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LNG

PROCESSING

**AUSTRALIA : Shell plans to develop floating LNG technology at Prelude and Concerto gas discoveries – CNR/48/24/1**

Shell announced recently that it plans to develop its Prelude and Concerto gas discoveries, located in the Browse Basin off the northwest coast of Western Australia, using its innovative Floating Liquefied Natural Gas (FLNG) technology. Shell's FLNG solution is able to process gas 'in situ' over an offshore gas field, reducing both project costs and the environmental footprint of an LNG development. Shell is the Operator and 100% equity holder of the WA-371-P permit, containing the Prelude and Concerto fields, which would be developed sequentially. While pending a Final Investment Decision, the Prelude FLNG Project is now in the Front End Engineering and Design (FEED) phase of development. FEED for Prelude is being undertaken as part of Shell's contract with the Technip- Samsung Heavy Industries consortium for the design, construction and installation of multiple FLNG facilities. Jon Chadwick, Shell's Executive Vice President – Australia, Upstream International, said: "This Project will produce LNG, condensate and liquefied petroleum gas during its 20-plus years of operation and it will contribute to Australia's economy through employment, tax revenue and business opportunities for Australians.

This project is fast moving, with Prelude discovered in January 2007 and Concerto in late March 2009." Shell is currently working on the environmental and production approvals for the Prelude FLNG Project, with the Environmental Impact Statement soon to be released for public comment. The dimensions of Shell's FLNG facility are approximately 480 by 75 metres, with the capacity to produce around 3.5 million tonnes per annum of LNG, as well as condensate and LPG. Shell's FLNG solution means the facility can be re-deployed to another gas field once production at one gas field is complete, and its standardised "design one, build many" approach allows repeatability gains to be captured during design and construction phases. It is suitable for more distant offshore fields, remains on station during harsh metocean conditions such as cyclones, and can process a wide range of gas compositions. (Shell press release, October 10, 2009)

**BRAZIL : Tenders for Floating LNG plant to be launched soon – CNR/48/24/2**

Petrobras will launch soon tenders for a floating natural-gas liquefaction plant, with proposals for the unit expected in less than a month. Petrobras' initial plans are to have the company's first floating LNG plant operational by 2015, said Research and Development Executive Manager Carlos Tadeu da Costa Fraga. The unit will liquefy natural gas produced from the so-called subsalt oil discoveries off Brazil's coast that are expected to produce about 200 million cubic meters a day by 2020, Fraga said. The so-called subsalt discoveries were made under a thick layer of salt in the Santos Basin off the coast of Sao Paulo and Rio de Janeiro states. Petrobras faces daunting technological and logistics challenges to developing the offshore fields, which lie 300

kilometers to 400 kilometers off Brazil's coast. The company has considered pipelines to shore, but LNG would offer the greatest amount of flexibility. With LNG, we could ship to markets anywhere," Fraga said. The Brazilian company expects to boost imports of LNG rapidly in coming years, rising from 1.1 million cubic meters a day in 2007 to about 33.1 million cubic meters a day in 2012. Petrobras, however, has so far dismissed the possible use of compressed gas for natural gas produced from the subsalt region, Fraga said. "It's a very expensive system," Fraga said, noting that one ship is required to compress the gas, while another is required for transport to shore. That reduces the feasibility when considering the possible volumes expected from the subsalt reserves. (Dow Jones, October 6, 2009°

**INDONESIA : Full production at Tangguh LNG plant expected to begin soon – CNR/48/24/3**

BP said recently its Tangguh liquefied natural gas plant would achieve soon full production after a total shutdown at the huge plant in August 2009. Nico Kanter, BP's Indonesia country head, said "Train 2 has been producing LNG since October 2 and Train 1 started on September 25, with full production expected to commence this month". BP is expected to export its fourth shipment of 150,000 metric tons of LNG to China National Offshore Oil Corp.'s terminal in Fujian province, Raden Priyono, head of upstream oil and gas regulator BPMigas, said. BP would deliver only 16 shipments of LNG in 2009 — only about 28 percent of BPMigas' target of 56 shipments for the year for Tangguh — because of technical problems with commissioning. The \$5 billion Tangguh plant is located in Papua's Bintuni Bay. The field holds 14.4 trillion cubic feet of proven gas reserves. (The Jakarta Globe, October 12, 2009°

**JAPAN : Toyo Engineering and Hitachi want to enter into small scale LNG plant market – CNR/48/24/4**

Toyo Engineering Corporation and Hitachi Ltd. will join forces to make an entry into the global market for liquefied natural gas plants, targeting small, undeveloped gas fields mainly in Australia and Indonesia. Hitachi will provide rotating equipment and power control software while Toyo

Engineering will manage projects including plant design, equipment procurement and construction. Hitachi and Toyo Engineering alliance is seeking to reduce the costs of economic-size LNG plants construction by 20%. The alliance will market relatively small plants that can produce up to two million tons of LNG per year. (Energy Business Review, October 8, 2009)

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**TRINIDAD AND TOBAGO : Lack of gas stops fifth LNG train project – CNR/48/24/5**

Trinidad and Tobago does not have enough gas to build a fifth liquefied natural gas train. In November 2008n Minister in the Ministry of Finance Mariano Browne said that train five was still on the cards and Energy Minister Conrad Enill said the Government was waiting on the findings of a study on the economics of train five, to decide if it was feasible. But recently Director of Policy in the Ministry of Energy David Small said "As of now, the gas is not all there for an expansion. It's not automatic that there will be a fifth train at Atlantic LNG.". A Ryder Scott gas audit, earlier in 2009, showed that proven gas reserves, at 15.37 trillion cubic feet, reached an all-time low in 2008. (Trinidad Express, October 12, 2009)

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**VENEZUELA : Sonatrach and PDVSA in LNG projects talks – CNR/48/24/6**

