

# PIPELINE REPORT

*the industry newsletter* *June 2001*

## INTERNATIONAL PIPELINE NEWS

STATE ENERGY company **Sonatrach** has awarded the \$36-million contract to expand the Mesdar oil pipeline terminal, 180Km SE of Hassi Messaoud to **Sofresid**. The expansion of Mesdar includes the installation of two high-pressure 4-MW turbo pumps, three 170-kW pressure pump boosters, two 2-MW turbo generators, and a new flow regulation and counting system. The Jeddah-based **Islamic Development Bank** is reported to be financing the project with a 12-year loan facility worth \$30.3 million.

The terminal, located in the Hassi Berkine basin, is used to transfer hydrocarbons from the Rhoud el-Baguel, El-Borma, Bordi Rbaa North, and Mesdar fields. The project aims to double throughput to 200,000bbl/d.●

AUSTRALIA'S long-distance gas pipeline developers are reported to have been relieved by a federal court decision overturning what the industry has criticized as restrictive regulation. In a precedent-setting case, the Australian Competition Tribunal has ruled that tight tariff and rate-of-return regulations by the Australian Competition and Consumer Commission (ACCC) should not be applied to **Duke Energy's** new 800-km, \$400-million, Eastern Gas Pipeline, running from Victoria to New South Wales. The tribunal said recently that project-specific regulation is not required because competition already exists as a result of other pipelines supplying New South Wales and Sydney.

US-based Duke has undertaken to provide third-party access to the pipeline, which takes gas from the offshore Bass Strait fields to Sydney; an older pipeline runs east to the area from the Moomba fields in central Australia, and a new spur connects the Victorian system into New South Wales.●

THE Australian Gas Association's chief executive Bill Nagle said that the Eastern Gas Pipeline decision would provide encouragement for other long-distance projects. Among the most ambitious of these is a 2,000-km pipeline that would run from the Timor Sea off Northern Australia to domestic markets, proposed by both the **Epic Energy** joint venture of US-based **El Paso**, locally-based **Dominion Resources**, and the **Australian Pipeline Trust** owned by **Australian Gas Light**.

Other projects being considered include the Exxon Mobil-led 3,200-km Papua New Guinea-to-Queensland line (*see below*), and a number of 600-700km pipelines from offshore Victoria to South Australia.●

EXXON MOBIL has assumed control from fellow project participant and operator **Chevron** of the Papua New Guinea to

Algeria: oil pipeline terminal expansion

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...and encourages other projects

New control for PNGgas pipeline

Queensland gas pipeline. Under new management arrangements, the project will now come under the control of Exxon's Melbourne-based exploration director Doug Schwebel. A new management committee, representing each of the project's owners, will be chaired by Exxon's vice president of exploration for Asia, Russia, and Australia, Bill Threlfall.

Owners of the project include Exxon Mobil, Chevron, and Australian groups **Oil Search Ltd**, **Orogen Ltd**, **Mineral Resources Development Ltd**, and **Santos Ltd**, as well as Japan's **PNG Petroleum**. The companies each hold various stakes in PNG gasfields and intend to sell gas through the pipeline once complex contract talks are completed and a final decision to proceed is made. The major stumbling block to the project's final go-ahead has been delays in signing contracts with customers over the volumes of gas to be taken.

Australian pipeline group **AGL Ltd** and Malaysia's **Petronas** will build, own and operate the \$750-million pipeline stretching 3,200km from the *Hides* and *Kutubu* fields in Papua New Guinea's gas-rich highlands to Brisbane and Gladstone in central Queensland. First gas is expected in 2005, more than two years behind the original estimate of 2003.●

### Azerbaijan: Parliament ratifies agreement on gas supplies to Turkey

**A**ZERBAIJAN'S parliament is reported to have ratified the agreement between Azerbaijan and Turkey signed in Ankara on 12 March on natural gas supplies from the *Shah-Deniz* field to Turkey. According to current reports, natural gas exports will start in late 2004, when an estimated 2Bcm gas will be produced, increasing to 6.6Bcm in 2007-2018.

A \$2.6 billion in investment is estimated for initial gas production (see below), which includes construction of the 700-km long Baku-Tbilisi-Erzurum gas pipeline with an initial annual capacity of 7.2Bcm. Baku-Ceyhan pipeline cost revised upwards "but under control."●

### Baku-Ceyhan pipeline cost revised upwards

**D**ESPITE A recent basic engineering study that revised upwards the estimated cost of Baku-Tbilisi-Ceyhan oil pipeline to between

- Pipeline defect assessment course, Aberdeen, 10-12 September
- Pipeline integrity and safety management conference and courses, 26-27 September, 2001, Houston (*new dates*)

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\$2.8 billion-\$2.9 billion from an original \$2.7 billion, the new estimates still keep the project in limits of what international oil companies consider as “commercially viable.”

Turkish energy ministry officials said that the Turkish government was in full agreement with the international consortium that would develop and export Caspian Sea crude, and that the findings of the new study showed the next stage of the project could go ahead. “We are currently at the detailed engineering study phase for the Turkish section of the proposed pipeline,” said one senior official. “And we are about to award the engineering contract to one of the three bidders.”

David Woodard, president of the **BP-led Azerbaijan International Oil Co (AIOC)** told reporters in Baku on 5 June that the new cost estimate was well within the range necessary for moving to the next stage of the project’s detailed engineering. AIOC completed the basic engineering study of the project in May and is now focusing on a detailed feasibility study.

But Turkish pipeline officials said the AIOC was worried that Turkey’s corruption investigations into the entire energy sector could in the future spread to the Baku-Tbilisi-Ceyhan business. “It has come to our attention that the consortium has legitimate concerns over possible legal complications and over defending the commercial rights of its future sub-contractors,” a senior **Botas** official told *Pipeline Report* on 6 June.

