead of contracting the job out, Leeds says. “This is the price to pay for not doing the job properly in the first place,” he says.

That’s not happening. BP in 2006 awarded the monitoring

contract for its Azerbaijan assets to Rasco International Ltd., a Baku-based building company with no previous pipeline monitoring experience, and BPA, a Hemel Hempstead, England-based manager of pipelines. They’re still talking to BP about whether they’ll take charge of the BTC and SCP pipelines, even though the pipelines were described in the contract, says Neil Barber, a Rasco project manager.

BP also cut out a clause in the contract requiring qualifications set by the Houston-based National Association of Corrosion Engineers or a similar organization, according to the preliminary and final versions of the contract, copies of which were obtained by Bloomberg News. BP spokesman Odone declined to comment on the contract.

In 2000, Browne gave a British Broadcasting Corp. Reith radio lecture on the theme of “Respect for the Earth” in which he set a high standard for himself. “Transparency is not just about publishing numbers,” he said. “It is also about establishing clarity as to where responsibility lies.” When it comes to addressing concerns about the BTC pipeline, Leeds says, Browne is not living by those words. ♦

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BLOOMBERG TOOLS

Tracking Oil Reserves

Azerbaijan and Kazakhstan held almost 4 percent of the world’s proven oil reserves as of the end of 2005, according to the annual BP Statistical Review of World Energy. Discoveries in the Caspian Sea region—including Kazakhstan’s Tengiz field, which contains 6 billion–9 billion barrels of recoverable crude oil, according to Chevron’s Web site and is the largest find since Alaska’s Prudhoe Bay field in 1968—have increased that figure from 1.4 percent in 2000.

To track oil reserves and production, type BPSR <Go> for a menu of data from the Statistical Review. Click on Reserves for a monitor showing proven reserves in billions of barrels by region, as shown below. To see figures for countries in Europe and Eurasia, click on the Page 3 tab at the bottom of the monitor.

Of the six so-called supermajor oil companies, BP

had the third-highest reserve replacement ratio in 2005. To see energy-related operating data—including this measure of the percentage of a company’s reserves used in production that was replaced by new finds, acquisitions or improved recovery of oil—for BP, type BP/ LN <Equity> CH7 <Go>. The Company Financial History—Energy Items function displays figures for the company’s total reserves for the past five years.

For news stories related to oil, type NI OIL <Go>. For the main menu of energy-related functions and data, type NRG <Go>.

JON ASMUNDSSON

Proved Oil Reserves								
Ticker	Time/Date of Last Upd	2005	2004	2003	2002	2001	% Change	% of Total
Proved Oil Reserves at End of Year								
(billion barrels)								
Asia Pacific	12/31/05	40.20	39.00	41.00	47.50	43.78	1.01	3.35
Europe & Eurasia	12/31/05	140.50	138.70	138.60	104.30	84.10	1.30	11.70

For a menu of global crude oil prices, type CRUD <Go>.