Sonatrach's CEO, Mohamed Meziane, said recently that Algerian state the energy group is in talks with Venezuelan oil company PDVSA over a joint venture in two liquefied natural gas projects and plans to boost expansion abroad. "We reformulated the question of our participation in these projects. On that matter, Venezuelan

President Hugo Chavez said during his last visit to Algeria that he wanted to see Sonatrach participate in the Venezuelan gas sector". Meziane said. "We are studying these projects. We are waiting for the position of the two countries, whose presidents have outlined a plan under which we think we can reach something," he added. (Reuters, October 5, 2009)

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**TRANSPORTATION-DISTRIBUTION**

**QATAR : New LNG carrier delivered to Nakilat and Qatargas – CNR/48/24/7**

A Q-Flex LNG carrier was recently delivered to Nakilat and chartered on long term contract to Qatar Liquefied Gas Company Limited (4), known as QG4, at Daewoo Shipbuilding & Marine Engineering Co. Ltd., shipyard on Geoje Island. The Nakilat owned Q-Flex LNG Carrier "Al Karaana" (210,000 cm) will be used to ship LNG produced by QG4, to markets primarily in North America. (Nakilat press release, October 1, 2009)

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**WORLD : Höegh LNG signs three year time charter with Repsol for a LNG-carrier – CNR/48/24/8**

Höegh LNG signed recently a time charter agreement for the LNG-carrier "STX Frontier" to Repsol for a period of 33 months plus options. Höegh LNG takes the vessel on charter from its owner STX Pan Ocean. The STX Frontier is under construction at Hanjin Heavy Industries & Construction Co. Ltd., Korea. The vessel will enter the time charter to Repsol in July/August 2010. Höegh LNG will manage the vessel from the time

of delivery. STX Frontier is a 153 600 m3 Mark III membrane vessel with Dual Fuel Diesel Electric propulsion. Höegh LNG is in the process of renewing its asset base and has sold two of its older LNG carriers the last two years, and will take delivery of two new building Shuttle and Re-gasification Vessels (SRV) on November 2009 and 2nd quarter 2010. The Company already has the LNG-carrier Norman Lady on long term charter to Gas Natural of Spain. (Höegh LNG press release, September 28, 2009)

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**YEMEN : MISC and Yemen LNG in long term charter play – CNR/48/24/9**

MISC's latest LNG vessels, Seri Balqis and Seri Balhaf joined recently the fleet of LNG vessels delivering the gas for the Yemen LNG Project, following the signing of the Protocol of Delivery & Acceptance of the two vessels by MISC Berhad and Yemen LNG Co. Ltd. The signing also marked the commencement of long

term charter party between the two companies. Upon commencing operations, the two vessels will deliver LNG to TOTAL Gas & Power Ltd, from Yemen to USA, Mexico and major LNG terminals worldwide. Both vessels, with a capacity of 157,000 cm, were built and delivered in 2009 by Japan's Mitsubishi Heavy Industries. The contract, signed in December 2005, will see the two vessels being chartered to service Yemen LNG for a period of 20 years, with options for a further 11 years. (Seatrade Asia, October 12, 2009)

### **SUPPLIES - IMPORTS - EXPORTS**

#### **AUSTRALIA : Chevron secures gas sales agreements for Gorgon LNG – CNR/48/24/10**

Chevron Corporation announced recently that Australian subsidiaries of Chevron have signed three binding long-term Sales and Purchase Agreements (SPAs) for Chevron's share of liquefied natural gas from the Gorgon project. The agreements are for a total supply of nearly 3 million tons per annum of LNG to Osaka Gas, Tokyo Gas, and GS Caltex. Chevron will supply Osaka Gas 1.375 MTPA of LNG for 25 years. Osaka Gas will also purchase 1.25 percent equity in the Gorgon Project. Tokyo Gas will be supplied

1.1 MTPA over 25 years and will purchase a 1 percent equity stake. Supply from both agreements is expected to commence in the second half of 2014. Chevron Australia Pty Ltd and Chevron International Gas Inc., have also signed separate agreements with GS Caltex Corp. for 0.5 MTPA of LNG for up to 20 years. The LNG to GS Caltex will be supplied from the Gorgon project and other gas within the global Chevron portfolio. GS Caltex is 50 percent owned by Chevron. (Chevron press release, September 9, 2009)

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#### **ANGOLA : Sonangol eyes new LNG markets – CNR/48/24/11**

Sonangol is seeking other markets for its liquefied natural gas after prices in the U.S. fell, the head of its gas unit said. Sonangol is revising plans to ship to the U.S. most output from a LNG joint venture in the northern Angolan city of Soyo, said Antonio Orfao, president of Sonangol Gas Natural. The Angola LNG project is a joint venture with Chevron Corp., Eni SpA, Total SA and BP Plc. The project was set up "with the U.S. market in mind," Orfao said. "Given the low prices there today, we are working on the optimization of our clients". The plant is slated to start exports in February 2012. (Maritime News, October 10, 2009)

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#### **TRINIDAD AND TOBAGO : LNG exports to U.S. decline – CNR/48/24/12**

Trinidad and Tobago's LNG exports to the United States, its major market, declined during the first seven months of the last fiscal year, while increased shipments went to higher priced markets in Europe and Asia. Between October 2008 and April 2009, the United States received 129 billion cubic feet, or 33.2 percent, of the Caribbean nation's total liquefied natural gas exports, according to the government's recently published Review of the Economy 2009. "This, however, represents declines of 6.7 percent in market share and 22.4 percent of U.S. imports when compared to the comparative 2007/2008 period, and reflects increased shipments of LNG to higher priced markets in Europe and Asia," the

document stated. The United States and Spain are the two largest importers of LNG from Trinidad and Tobago. Spain's share of total exports also fell, from 25.6 percent to 24.8 percent, during the first seven months of 2008-09. About 50.5 percent of natural gas produced in Trinidad and Tobago during that period was utilized for the production of LNG. LNG for export increased by 4.4 percent to 12,393 million cubic metres, from 11,875 million cubic metres in the October 2007 to April 2008 period. (Reuters, October 12, 2009)