On 4 June, the **European Bank of Reconstruction and Development** announced plans to provide a total of \$525 million financing for the proposed pipeline. The bank and its stockholders are still discussing the terms of financing.●

**B**Y EARLY June, Bolivia was expected to be exporting 43.7Mcf/d of gas from its *Rio Grande* production complex to western Brazil via the new Santa Cruz-Cuiaba pipeline. It has also been exporting around 1.05Bcf/d for about 18 months to the Brazilian industrial heartland via its Puerto Suarez-Sao Paulo pipeline, which links up with the Sao Paulo-Porto Alegre pipeline.

The country is now seeking further outlets for its large gas reserves, and is reported to be investigating export routes to the US. A plan has been announced to build a \$550-million pipeline across the Andes to an LNG terminal on the Pacific coast of either Chile or Peru. The project would also require construction of four \$160-million tankers and a regasification plant in Mexico.

**BP**, France’s **TotalFinaElf**, the UK’s **BG**, and Spain’s **Repsol-YPF** are all said to have expressed interest in building the LNG facility. **BG** is reportedly near completion of a feasibility study, although it has yet to release details. Construction would begin in 2003 for first deliveries in 2005-06, according to Bolivian officials.●

**T**HE **Matabeleland Zambezi Water Trust (MZWT)** has raised \$500million for the long-delayed 470-km Zambezi-Bulawayo water pipeline, but is now waiting for the Zimbabwe government to raise its share of the project cost. The Botswana Minister of Rural Resources and Water Development said the trust had raised the money through a Malaysian company called **Zimmal**, adding that the project would be built together with construction of the \$50-

**Bolivia: New trans-Andean gas pipeline?**

**Botswana: water pipeline goes ahead**

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A directory of pipeline companies, services, and equipment

million Gwayi-Shangani dam. The Zimbabwe government had approached the Italian government, which indicated its willingness to fund the dam on condition that funds for the construction of the pipeline were also available.●

### China: W-E pipe progress

**STATE-CONTROLLED China National Petroleum Corp**, also known as **PetroChina**, has invited consortia led by **BP**, **Exxon Mobil**, and **Royal Dutch/Shell** to discuss further their possible roles in construction and operation of the 4,200-km long, 12Bcm/yr gas pipeline.

The consortia were chosen from an earlier group of 19 companies who expressed interest in a role in the pipeline, which is being planned from the Xinjiang gasfields in China's far west to Shanghai on the east coast.●

### Longest product oil pipeline project

**SURVEY** work has started on a 2,000-km long oil products pipeline project linking Kunming, capital of southwest China's Yunnan Province, to Maoming, one of China's largest oil-refining bases in Guangdong Province. It is expected to become the country's longest pipeline for refined oil as an important part of **PetroChina's** new five year plan.

The southwestern region, which includes Yunnan, Tibet and Guangxi Zhuang autonomous regions, and Guizhou Province, relies heavily on refined oil supplied from Maoming, mainly by railway which can no longer meet the demand.

The new pipeline, designed with an annual capacity of 10 million tons, will pass through Guangdong, Guangxi, Guizhou, and Yunnan, and require 23 pumping stations.●

### Czech Republic: Transgas sale

**AT THE END** of May, Germany's **Ruhrgas** had teamed up with **Gaz de France** to bid for a majority stake in the Czech government-owned gas importer **Transgas**, as well as shareholdings in eight regional Czech gas companies.

The Czech government is planning to sell up to 97% of Transgas, and its stakes in the country's eight regional power distribution companies, by the end of this year. A significant part of Transgas' revenues comes from transit fees from gas passing through the country to western Europe, under a 20-year deal with **Gazprom** signed in 1999.

Germany's **Wintershall**, together with **RWE Gas**, are also reported to be showing interest in Transgas, as is Italy's **SNAM**.●

### Denmark: gas line to the UK?

**DENMARK'S** state-owned oil and gas company **DONG** said in May that it plans to build a \$400-million pipeline from Denmark to the UK to compensate for lost ground at home as European gas markets open. "The pipeline would compensate for a future decline in DONG's market shares in Denmark and Sweden due to the faster-than-expected European gas deregulation," DONG's CEO Holger Lavesen is quoted as saying.

The Denmark-UK pipeline could be completed after 2003; Lavesen predicted annual gas sale to the UK could be around 2Bcum/yr.

### Egypt: pipeline agreement signed with Jordan...

**EGYPT** and Jordan have recently signed an agreement to construct a \$300-million pipeline to carry Egyptian gas to Jordan. This would be the first stage in a larger scheme launched in March to build a \$700-million pipeline take about 12Bcum/yr of Egyptian gas to Jordan, Syria, Lebanon and, eventually, Turkey.●

### ...and Israel-Egypt-Turkey gas pipeline project

**TURKEY'S** foreign and energy ministries fully support plans for the construction of a pipeline to supply natural gas from Egypt

to Israel and Turkey. "This would be a deal not only commercially viable and fitting into Turkey's future gas purchase policy, but also a strategic move linking the leading powers in the region," a senior Turkish diplomat told *Pipeline Report* on 5 June. "We believe the project could serve restoring peace in the Middle East. However, one problem remains: the possible reaction from the Arab world."

The Arab League and the Organization of the Islamic Conference (OIC), of which both Turkey and Egypt are members, have called for a freeze of political contacts with Israel in protest at Israel's treatment towards the Palestinians during the current nine-month-old uprising.

Energy ministry officials said that Turkey and Egypt in January signed a preliminary agreement confirming their commitment to the project. "In the months ahead we shall work out the project details," said one official.

Turkey's **Botas** and Israel's **Merhav** are involved in plans for the construction of the proposed pipeline.●

**A**USTRALIAN-based **BHP** has been mandated by the Iranian government to examine the possibility of laying pipeline from Iran to India passing through Pakistan. Pakistan is said to be supporting the route onshore as it is keen to capitalize on the transit fee it would get; the country could earn about \$580 million transit fee from the 2,670-km long, 48-in diameter, \$3.2 billion dollar pipeline (see the story below for the offshore option, being discussed by Snam).