The Review of the Economy 2009 is available for download at:

<http://www.finance.gov.tt/documents/publications/pub421EE6.pdf>

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#### **WORLD : LNG supply predicted to exceed demand by 2013 – CNR/48/24/13**

Repsol YPF chief executive Antonio Brufau forecasted recently that global liquefied natural gas supplies will outstrip demand until 2013. "Primary gas consumption's share in the energy matrix is expected to be stable or rising in the next 25 years, at around 22 per cent; historically that share in the matrix has never stopped increasing," Antonio Brufau said. The global economic crisis has temporarily depressed natural-gas demand at a time when many new LNG production projects have begun production, Brufau indicated. However, the postponement of new projects could result in a supply deficit by the middle of the next decade. "Up to 2013 there will be a situation of excess supply. Thereafter, demand will exceed supply," Brufau said. The

anticipated supply surplus could prompt national oil companies in major LNG producing nations to deliberately restrict supplies to support prices, Brufau added. The fact that LNG is priced against crude oil in Europe and Asia could lead to more gas flowing to those regions instead of the US, where domestic prices are likely to remain weak, Brufau added. (New Europe, October 11, 2009)

### **STORAGE**

**UNITED KINGDOM : Petronas and Gazprom announce collaborative venture in LNG business and gas trading – CNR/48/24/14**

Petgas Trading (UK) Limited, a UK subsidiary of Malaysian Petronas announced recently a number of collaborative ventures with Gazprom Marketing & Trading Limited, a UK subsidiary of OAO Gazprom. The collaboration initially focused on opportunities related to the recently commissioned Dragon LNG terminal in Milford Haven, South Wales in which Petgas Trading (UK) Limited has a

50% share of the terminal's LNG re-gasification capacity. The terminal is able to supply 6 billion cubic metres of LNG importation annually. The companies have expanded the initial area of collaboration to include other gas marketing and trading activities, and discussions are on-going to deepen and extend the scope of the two companies' relationship which may include ventures beyond the UK gas market. (You Oil and Gas News, October 10, 2009)

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**UNITED KINGDOM : South Hook LNG Terminal commences operations – CNR/48/24/15**

Europe's largest LNG Terminal, South Hook, has recently completed its commissioning of Phase 1 and is now commercially operational. The South Hook Terminal is owned by a UK joint venture of Qatar Petroleum (QP) (67.5%), ExxonMobil (24.15%) and Total (8.35%). Construction of the terminal is occurring in two phases: Phase 1 has now commenced commercial operations, while Phase 2 will be completed in the first quarter of 2010. When fully commissioned, the terminal will have a total processing capacity of 15.6 million tonnes per annum of LNG and be capable of delivering up to 21 billion cubic metres per annum of gas into the National Transmission System (NTS). (Gasworld, October 8, 2009)

### **GTL**

### **USE AS AUTOMOTIVE FUEL**

**QATAR : First flight powered by a GTL-based fuel – CNR/48/24/16**

Qatar Airways made recently history by being the first airline to power a flight on a fuel made of natural gas from London Gatwick to Doha The flight was the latest step in more than two years of scientific work carried out by a consortium consisting of Airbus, Qatar Airways, Qatar Petroleum, Qatar Science and Technology Park, Rolls-Royce, Shell and WOQOD into the benefits

of using GTL Jet Fuel to power commercial aircraft. Shell developed and produced the 50-50 blend of synthetic gas-to-liquids (GTL) kerosene and conventional oil-based kerosene fuel. Qatar is set to become the world's leading producer of GTL kerosene when it is put into commercial production from 2012 at Pearl GTL, Ras Laffan Industrial City. (Arabian Business, October 13, 2009)

### **NATURAL GAS**

### **EXPLORATION – DISCOVERY**

**AUSTRALIA : Elixir Petroleum tests gas at Pompano field – CNR/48/24/17**

Elixir Petroleum Limited announced recently the successful completion of the workover of Well #1 at the Pompano Field and the recommencement of gas sales from the well. Well #1 flowed at an aggregate gas rate of approximately 3.3 million standard cubic feet per day with declining water production of approximately 325 barrels per day. (Elixir Petroleum pres release, October 6, 2009)

**RUSSIA : First well test results of Koshekhabskoye field – CNR/48/24/18**

JKX Oil & Gas plc announced recently the results of its first well test in the Koshekhabskoye field, located in the Republic of Adygea, Russia. Well 27 flowed at a stabilised rate of 13.1 MMcfd of gas and an estimated 12 bpd of condensate through a 36/64" choke with a flowing wellhead pressure of 1,741 psi. This flow rate significantly exceeds the

rates anticipated at the time of acquisition of the Koshekhabskoye field in 2007 which averaged 6 MMcfd. The Koshekhabskoye field redevelopment includes well workovers, design and installation of a new gas processing facility, replacement of the entire existing infrastructure, and laying of new flowlines. (JKX Oil & Gas press release, October 6, 2009)

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**UNITED STATES : Drilling activity must rise to meet demand – CNR/48/24/19**

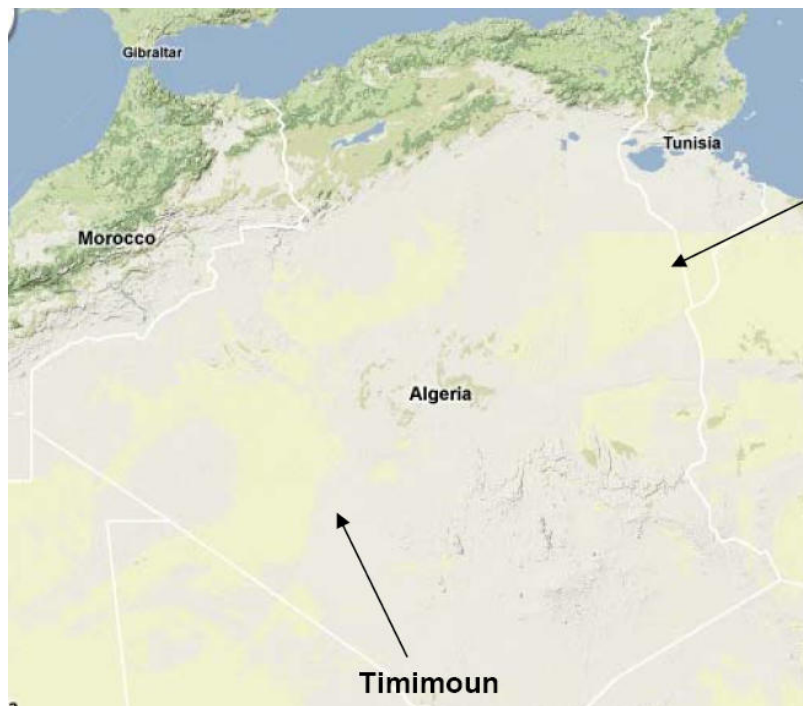
U.S. Energy Information Administration official Richard Newell predicted recently that U.S. natural gas production would decline by 3.8 percent in 2010. "Drilling activity which dropped off over the first half of 2009 as prices fell sharply appears to have stabilized and will need to increase again to meet demand," Newell said. "Natural gas has gotten cheap enough that some electricity generators have backed out of coal-fired generation in favour of natural-gas-fired generation". (Reuters, October 7, 2009)

**PRODUCTION**

**ALGERIA : Authorities agree development plan of Timimoun gas project – CNR/48/24/20**

Total, Sonatrach and Cepsa announced recently that the Algerian National Oil and Gas Development Agency (ALNAFT) has approved the development plan for the Timimoun natural gas project, located between Timimoun and Adrar in southwestern Algeria. Development work should begin in the fourth quarter of 2010, with first gas scheduled for 2013. Timimoun is expected to commercially produce around 1.6 billion cubic meters of natural gas per year at plateau. Total,

Sonatrach and Cepsa will jointly operate the Timimoun project. The development plan entails drilling around 40 wells to tap eight structures over an area of 2,500 square kilometres. It also includes the construction of gas gathering and processing facilities, as well as a connection to the pipeline that Sonatrach has been called to develop to carry gas from fields in southwestern Algeria to Hassi R'Mel. Under the marketing agreement, Sonatrach will market all the gas produced. (Total press release, October 7, 2009)



Source: Cepsa

**CANADA : Natural Gas Supply to Decline as Market Recovers – CNR/48/24/21**

The National Energy Board published recently an "Update to Short-term Canadian Natural Gas Deliverability 2009-2011. This report provides an outlook for Canadian gas deliverability (the ability to produce gas from new and existing wells) to the end of 2011. As a result, Canadian natural gas deliverability is expected to decline over the projection period. Despite the decline, projected Canadian natural gas deliverability will be more than sufficient to serve Canadian markets. (NEB press release, September 17, 2009)

The document is available to download at:

<http://www.neb.gc.ca/clf-nsi/nrgynfmrtn/nrgyrprt/ntrlqs/ntrlqsdvlvrblty20092011/ntrlqsdvlvrblty20092011-eng.pdf>

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**CHINA : Petrochina's gas project in Sichuan to start production from 2010 – CNR/48/24/22**

A natural gas project of PetroChina Co Ltd in Sichuan Province may start production from 2010. Chevron participated in the construction of the project, in which it takes a 49% stake. Both sides signed a product-sharing contract in 2007 under which PetroChina will exploit a high sulfur gas field by using the latter's technology. China

National Petroleum Corporation will be responsible for the operation of the gas field. The project is located in southwest Sichuan Province, west China, with proved natural gas reserves of 176 billion cubic meters. And the two parties announced in 2007 that they planned to build two natural gas plants there with an aggregated gas output of 7.6 billion cubic meters per year. (Steel Guru, October 4, 2009)

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**INDONESIA : First gas flows from Oyong Phase-2 – CNR/48/24/23**

Santos announced that gas production has commenced from the Oyong Phase-2 project located off Madura Island, East Java. Oyong commenced oil production in September 2007 and has produced over four million barrels to date. Oyong Phase-2 was sanctioned in December 2007 and involves modifications to the offshore facilities and construction of a 60-kilometre pipeline to a new onshore gas processing facility located in East Java. The gas will be sold to PT Indonesia Power Grati for use in the Grati power station. After an initial ramp-up period, gross gas production rates are expected to be about 50-60 mmscfd during the plateau period. The Oyong field is located in the Sampang Production Sharing Contract, approximately 70 kilometres from Surabaya in the East Java region of Indonesia. Santos (Sampang) Pty Ltd is operator with a 45% interest. Other shareholders are Singapore Petroleum Company (40%) and Cue Energy (15%). (Santos press release, October 2, 2009)

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**JORDAN : Council of Ministers approves Al-Rishah gas field development plan – CNR/48/24/24**