According to the plan, the proposed pipeline would connect *Assaluyen* gas field in southern Iran to the **Gas Authority of India Ltd's** (GAIL) HBJ pipeline in Gujarat.●

**T**HE INDIAN Ministry of Environment and Forests has given clearance to **Bharat Petroleum Corporation Ltd** for the proposed 943-km long crude pipeline from Vadinar in Gujarat in western India to Bina in Madhya Pradesh in the center of the country. The approval to lay the pipeline in the forest area of Gujarat was communicated by environment and forest minister T.R.Baalu in a letter to the petroleum minister Ram Naik, sources said.

The approval to proceed, however, states that BPCL should "lay the pipeline in the portion forming part of national park/sanctuary by horizontal drilling at such a depth so that there is no subsidence or vibration on the surface and there is no adverse impact of laying the pipeline in the forest and wildlife inside the sanctuary/national park." ●

**I**NDIA'S private-sector oil giant, **Reliance Petroleum Ltd** (RPL) has submitted a proposal to the government to set a number of 'multi-source' gas pipelines across the country. The pipeline projects will be implemented by a Reliance subsidiary, **Gas Transportation and Infrastructure Ltd**.

The first pipeline proposed will connect Cuttack in Orissa in eastern India to Jamnagar in Gujarat in western India; the second pipeline will link Goa in western India with Kakinada in Andhra Pradesh in southern India. The proposal is based on providing the country with a second source of gas supply from offshore; until now the *Bombay High* field has been the only available source, but RPL wants to bring gas ashore from fields offshore Orissa and Goa, over which it has exploration and production rights.

The Cuttack-Jamnagar pipeline is planned for implementation in two phases. In the first phase, the gas pipeline will be constructed from Jamnagar to Ahmedabad, Ujjain, and terminate at Bhopal. In the second phase, it will be extended from Bhopal to Cuttack.●

**India: BHP to examine Indo-Iran pipeline**

**Environmental clearance given to crude pipeline project**

**Reliance proposes to multi-source pipelines in India**

## 500-km gas line in South India

**T**HE INDIAN government-owned gas major, **Gas Authority of India Ltd** (GAIL) is planning to lay a 500-km, \$434.7 million, natural gas pipeline in south India connecting Kasargode in Kerala state to Bangalore via Mangalore in Karnataka state by 2003. The pipeline would transport 6Mcm/d of gas, of which 4Mcm four million cubic meters will be used by a proposed 800-MW power plant at Bidadi near Bangalore. In addition, GAIL is also proposing to double the capacity of its main HBJ natural gas pipeline across seven states to 60.15Mcm/d from the current 33.4Mcm/d.●

## Iran: IGAT-3 pumping stations: new tenders

**T**HE **National Iranian Gas Company** has changed the specifications of a late-2000 tender for compressor stations for the IGAT-3 gas pipeline, and plans to issue a new date for bid submissions. The project is valued at about \$500 million.

NICC invited bids for 12 compressor stations in December, setting a closing date of 31 January, then extending it to 15 March. Bidders say they were later notified that the tender modifications includes the number of stations, which was being reduced to six.

The 56-in diameter IGAT-3 pipeline will run from Bandar Assaluyeh – the onshore gas-treatment plant for the **South Pars** offshore gasfield – to the central and northern regions of the country. It will probably be constructed in two separate sections. The plan could well be extended to include production from the Nar-Kangan onshore gasfield as well.●

## Iran-India gas pipeline feasibility

**I**TALY'S state-owned energy corporation **ENI** is reported to be working on a feasibility study for the construction of the offshore gas pipeline from Iran via Pakistan to India. Iran's gas reserves, among the world's largest, could find a ready and enthusiastic market in India, but political tensions with Pakistan make transporting the gas through its territory highly politically sensitive – but see the story above for the onshore option being discussed by BHP.

ENI's engineering subsidiary **Snam** is examining costs and the technical feasibility of a project, which would call on expertise similar to that being used to construct the Russia to Turkey pipeline via the Black Sea, known as *Blue Stream* (see below). A deepwater Iran-India pipeline would entail massive investment and pose major technical challenges.●

## Iraq: asserts claim to disputed Saudi pipeline

**I**N MID-JUNE, Iraq confirmed that it would continue to claim ownership of the oil pipeline that runs through the country, and that was seized by Riyadh after the Kuwait invasion of 1990. Iraq also said it would seek damages for losses sustained since the pipeline's closure almost 11 years ago. "Iraq will continue to claim its ownership over this pipeline and affirm its right to compensation from Saudi Arabia for losses suffered since exports stopped via the pipeline on 12 August, 1990," a foreign affairs ministry spokesman said. "The Saudi move constituted an illegal seizure, and Iraq has provided the United Nations and the Arab League with proof of that," he continued.

Saudi's Defence Minister, Prince Sultan bin Abdel Aziz, is reported to have responded by saying that "it is a Saudi pipeline, built by Saudi Arabia to help export Iraqi oil, and Baghdad has no right to demand compensation."

Saudi authorities announced the seizure of the pipeline, which was built in the late 1980's at an estimated cost of \$2.2 billion to transport Iraqi crude to the Red Sea, in a letter to the United Nations on 4 June 4. Saudi Arabia disconnected the 1.65Mbrl/d pipeline, which came on-line in September 1989, after Iraq invaded Kuwait in August 1990, and it has not been used since.●

A STUDY is to be funded by the Kenyan government is to consider the viability of extending the Mombasa-Eldoret oil pipeline from Eldoret to Kampala in Uganda. Officials of the Ugandan Ministry of Energy and Mineral Resources said that the funds being provided by Kenya would be part of project costs, and would be recoverable once the two countries hand the project over to a private-sector operator.

If the project goes through, the extension will result in a significant reduction in the price of oil products in Uganda, Rwanda, and the eastern Democratic Republic of Congo, all of which import refined oil products through Kenya.