The Council of Ministers approved recently the partnership agreements between the National Petroleum Company (NPC) and BP for the concession of the Al-Rishah gas field, including the agreements for amending the concession, execution, share remittance, and operation. Khaldun Qutayshat, minister of energy and mineral resources, said that under these agreements, the British company will participate in two phases. The first is the phase of exploration and evaluation for a period of three to four years that is extendable for one more year, during which the company undertakes to spend 237m dollars on exploration activities, including three-dimensional seismological surveying, drilling wells, and conducting studies. In this phase, the NPC will continue with the production activities and the management of the field and will keep the production up to 50m cubic feet per day, which is the maximum capacity of the existing installations. The Minister noted that in light of the positive results of the exploration phase, BP will enter the

second phase; that is, development and production, after it announced that the project is commercially viable, and will carry out comprehensive development of the field. He added that the expected volume of production will range between 330m and 1bn cubic feet per day. The average daily amount of natural gas, which is imported from Egypt at present, is around 320m cubic feet daily. Dr. Nabil al-Sharif, minister of state for media affairs and communication, said that BP, on behalf of the government and the owner of the concession, the NPC and BP, will sell the gas locally and internationally, while it will share the profits with the government, after recovering costs, at the rate of 50 percent for the government and 50 percent for the owner of the concession. Al-Sharif said that BP will pay the government a grant of 30m dollars once it makes the final decision on developing the field, after signing the agreements for selling gas. The concession period extends until the year 2046 unless it is extended for a maximum period of eight years until signing the agreements for selling gas, which will be produced during the period of development. (Rigzone, October 12, 2009)

**KAZAKHSTAN : Total signs Heads of Agreement with KazMunaiGas to develop the Khvalynskoye field – CNR/48/24/25**

Total announced recently the signature of a Heads of Agreement (HOA) establishing the principles of a partnership with KazMunaiGas (KMG) for the development of the Khvalynskoye field, located offshore in the Caspian Sea on the border between Kazakhstan and Russia. Khvalynskoye is a conventional gas condensate field located in water depths of 25 metres which will be developed by Lukoil (50%, operator). The gas produced from this field will be transported to Russia. Under the terms of the HOA, Total and GdF-Suez will acquire a participation of 25% (Total 17%, GdF-Suez 8%) from the initial 50% stake held by KMG. (Total press release, October 6, 2009)

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**NETHERLANDS : Cirrus Energy starts production at L8-D field – CNR/48/24/26**

Cirrus Energy Corporation announced recently that its wholly-owned subsidiary in The Netherlands, Cirrus Energy Nederland B.V. commenced commercial production from the L8-D field. The L8-D field area has been unitised and equity interest partners in the L8-D Group are Cirrus (operator and 25.479%), TAQA Offshore

B.V. (15.000%), TAQA Licenses Offshore B.V. (2.880%), Energy06 Investments B.V. (1.341%), EWE AG (13.400%) and EBN (41.900%). The L11b-A06 well commenced production on October 4, 2009 and is currently producing at a constrained gross rate of 32.8 MMscf/d although production rates of 37.3 MMscf/d have been tested. (Cirrus Energy press release, October 5, 2009)

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**RUSSIA : Shtokman project delayed – CNR/48/24/27**

CEO of Total, Christophe de Margerie, confirmed recently that the Shtokman field in the Barents Sea will be delayed. He underlined that it will take five years to develop the project. Mr. de Margerie also confirmed that that gas prices must increase if the huge project is to become economically viable. It is "definitely" not economic at \$3/m Btu, he said. He also said that the three partners in the Shtokman Development AG have "a good idea of how they would develop the field, but have yet to calculate the scheme's probable cost. "That is what we have to do over the next 12 months," he added. (Barents Observer, October 12, 2009)

**RESERVES**

**WORLD : BP predicts more years of natural gas – CNR/48/24/28**

BP Plc forecasted recently that gas resources may rise 60 percent to 100 years of global use at current rates, helped by unconventional sources that are undeveloped or unidentified. New discoveries could contribute 4,000 trillion cubic feet of gas resources "over the next few years," BP Chief Executive Officer Tony Hayward said.

BP estimates that global proven natural-gas reserves totalled 6,500 trillion cubic feet, at the end of 2008, enough for 60 years. "Reserve estimates are rising sharply as technology unlocks unconventional resources," Hayward said. "Estimates vary, but the U.S. may now be sitting on between 50 and 100 years worth of recoverable natural gas". (Bloomberg, October 9, 2009)

**PROCESSING**

**CANADA : Rimbey gas processing plant comes on stream – CNR/48/24/29**

Keyera Facilities Income Fund celebrated recently the success of the Ethane Extraction Project at Keyera's Rimbey Gas Plant. As a result of this project, Keyera is extracting approximately 5,000 barrels per day of ethane from the raw gas stream. The extracted ethane is sold under a long term contract to a major petrochemical producer for use in its Alberta petrochemical facilities. To transport the ethane to an ethane transportation pipeline running through central Alberta, a 32 kilometre pipeline was built. The modifications and pipeline were completed in the summer of 2009 and the facility was put into operation in August. (Keyera Facilities Income Fund press release, October 1, 2009)

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**GHANA : Oando and partners to develop transportation, processing and storage facilities – CNR/48/24/30**

Oando Plc, Saipem SpA and Modec-Itochu of Japan will develop gas facilities in Ghana, Oando said in a recent statement. "The scope of the project includes the development of offshore and onshore high-pressure



gas transmission pipelines, a processing facility, liquefied petroleum gas and condensate storage tanks,” it said. Ghana plans to use part of the gas to fuel two power plants in the western part of the country and sell the rest to domestic and foreign customers, Oando said. (Bloomberg, October 5, 2009)

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**KAZAKHSTAN : New plant will process associated gas at Kumkol – CNR/48/24/31**

Turgai Petroleum plans to build a gas-processing plant in the Kyzylorda region in the south of Kazakhstan. The new plant will process 150 million cubic metres of associated gas per year to produce commercial dry gas and 68 tonnes of liquefied petroleum gas for residential household use. The project has come about thanks to foreign investments. The shareholders of Turgai Petroleum, Russia’s LUKoil Overseas and Chinese PetroKazakhstan have invested \$92 million. According to the head of the Kazakhstan

branch of LUKoil Overseas Service Ltd, Iskander Nasirov, the Kumkol gas plant is unique in Kazakhstan. Turgai Petroleum Director General Alik Aidarbayev said “With this plant in operation, we will be able to not only meet the internal demand for household gas but also to export any surplus. We already have agreements for its supply to the Ukraine, Poland and the Czech Republic.” The other product of the gas-processing plant, commercial dry gas, will be delivered to the nearest gas turbine station to generate electricity for the Kyzylorda region. (New Europe, October 11, 2009)

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**NIGERIA : More investment required to eliminate gas flaring – CNR/48/24/32**

Shell Petroleum Development Company of Nigeria Limited (SPDC) said recently it required \$3billion to effectively tackle complete gas flare-out from its operations in the Niger Delta region of the country. Shell, which is the operator of Shell/NNPC/Total/Agip joint venture, also identified inadequate funding and security challenges in the oil-producing Niger Delta as major factors delaying the implementation of the gas projects to achieve zero flare-out. The Corporate Media Relations Manager, Tony Okonedo also announced that SPDC has taken delivery of detailed engineering design for a project that will put out gas flares in three fields in Western Niger Delta which covers Otumara, Saghara and Opuama fields. According to him, the project involves the collection of gas from the three fields to a central processing facility at Otumara, which will treat and send it for domestic use through the Escravos-Lagos Pipeline System (ELPS). (The Guardian, October 5, 2009)

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**UNITED STATES : Saxon Oil Company extends Ellsworth gas gathering system in Kansas – CNR/48/24/33**

Saxon Oil Company Ltd. announced recently an 11-mile extension of the Ellsworth gas gathering system, a part of the Mid Kansas Gas Gathering (MKGG) joint venture. MKGG is a joint venture between Central Kansas Gas Gathering (CKGG), a wholly-owned subsidiary of Saxon, and American Energies Corporation. MKGG began the project in June 2009 and completion is scheduled for early November. The extension will connect a newly discovered gas field, drilled on a large, shallow-depth structural feature covering over 20,000 acres, to a Northern Natural interstate

pipeline. MKGG will gather gas from third-party gas wells, which tested at combined rates exceeding 4 million cubic feet per day and are expected to produce at settled rates of 3 MMcf. MKGG has signed a Percentage-of-Proceeds (POP) gas contract with the operator for these wells and all planned development wells. These wells should effectively double the gas throughput in the MKGG gathering systems. Eventually, gas from this field, as well as adjacent gas fields, will be committed to a cryogenic gas processing facility owned by MKGG and planned for installation in 2010. The plant will process the gas which contains a significant percentage of helium. (Saxon Oil press release, October 8, 2009)

**TRANSPORTATION-DISTRIBUTION**

**AUSTRALIA : Queensland authorities to facilitate construction of a “gas super-highway” – CNR/48/24/34**

The Queensland Department of Infrastructure and Planning announced recently the eighth state development area (SDA) to facilitate construction of the ‘gas super-highway’ needed to kick-start the LNG industry in Queensland. The 44 km Callide Infrastructure Corridor SDA will lay the foundations for the pipeline required by coal seam gas producers to pipe their product from the Surat Basin to Gladstone. State Minister for Infrastructure and Planning Stirling Hinchliffe said “This corridor will run from the Calliope Range

to the Gladstone SDA, where major LNG production and export facilities are being proposed for Curtis Island". BG Group/QGC's Queensland Curtis LNG, Origin Energy's Australia Pacific LNG, Santos' GLNG and Arrow Energy's Surat Gladstone Pipeline projects plan to use the common infrastructure corridor. (Gas Today, October 9, 2009)

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**AUSTRALIA : Origin completes work on Queensland pipeline – CNR/48/24/35**

Origin Energy completed recently works on the 205 kilometre domestic gas pipeline to provide natural gas to its new Darling Downs Power Station. The 630 MW Darling Downs Power Station set to be the largest combined cycle power station in Australia. The 205 kilometre pipeline stretches from the Wallumbilla gas hub near Roma to the Talinga gas production facility and gas fields, owned by Australia Pacific LNG, and on to Origin's Darling Downs Power Station near Dalby. Australia Pacific LNG is a 50:50 joint venture between Origin and ConocoPhillips to

develop Australia's largest coal seam gas reserves in the Surat and Bowen Basins of western Queensland. With the capacity to transport up to 400 TJ of gas each day, in addition to meeting the current gas requirements of Darling Downs Power Station, the pipeline is able to act as a short term gas storage facility or support the development of additional gas fired electricity generation. Origin Executive General Manager for Major Development Projects, Andrew Stock, said Darling Downs Power Station was on schedule for completion in 2010. (Origin Energy press release, October 5, 2009)

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**FRANCE : Fourth development statement on its transmission systems released by GRTgaz – CNR/48/24/36**

GRTgaz published recently its fourth development statement on its transmission systems. The statement confirms the momentum of transmission infrastructure development and the attractiveness of the French natural gas market. The fourth Development Statement, covering the development of GRTgaz's transmission system over the period 2009-2018, reflects the sustained demand for new transmission capacity. If the connection projects (LNG terminals, combined-cycle gas turbine power stations, etc.) are confirmed, GRTgaz will pursue the expansion of its transmission infrastructures (1,600 km of additional pipelines, upgrading of the compressor fleet) and, in the long run, increase its entry and exit capacity by more than 65%. Over the first six months of 2009, the number of wholesale market transactions in GRTgaz's North zone grew by more than 40% and the volumes traded by 70%, compared with the levels recorded over the same period in 2008.