The consultancy that wins the award will look at the viability of extending the oil pipeline from Eldoret in Kenya to Namanve near the Ugandan capital. The consultants will review and update work that has so far been carried out, including a feasibility study by an international consultant in May, 1995, and also undertake a cost-benefit analysis of competing modes of transport.

If the existing infrastructure requires major repairs, the extension of the pipeline to Kampala will be that much more expensive. Kenya has already carried out a technical review of the existing infrastructure and the findings will be incorporated in the final Kenya-Uganda oil pipeline study report.

The pipeline will likely have a capacity of 220,000li<sup>3</sup>/hr, and save Uganda the cost of transporting fuel by road and rail. In 1995, the cost of extending the pipeline was estimated at \$80 million.●

**Kenya: study on oil pipeline to Uganda**

THE Norwegian government is to create a new company, **Gassco**, to operate the country's extensive gas export pipelines and its terminals in Germany, France, and Belgium. Gassco has been created only to provide 'neutral' management for the Norwegian transport infrastructure in the light of the pending privatization of the government's stake in **Statoil**. The government takes the view that it would be unwarranted to allow any private company, including a future Statoil, to control the country's gas pipeline infrastructure, as Statoil currently does.

On the subject of open-access to the pipeline system, the Norwegian government pledged a year ago to enact the European Union Gas Directive provisions for open access, provided that this was "subject to resource management criteria," and that five years were allowed for negotiations with Brussels. The EU says that five years is too long a time for such talks.●

**Norway: new pipe operating company**

GAS FLOW through **Statoil's Zeepipe** from the *Sleipner* field to Zeebrugge in Belgium resumed on 9 May after a month-long shut-down caused by a minor gas leak in a valve on an unmanned riser platform connected to the *Sleipner A* platform. The valve controls the gas flow from the *Sleipner East* field into Zeepipe.●

***Zeepipe* back on-line**

THE SEVEN-year old plan to build a \$400-million pipeline to export Nigerian natural gas to Ghana, Togo, and Benin, proposed by **Chevron**, is nearing reality. One of the last planning hurdles to be crossed is establishing a contract for gas supply into Ghana, and Chevron reports that it is now on the point of confirming this with the Ghanaian **Takoradi International Power Co**, a joint venture between Michigan-based **CMS Energy** and Ghana's **Volta River Authority**, the state-owned energy transmission company.

**Nigeria: West Africa gas pipeline progress**

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Where are they?

The pipeline project entails building a mainly-offshore pipeline that will connect to the Escravos-to-Lagos line near Itoki. The 57-km onshore portion would run south to a point near Lagos beach, from where the 800-km offshore portion would connect via spurs to terminals in the capitals of Benin and Togo, and to the Ghanaian ports of Tema, Takoradi, and Effasu.●

**Russia: new gas pipeline to Germany?**

**GAZPROM, Ruhrgas AG, Wintershall AG, and the Fortum Co** are reported have agreed on a project to construct a new gas pipeline from Russia to Germany across the Baltic Sea (the 'North European Gas Pipeline'), which would become a major new route for Russian natural gas supplies to Western Europe. This agreement was follows meeting of CEOs of these companies in Moscow on 24 April. A business plan is now being prepared, with initial design being undertaken by Gazprom and Fortum.●

**Teton completes Russian pipeline**

**A** 40-km long oil pipeline has been constructed in western Siberia by US contractor **Teton Petroleum Co** of Steamboat Springs, Colorado. The pipeline will enable the company to produce oil on an all-year-round basis from the *Eguryak* field, 20 miles north of the *Samotlor* oilfield. Teton began developing the *Eguryak* oilfield in 1997, and has been producing oil since later that year. From that time to the present, the company has had to transport the oil by road tanker in the winter and by river barge in the summer, shutting down production in the spring and autumn due to the rapidly-changing weather conditions.●

**Turkey: all eyes on critical criminal report in Turkey's *Blue Stream* probe...**

**T**HE FUTURE of a comprehensive Turkish probe into the *Blue Stream* gas pipeline project depends on the findings of a committee of experts, made up mainly of finance ministry inspectors, judiciary officials have said. They said State Security Court Prosecutor Cengiz Koksak has sent the documents he had seized from the headquarters of state oil and gas pipeline company **Botas** and from **Turusgaz**, a partnership between Botas, Russia's gas monopoly **Gazprom** and Turkish construction concern **Gama**, to the committee of experts for a critical criminal report. "If the criminal report finds out any wrongdoing in *Blue Stream* dealings, the prosecutor will inevitably file a suit against the managers o both firms," a senior judge told **Pipeline Report** on 7 June.

On 24 May, Turkish paramilitary police raided the Ankara headquarters of Botas and Turusgaz. The investigation in *Blue Stream* is part of a wider probe into alleged graft in Turkey's energy sector, code-named 'White Energy'.

"We are closely cooperating with the prosecutor on this probe," Botas' general director and Turusgaz's board chairman Gokhan Yardim told **Pipeline Report** on 6 June. "We have handed out all documents linked to Blue Stream. All phases of this project had been documented through a law passed in (Turkish) parliament last year."

The probe into the project was launched in early May after an appeal by the main opposition Virtue Party that the project had incurred losses to the state by making a \$52 million downpayment to a consortium building the Turkish section of the pipeline. Botas says the downpayment was made as part of the intergovernmental agreement signed between Russia and Turkey, and later ratified by he parliaments of the two countries.

In April, Turkish Energy Minister Cumhur Ersumer resigned over the White Energy investigation under which nine people, including a former minister and senior energy bureaucrats, are currently under custody. On 26 May Ersumer's successor, Zeki



Cakan, ordered a probe into the top bureaucrat in the ministry, Undersecretary Yurdakul Yigitguden, into alleged corruption in state tenders.