The likelihood of projects being implemented in GRTgaz's North zone rose in 2009. A consultation of market players at the end of 2008 revealed very significant need for the development of interconnection capacity between France and Belgium. GRTgaz's South zone is experiencing a similar trend, also stimulated by plans for new LNG terminals and for the reinforcement of the interconnection between France and Spain. At the time of the publication of the Multi-Year Indicative Plan (PIP) for the gas sector in 2009, the Government emphasised the need to increase investment in the major national infrastructures, in particular to enhance safety and fluidity in the main gas transmission pipeline network. The Development Statement (2009-2018) is a framework document. Published annually by GRTgaz in the last four years on a voluntary basis, it anticipates the 10-year development plans that transmission operators will in the future be required to produce in application of the 3rd European Directive. (GRTgaz press release, October 8, 2009)

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**VIETNAM : Petrovietnam seeks approval to construct another gasline in Nam Con Son basin – CNR/48/24/37**

Petrovietnam asked recently permission to the Vietnam government to construct a second natural gas pipeline in Nam Con Son basin. The pipeline would carry natural gas from 05.1 and

05.2 blocks to feed power plants in Phu My in the southern oil and gas hub province of Ba Ria-Vung Tau. First pipeline in Nam Con Son basin was built by BP. It now supplies about four billion cubic metres of gas annually to meet 32% of Vietnam's power generation. (Energy Business Report, October 7, 2009)

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**SUPPLIES - IMPORTS - EXPORTS**

**DENMARK : Pressure on gas ordering at Ellund – CNR/48/24/38**

Energinet.dk reported recently that the start of the new gas year on 1 October 2009 saw enormous pressure on the commercial ordering of gas from Germany to Denmark. Orders for gas to Denmark therefore

outnumber those for gas to Germany, and this has resulted in the deliveries to Denmark being curtailed due to resulting congestion. Right now it is commercially possible to receive up to around 48 million kWh per day (approx. 2 million kWh/h) in the northbound direction due to backhaul in the southbound direction. The real requirement for importing gas from the southbound direction is somewhat higher.

This is indicated by the capacity orders into Denmark which will amount to approx. 3 million kWh/h in October 2009. The deliveries of North Sea natural gas received at Nybro are another indication that the start of this gas year has been very different from previous years. At the same time, in 2008, 8-11 million kWh/h were received at Nybro whereas in the first three days of the new gas year 3 million kWh/h were received at the same point. (Energinet.dk press release, October 5, 2009)

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**NIGERIA : Geometric Power signs gas sales agreement with Shell and NNPC – CNR/48/24/39**

Geometric Power Limited has signed recently a gas supply agreement with Shell Petroleum Development Company and the Nigerian National Petroleum Corporation for the generation of about 188 mega watts of electricity. Shell and other international oil companies are expected to deliver

gas to the Geometric gas plant located at Aba, Abia state. The Managing Director of Geometric Power Company, Professor Bart Nnaji, said the plant would take off in the first quarter of 2010. According to Nnaji, at the moment the plant is about 80 percent completed and all the gas pipelines that will link to the plant from the gas sites have been laid. (AllAfrica, October 11, 2009)

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**RUSSIA : DONG Energy will receive more gas from Gazprom via Nord Stream pipeline – CNR/48/24/40**

Gazprom and DONG Energy signed recently a contract for the supply of additional Russian gas volumes to Denmark through the Nord Stream pipeline. The contract specifies that DONG Energy starting from 2012 will additionally receive 1 billion cubic meters of gas per annum within a period of 18 years via the second string of the offshore gas pipeline. Currently, DONG Energy has the contract for the supply of 1 billion cubic meters of gas via the Nord Stream. (Gazprom press release, October 10, 2009)

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**SLOVAKIA : SPP signs gas supply contract with GDF Suez – CNR/48/24/41**

Slovenský plynárenský priemysel, a.s. (SPP) and GDF Suez concluded recently a 5-year contract on natural gas supplies to Slovakia. Under this contract, GDF Suez will each year supply SPP with up to 500 million cubic meters of natural gas. In July 2009, SPP already signed second contract with E.ON Ruhrgas on the natural gas delivery of additional up to 350 million cubic meters annually, and a short-term contract with VNG. In August 2009, SPP also signed a contract on natural gas supplies with Verbundnetz Gas (VNG). Under this

contract, VNG has committed itself to supply SPP with up to 30 million cubic meters in the event of disruption or total stoppage of gas supplies from Russia. "The long-term diversification contracts with GDF Suez and E.ON Ruhrgas significantly reduce the Slovak Republic's dependence on a single source of natural gas. In the event of any extraordinary situation, we are now able to cover up to about one fifth of the annual consumption of natural gas from diversified sources," highlighted the Chairman of the Board of Directors of SPP, Jean Jacques Ciazynski. (SPP press release, October 5, 2009)

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**TURKMENISTAN : Gas supplies to Russia restarted – CNR/48/24/42**

Torye Yagshymuradov, head of the country's geological institute said that Turkmenistan hopes to renew gas supplies to Russia by the end of October 2009. Supplies from Turkmenistan were suspended in April 2008 after a pipeline explosion, which connects Russia and the country. (Reuters, October 7, 2009)

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**WORLD : Chevron forecasts a rising gas demand in 2010 – CNR/48/24/43**

Chevron Corp President of Global Gas John Gass said recently that global natural gas demand will begin to recover in 2010, but prices in the United States could remain under pressure in the medium term as ample supply weighs. Gass also said "If you look at the fundamentals for a few years with the current supply situation, there is more downward pressure than upward". (Reuters, October 10, 2009)