Most recently, Turkish Interior Minister Sadettin Tantan, who had angered his own Motherland Party, the junior partner in Turkey's tripartite coalition, by letting police carry on inquiries into the energy ministry and Botas, was forced on 6 June by Deputy Prime Minister (and Motherland's leader) Mesut Yilmaz to resign. Yilmaz has accused Tantan of betraying his own party.●

**T**URKISH pipeline officials have said that the continuing corruption investigation into in the *Blue Stream* project (see above), and uncertainties over the future of a complex legal procedure, may cause further delays in the ambitious project as the Russians are facing difficulties raising funds for *Blue Stream* as a result of the Turkish investigations.

Under an updated schedule, the proposed pipeline that will carry 16Bcm of Russian natural gas to Turkey annually, and will start pumping by February, 2002. There were press reports that the project would be delayed until 2003 because of financing problems.

In a written statement, Botas said last month the project was going "full speed ahead," but some analysts said the company had made the announcement in efforts to quash mounting speculation that the project would be suspended altogether following the findings of the corruption probe. But on 29 May, European and Japanese banks opened a \$1.76 billion credit line for the \$3.3-billion project. The first tranche of the loan, guaranteed by a group led by Italy's export credit agency **SACE**, will amount to \$300 million.

Under the current plan, the *Saipem-7000* pipelaying barge will arrive in the Black Sea in August and will start by the end of the month building the underwater gas export line between the Turkish and Russian coasts.●

**R**USSIA'S gas monopoly **Gazprom** is planning to enter Turkey's gas distribution market after a new law was passed last month by the Turkish parliament to liberalize the sector. Gazprom's management board member Yuri Komarov said on 16 May that the company planned to enter the Turkish gas distribution market with **Botas** or another company.●

**T**URKEY and Iraq are in talks to build a gas pipeline to carry Iraq's exports to Turkey's Mediterranean port of Ceyhan. But Turkish officials said the US administration opposed the plan.●

**T**URKEY has put out an international prequalification tender for engineering, procurement, and construction for the Turkish section of a pipeline that will carry Caspian crude to western markets. **Botas** said the tender would include the laying of 1,070km of pipeline divided into three segments inside Turkey. Bidders are also asked to make proposals for metering and pumping stations on the pipeline and tank farm and a jetty at Ceyhan terminal on the Mediterranean coast. The project is estimated to cost \$1.4 billion.●

**F**OUR INTERNATIONAL and local companies are at the top of the bid list to be awarded the contract to construct pipelines and plant for the new Fujairah power and desalination complex in the

...and *Blue Stream* faces delays, seen to start pumping by February 2002

Briefs...

UAE: Fujairah water lines

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Who does what?

UAE. A 24-month contract is anticipated for award by the end of next month (July) for the construction of storage tanks, associated facilities, a 185-km pipeline running from the plant at Qidfa to Al-Ain, and a 25-km long pipeline extending the system to Dhaid.

The contractors who are currently involved in the bidding process are Athens-based **Consolidated Contractors International Co**, local **Al-Jaber Energy Services** in j-v with **Technip** of Germany, and the locally-based **Pan Arab Enterprises for Pipeline Construction**. The project is being funded by the Abu Dhabi government, which has mandated **UAE Offsets Group** to oversee its construction.●

## Prequalification for Dolphin project

**P**REQUALIFICATION announcements were issued in mid-May for companies interested in constructing the various parts of the massive *Dolphin* project, which is designed to provide around 2000Mcu/d of gas from Qatar's *North* field to Abu Dhabi and Dubai. A critical component of the project is the 350-km long, 48-in diameter, offshore pipeline from the *North* field to landfall at Ras Laffan.

Among contracts to be awarded are the environmental impact assessment for the pipeline, together with onshore portions from Ras Laffan to Taweelah and Jebel Ali, the route survey for the pipeline, and the design and engineering for upgrading the UAE's existing gas-distribution network to allow for the new source of fuel.

The overall project is being managed by **Dolphin Energy**, based in Jersey, UK. First gas is planned for early 2005.●

## UK: *Elgin/Franklin* start-up

**A**LMOST A year behind its original scheduled start-up, due to a range of unexpected cost and geological snags, production from the **TotalFinaElf**-operated *Elgin* field began on 31 March. The field is expected to be processing around 5% of the UK's gas output by early July, although **Gaz de France** will be its biggest customer. The field's production comes four years after the official launch of the gas-condensate development; subsequent overall investment in has amounted to £1.65 billion, making it one of the most significant developments on the UK continental shelf in recent years. Both *Elgin/Franklin* and the adjacent **Shell**-operated *Shearwater* field are highly technically challenging because of the high pressure (1100bar) and temperature (200°C) of reserves.

Gas from the field is transported by the 468-km long SEAL pipeline (Shearwater Elgin Area Line) to Bacton, and thence to Gaz de France via the Interconnector pipeline from Bacton to Zeebrugge.●

## USA: Alaska gas line options

**W**ILLIAMS has announced plans to increase its efforts to pursue Arctic gas and liquids development. Cuba Wadlington, Jr, executive vice president of Williams and president and chief executive officer of **Williams Gas Pipeline**, recently met with Governor Tony Knowles' Alaska Highway Gas Policy Council in Anchorage, to stress the company's commitment to building a pipeline to deliver natural gas from the North Slope to markets in Alaska, Canada, and the lower 48 states. Wadlington also announced the commencement of a feasibility study to look at new petrochemical investments in Alaska.

"Williams has been very active in the development of Alaska's energy resources for more than a generation," Wadlington said. "We were deeply involved in the Alaska North Slope gas project when it was first discussed in the 1970s. Williams is initiating a process to substantially accelerate efforts to participate in the development of a pipeline that will bring North Slope gas to market. The production of this gas also brings the potential for new natural gas liquids investments, such as the potential for petrochemical development in Alaska."

The team will be charged with conducting an extensive assessment of the numerous opportunities surrounding an Arctic gas pipeline, ultimately assisting in the development of a solution for moving Arctic gas and liquids to market that optimizes the interests of all stakeholders. With an extensive infrastructure already in place, Williams currently has more than \$340 million in fixed assets in Alaska, while in Canada the company owns a 14.6% interest in the Alliance pipeline system, which delivers 1.5Bcf/d of wet gas from Western Canada to the Chicago area. Extensive gas-processing and natural gas liquid production, fractionation and storage capacity has also been acquired in British Columbia and Alberta.

Williams is supporting the so-called Alaska Highway route for the gas-export line from Alaska, which would originate at Prudhoe Bay, run parallel to the existing TransAlaska Pipeline System to a point near Fairbanks, and then would turn east into Canada's Yukon Territory along the path of the Alaska Highway."This route was fully permitted in the 1970s and 1980s, Wadlington said. "Not a lot has changed in Alaska along the route of the proposed pipeline in that 20-year time frame, so the proposal could be pulled into final form and approved quickly" he continued.

Other plans are being discussed by the North American Natural Gas Group, a consortium of current North Slope producers made up of **BP**, **Exxon Mobil**, and **Phillips**, and Houston-based **Arctic Resources**, the proponent for an 'over-the-top' route that would follow the Alaskan-Northwest Territories coastline from near Prudhoe Bay to the Mackenzie Delta. It then would follow the Mackenzie River and Valley to an interconnection with existing Canadian gas pipelines in Alberta and British Columbia, along a route around 650km shorter than the other proposals.●

**T**HE SALT LAKE group of pipeline-operator **Williams** completed construction of expansion facilities on its Kern River natural gas transmission system on 1 July. The company filed an application with the Federal Energy Regulatory Commission on 15 March for a certificate of approval to proceed with the expansion project, adding 135,000 dekatherms per day of firm transportation service from Wyoming to California.

"We received FERC approval within three weeks of filing – an unprecedented turnaround. This allowed us to expedite the construction process and bring additional supplies of natural gas to the California market," said Kirk Morgan, director of business development for Kern River. "We anticipate most of the new natural gas will go directly to power generation facilities."

The emergency expansion project added two new compressor stations in Utah and one in California, as well as upgraded compressor units at three existing compressor stations in Wyoming, Utah, and Nevada. The installation of these facilities increased the transportation capacity on Kern River by 19%. Williams completed the multimillion project more than three weeks ahead of schedule.

"The extraordinary effort put forth by our contractors, employees and permitting agencies resulted in a successful completion of the project ahead of schedule," stated Micheal Dunn, manager of project management for Kern River. The Kern River Gas Transmission system operates a 1480-km long system delivering Rocky Mountain and Canadian natural gas to markets in California, Nevada, and Utah. The expanded system has a design capacity of 835Mcf/d.●

**Kern River  
expansion  
completed ahead  
of schedule**

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# COMPANY NEWS

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## Full-scale propagation test on x100 pipe is a success

A FULL-scale fracture-propagation test of a high-pressure gas pipeline has been successfully completed by **Advantica** at its Spadeadam test site in Cumbria, UK. This is the first in a series of full-scale fracture-propagation tests being conducted by the company on behalf of **BP**, **TransCanada PipeLines**, **Alliance Pipeline**, and **BG International** in a joint-industry project to study the fracture resistance of transmission pipelines manufactured from high-strength X100 grade steel. The pipes for the first test were provided by the Japanese steel manufacturer, **NKK**.

Dr David Batte, project coordinator, said: "The tests are designed to assess the ability of a pipeline to arrest a propagating ductile crack such as that which might occur following the unlikely event of direct impact on the buried pipeline by civil-engineering plant. The results will form the basis of guidelines for the safe design of next-generation pipelines using X100 steel.

"During the first test, the crack was arrested by the pipeline material and the gas released was deliberately ignited, resulting in a large fireball that reached over 300m in height and lasted about 15 seconds."

With origins in British Gas, Advantica - formerly BG Technology - is a leading provider of technology and engineering services to customers in gas, pipelines, and associated industries world-wide. It recently acquired **Stoner Associates**, a major software-simulation company in the US, for \$26m. Stoner specializes in providing off-the-shelf products for the gas, oil, petroleum and water industries, primarily in North America. ●

## Singapore pipeline operators advised on gas market liberalization

ADVANTICA'S training services team is using its extensive knowledge of gas market liberalization to help prepare **PowerGas** of Singapore for the imminent deregulation of the Singapore gas industry, to be phased-in over a three to five year period commencing in two years' time.

Tom Clarke, business development officer at Advantica, said: "The Singapore gas industry is poised for deregulation and PowerGas is keen to learn from our UK experience. As operator of the Singapore pipeline infrastructure, PowerGas will be responsible for converting the network from manufactured town gas to natural gas and for upgrading the pipeline from 2 to 28bar. The current course is designed to assist PowerGas through the complex planning stages necessary to ensure effective implementation when liberalization comes into force." ●

## Letter of intent for gas supply to Townsville nickel refinery

WOODSIDE Energy Ltd, Shell Development (Australia) Pty Ltd and QNI Pty Ltd have signed an exclusive letter of intent (LoI) specifying key commercial terms for the supply of natural gas from the Woodside operated Sunrise Gas Project in the Timor Sea, to QNI's Yabulu nickel and cobalt refinery located at Townsville.

The LoI proposes gas supply over a 20-year period, commencing at 12.5 petajoules/yr and potentially increasing to 19 petajoules/yr within the first two years. The gas would be used for power generation and process feedstock, providing QNI with a long-term secure and clean energy source capable of supporting future expansion at the refinery. ●

**MIKE** Caulfield was awarded the **Phoenix Natural Gas** Chairman's Award in recognition of his significant contribution to the Northern Ireland gas industry, at the prestigious Northern Ireland gas industry awards dinner held on 31 May. The awards dinner, now in its fifth year, was attended by heads of business from Northern Ireland, the Republic of Ireland, Great Britain, Europe, and America and hosted by Phoenix Natural Gas. The awards celebrate the contributions of individuals and companies in the growth of the natural gas industry in Northern Ireland; this year's theme was 'Delivering customer growth'.●

Northern Ireland  
gas industry award

**UK-BASED AMEC** has bolstered its consulting, engineering, and project-management capability in Indonesia with the establishment of a new joint venture, **AMEC Berca Indonesia**, which will focus on the country's rapidly-expanding oil and gas industry. The new company, formed between AMEC and local enterprise **Berca Engineering**, has also acquired the assets of **Bakrie Engineering**, which provides design and engineering services for offshore oil and gas facilities.