## STORAGE

### **HUNGARY : Serbia close to rent gas storage facility – CNR/48/24/44**

Serbia is close to a deal with the Hungarian gas trading unit of E.ON to rent a 200 million cubic metre gas storage facility in case of possible supply disruption in winter, a state official said recently. "I expect the contract to be signed next week," said Dusan Mrakic, secretary of state in Serbia's energy minister. "There are still some technical details that need to be agreed, but that will be done next week". From this storage we should be able to get 3 million cubic metres of gas a day in case of crisis," Mrakic said. The European Bank for Reconstruction and Development said in September 2009 it was considering loaning Serbia's state gas company Srbijagas 150 million euros to buy 250-300 million cubic metres of gas

as a reserve in storage facility in Hungary. Russia supplies 92 percent of its Serbia's gas needs of 2.4 billion cubic metres via a pipeline through Ukraine and Hungary. Bojan Kacanski, director of Srbijagas operational unit, said that in a crisis his company would be able to tap up to 4 million cubic metres of gas from local production and soon-to-be completed storage facility in Banatski Dvor on top of 3 million cubic metres of imports from Hungary. "That will be nearly half of the country's needs in winter that amount between 10 and 11 million cubic metres of gas a day," Kacanski said. Serbia was expected to finish the construction of its first gas storage facility in Banatski Dvor by November to allow it to store up to 300 million cubic metres of gas. (Reuters, October 9, 2009)

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### **SERBIA : Electric Power Industry of Serbia to build gas-fired power plant at Novi Sad – CNR/48/24/45**

Serbia's state-run Electric Power Industry of Serbia (EPS) planned to build a gas-fired power and heating station in the northern city of Novi Sad .The city of Novi Sad and EPS have founded Energija Novi Sad (ENS Novi Sad), in order to provide generation of electricity and heating energy. According to the company, the project involves construction of a modern unit for cogeneration of electric and heating energy in combined gas-steam cycle with installed capacity in the range of 400-500MW, with the plant being a base hit load and having the installed capacity of at least 300MW for more than 80,000 households and commercial consumers in Novi Sad. (Energy Business Review, October 9, 2009)

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### **NEW ZEALAND : Contact Energy may store less gas at Ahuroa – CNR/48/24/46**

Contact Energy's gas storage project in Taranaki has "constipation", according to energy sector sources, but Contact said the project is "going to plan". In 2008, Contact bought rights to the largely depleted Ahuroa gas reservoir near Stratford to convert to an underground storage facility and started putting gas into the field. But an energy sector insider said the geology of the Ahuroa field

had changed and it was now "totally constipated". Contact bought new compressors to force more gas into the field. Sources said Contact had hoped to be able store 12 petajoules of gas, but it may now only get 7pj, despite the new equipment. Contact's annual report showed it had now stored 5.6 petajoules. Contact rejected that, saying the Ahuroa gas reinjection project was on track. (The Timaru Herald, October 12, 2009)

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### **UNITED STATES : Central Valley Gas Storage announces open season for 2012 storage capacity – CNR/48/24/47**

Central Valley Gas Storage, L.L.C., a subsidiary of Nicor Inc. of Naperville, Illinois, announced recently that it will hold a non-binding open season for firm storage services beginning April 1, 2012. Central Valley is continuing the process of developing the new, strategically located, underground natural gas storage facility north of Sacramento near the town of Princeton, California in Colusa County on Pacific Gas and Electric Company's (PG&E) gas transmission system.

Following an open season held in 2008, Central Valley has continued to develop the project, including finalizing certain binding market commitments for the project. Central Valley also recently filed an application for a Certificate of Public Convenience and Necessity (CPCN) with the California Public Utilities Commission (CPUC) in August 2009 requesting authorization to construct and operate an 8 Bcf underground natural gas storage facility. Pending all necessary approvals, Central Valley is anticipating issuance of the certificate in mid 2010 and expects to provide firm storage services by April 2012.

The Central Valley natural gas storage project is a high deliverability depleted reservoir. The facility is strategically situated in northern California and will have an interconnection into PG&E's gas transmission system. The interconnect point will be considered a PG&E city gate point similar to other independent storage facilities connected to the PG&E system. (Business Wire, October 12, 2009)

**UNITED STATES : Tricor Ten Section Hub reports successful storage open season in the Western United States – CNR/48/24/48**

Tricor Ten Section Hub, LLC announced recently that the non-binding Open Season for its planned storage project, resulted in significant oversubscription for firm service, and Tricor also received additional bids for interruptible and hub services. According to Chris Kunzi, Tricor's Vice-President, "The results of the Open Season dramatically highlight the need for additional storage capacity in the Western U.S". The Ten

Section Hub Project is currently pending approval by the Federal Energy Regulatory Commission. It will be centrally located near the backbone systems of major western US pipelines, and will have more than 4.0 Bcf/d of interstate and intrastate pipeline capacity surrounding it. The Ten Section Hub facility is designed to hold 22.4 Bcf of working gas, and will offer customers up to four-turns of high-speed deliverability. Ten Section Hub will offer up to 1.0 Bcf/d of withdrawal service and up to 0.8 Bcf/d of injection service. (PRNewswire, October 9, 2009)

**USE FOR POWER GENERATION**

**INDIA : Karnataka government plans gas-fuelled power plants – CNR/48/24/49**

The Karnataka government is planning to set up gas-based power plants to generate close to 5,000 Mw of power. Senior government officials in the energy department confirmed these plans and added that they are scouting for land in Tumkur, Davangere and Gulbarga districts in addition to setting up a 2,000 Mw combined cycle power plant at Bidadi near Bangalore. "The state government is in discussion with Gas Authority of India Limited to source the gas for these projects and hopefully, we should see some concrete steps for these plans to move from the planning stage," a senior energy department official detailed. These steps to increase power generation in the state are part of the state's long term agenda to plug the 26.5 per cent peak demand-supply gap. In addition to initiating a string of pacts with the public and private players to step up generating capacity in state, Karnataka has also requested the Centre for increase of 1,000 Mw in its share from central generating stations from the allocation of 1,534 Mw. (Business Standard, October 10, 2009)



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Centre International d'Information sur le Gaz Naturel et tous Hydrocarbures Gazeux  
1 et 4, avenue de Bois Préau, 92852 Rueil-Malmaison Cedex, France  
Tel. +33 1 47 52 60 12 - Fax +33 1 47 52 70 14 - [www.cedigaz.org](http://www.cedigaz.org)