AMEC expands  
capability in  
Indonesia

AMEC Berca Indonesia will operate from the former Bakrie Engineering offices in Jakarta, and is already working on four of Bakrie's recently awarded engineering contracts. These include: a pipeline project for **Total's** Tuna project; a pipeline from the offshore *Natuna* field to Malaysia for **Conoco**; modifications to existing topside facilities and pipelines for **Kodeco Poleng**; and service activities on existing platforms for Maxus.●

**BJ PROCESS and Pipeline Services** has opened a new operations facility in Calgary, Alberta, to house the global headquarters of its pipeline-inspection services group, headed-up by general manager Dale Kakoschke. Although BJ Pipeline Inspection Services has always maintained its world headquarters in Calgary, the new complex offers significant benefits to clients and staff.

New HQ for  
pipeline-inspection  
company

With 80 permanent staff currently based in Calgary, BJ Pipeline Inspection Services will continue to provide critical pipeline inspection services to pipeline owners and operators in North America and world-wide.●

**ABERDEEN-based Copipe Systems Ltd**, part of the **PSL Group**, has reported two successful projects for its patented and award-winning subsea pigging unit (SPU).

Success for the  
subsea pigging  
unit

The first project was a 59-km, 16-in diameter pipeline offshore UK, where the unit was positioned in only 16m of water, the most shallow job completed to date. The SPU flooded the pipeline during actual installation thus allowing the client to significantly reduce wall thickness.

The second project was 1366m deep offshore West Africa, where a 2-km, 8-in pipeline was successfully flooded. This is the deepest project completed to date.

Les Graves, commercial director, said: "These two projects show how flexible our SPU is in regard to application and water depth. Shallow-water flooding proves that use of the SPU is not limited to deepwater projects. Our success in West Africa does, however, demonstrate the potential for us in what is seen as the future growth area of the pipeline industry. We are extremely pleased to add this

<http://www.pipedir.com>

A directory of pipeline  
companies, services,  
and equipment

job to our track record and can see a huge potential in global deepwater areas.”●

### Multi-frequency acoustic listening system

**CROSTEK Corp** (formerly **Canadian Pipeline Services International**) has developed a high-tech digital acoustic listening system. The unit was developed at the request of pipeline companies to fill a void in the market place for pigging operators to acoustically track pigs, find stuck pigs, and to find leaks in underground valves, etc., using the latest multi-frequency technology available.

Unlike traditional geophones, Crostek has designed-in a frequency-attenuation system to enhance the sounds of a pig travelling through the line, taking account of external variables such as soil type, compaction and porosity, and the internal variables with regard to sound and vibration attenuation that are found in different pigs and product types in a pipeline. ●

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## ORDERS & CONTRACTS

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### Anglian Water completes pipeline over the Danube in Serbia

**T**WINE 500-mm diameter steel pipelines taking water over the Danube in Novi Sad, Serbia, were opened on 8 May by Charles Crawford, the British Ambassador to Yugoslavia. This is one of a number of UK-government-funded projects to help rebuild the damaged infrastructure following the Balkans war.

Engineers from **Anglian Water Technology Group** based in Peterborough managed the design-and-build project through to completion in just four months following acceptance of their proposals.

The destruction by bombing of all three bridges over the Danube at Novi Sad, Yugoslavia's second largest city, cut vital water pipelines between the sourceworks and the treatment works. Since then the residents have had intermittent access to running water. Following the completion of the new 360-m span box girder Varadin Bridge, over the river Danube, by the Serbs themselves, the way was open to construct new pipelines through the bridge

Anglian Water's design manager, Philip Laws, commented that the Serbs were skilled engineers but lacked the funding and resources to manage the pipeline project themselves. He explained that every effort had been made to involve Serbian companies in the pipeline construction and hence generate local employment. Anglian used **Novi Sad University** to carry out the structural analysis of the pipeline, **Shipyard Novi Sad** to fabricate the steel pipes, and contractor **Mostogradia** were appointed to install the pipeline. Special pipeline movement joints were supplied from the UK by **KE Burgmann** of Congleton but the other materials were locally sourced

Richard Smedmore, a senior engineer with Anglian Water Technology Group, who has wide experience of large-diameter steel pipelines, made frequent visits to oversee the pipeline fabrication and installation, and was pleased with the ingenuity shown to complete the project with very limited plant and a very tight timescale and budget. Philip Laws explained that he was impressed by the determination of the engineers of Novi Sad water and sewerage company to maintain existing supplies during and after the hostilities. ●

### Flexible pipe contract for Nansen and Boomvang

**W**ELLSTREAM, a member of **Halliburton Co's** energy services group, has been awarded two contracts as part of **Kerr-**

**McGee's** development of the *Nansen* and *Boomvang* fields in the Gulf of Mexico.

The first contract is for the design and supply of 5.625-in, 6,000-psi, flexible pipe production risers and tie-in jumpers for the project. The risers will be installed in a catenary configuration on the *Nansen* and *Boomvang* spars for infield production, and will enable the operator to offset the spars for future on-site drilling. The tie in jumpers will be used to connect rigid flowlines and subsea trees. Manufacture of the risers and jumpers will be undertaken in Wellstream's Panama City, Florida, facility, for delivery in August.●

**T**HE CONTRACT to supply one 8-in internal diameter, and three 16-in internal diameter dynamic topside jumpers to single-buoy moorings (SBM) for **Shell's EA** field development offshore Nigeria has been awarded to **Wellstream**.

The jumpers will connect the field's floating production, storage, and offloading (FPSO) vessel and a soft-yoke mooring platform (SYMP). At 16-in internal diameter, these jumpers will become the largest diameter flexible pipes yet to be produced by Wellstream at its state-of-the-art manufacturing facility in Newcastle upon Tyne, UK, for delivery in June, 2002. The jumpers have been designed to withstand the severe operational conditions imposed by close proximity to the flare stack and degradation from prolonged exposure to ultra-violet radiation.●

**A** CONTRACT to supply a 6-in potable water line for the transportation of water from St Thomas to St Johns in the US Virgin Islands has been awarded by **Pirelli Inc** to **Wellstream**, the first order for the pipe manufacturer in the utilities market. The smooth-bore product will be designed and manufactured to the American Water Works Association's Standard C906-99 for potable water in the company's Panama City, Florida, facility, and will require the use of food-grade high-density polyethylene for the inner barrier.●

**T**HE ALASKA North Slope gas producers (**BP**, **Exxon Mobil**, and **Phillips**) have announced a series of contract awards to assess the feasibility of constructing a pipeline system to deliver natural gas from Alaska's North Slope to the rest of North America. The Canadian Environmental / Regulatory services contract has been awarded to **AMEC's** Earth and Environmental operation, based in Calgary, Alberta. AMEC - along with its major team members **Golder Associates** and **AXYS Environmental** - will dedicate over 80 staff in Alberta, British Columbia, Northwest Territories, and the Yukon to this project.

This contract will serve as a foundation for permitting and filing of applications with Canadian regulatory agencies. Evaluating environmental and social impact is an important consideration of the project work programme. Contract scope will include conducting environmental studies necessary to allow successful applications to all relevant Canadian regulatory agencies, including the National Energy Board.●

**C**OFLEXIP **Stena Offshore Inc** has been awarded a contract by **Shell Exploration & Production Co** for the installation of the infield flowlines and risers by the *CSO Deep Blue* for the ultra deepwater *NaKika* project located in the Mississippi Canyon in the Gulf of Mexico, at water depths ranging from 1,800-2,100m.

This project defines new frontiers for the industry, both in terms of working depths and the level of technology applied to the design

...16-in internal diameter flexible pipe award...

...and flexible, potable-water, line in the Virgin Islands

Alaskan environmental contract

Flowlines and risers in the ultra deepwaters of the GoM

and installation of flowlines and risers. The *CSO Deep Blue's* systems will enable the installation of the deepest ever pipe-in-pipe system using the J-lay process, and the deepest-ever fully-reeled steel riser, as well as the deepest ever pipe-in-pipe steel catenary riser.

The *NaKika* project ties-back five fields, using subsea techniques, to the *NaKika* floating development and production platform located in Mississippi Canyon block 474, in the Gulf of Mexico. The contract awarded to CSO involves the installation of over 160km of high-specification flowlines, including an 8-in reeled gas flowline, an 8-in-12in reeled pipe-in-pipe system, a J-laid 10-in-16in pipe-in-pipe system, and steel catenary risers (SCRs). The SCRs, also installed by J-lay, will include an 18-in oil-export riser, a 20-in gas-export riser, and two pipe-in-pipe SCRs of 8-in-12in, and 10-in-16in, respectively, as well as two 8-in risers and two 4.5-in gas-lift risers.

CSO will also be responsible for the design and fabrication of the 8-in-12in reeled pipe-in-pipe system, based on a similar successful project recently completed in the GoM.●

### **North West Shelf LNG train expansion**

**T**HE OPERATOR of the Australian North West Shelf Venture, **Woodside Energy Ltd**, has awarded £180million in contracts for the North West Shelf Train 4 expansion project on the Burrup Peninsula, Western Australia. Further contracts are expected to be awarded over the next six months, including contracts for civil engineering works.

The fourth LNG train will have a capacity of 4.2 million tonnes per annum, and the project will be completed by a 42-inch diameter pipeline connecting the plant and the Venture's gasfields. First LNG production from the new LNG train is scheduled for mid-2004.

The six equal participants in the North West Shelf Venture are Woodside Energy Ltd (operator); **BHP Petroleum (North West Shelf) Pty Ltd**; **BP Developments Australia Pty Ltd**; **Chevron AustraVia Pty Ltd**; **Japan Australia LNG (MIMI) Pty Ltd**, and **Shell Development (Australia) Ltd**.●

### **Balmoral scoops Danish deal for elastomer products**

**A**BERDEEN-based **Balmoral Group** has been awarded a £375,000 bend restrictor contract from Denmark's **NKT Flexibles** to produce one of the largest bend restrictors ever manufactured - weighing 390kg per pair - at its Aberdeen site. The restrictors, to be deployed on the *Triton Ceiba* development offshore West Africa, are interlocking modules installed around the flexible risers, flowlines, and jumpers to ensure minimum bend radii are never exceeded.●

### **Lawrence secures £550,000 Heathrow contract**

**A** £500,000 contract from **BPA** to divert an existing 20-in fuel main at London's Heathrow airport, as part of the £multi-million extension to the airport's Terminal 1, has been awarded to **Lawrence**.

The first six weeks of the 16-week construction phase are the most intensive, including reconfiguring existing stands, repositioning hydrant pots, constructing a new valve chamber in reinforced concrete with reinstatement using pavement-quality concrete, and a 100-m section of new pipeline. Of the remaining section, half will run under existing buildings and be laid in a limited headroom environment.

The project includes a total of three tie-ins, with one highly complex tie-in on a live four-way road junction. The scheme is an essential part of the Terminal 1 redevelopment work, which will provide additional baggage handling and infrastructure modification. Maintaining airport refuelling facilities throughout these works is an operational necessity.

Work is taking place currently and will continue throughout the busy summer season, with completion programmed for September.●