

# U-Gas News Report

## Unconventional Gas Activities in the World

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### ***COALBED METHANE & COAL SEAM GAS***

#### ***EXPLORATION DISCOVERIES***

##### **BOTSWANA : Kalahari Energy and Exxaro Resources in CBM exploration partnership. — UG27-1**

Kalahari Energy has recently signed an agreement with Exxaro Resources, for a coal-bed methane exploration programme in order to develop a deposit in the Kalahari Karoo Basin in eastern Botswana. Kalahari Energy's Craig Kirkland explained "The purpose of the partnership is the development of three of Kalahari Energy's leases to prove commercial gas flows and to explore the feasibility of a gas-based energy business. The focus of the feasibility study will be to highlight the commercial (development) options available and to reach a production decision for implementation," he said. Kirkland said the Southern African energy market held great potential for a coal-bed methane power business due to the regional shortages and rising energy prices. He added that Kalahari

Energy holds five prospecting licences in the eastern part of the Kalahari Karoo Basin with early indications that due to its location in the basin, the area is highly prospective for coal-bed methane. "The quality and extent of the Kalahari Karoo Basin coal-bed methane deposit requires further verification, and exploration activities have already commenced," he said. Estimates are that local coal-bed methane resources could support power development of up to one Gigawatt. Kalahari Energy's five prospecting licences cover an area of 3 912 square kilometres in the eastern part of the Kalahari Karoo Basin (around Mmashoro), while Exxaro Resources is one of South Africa's largest mining companies. (AllAfrica, March 30, 2009)

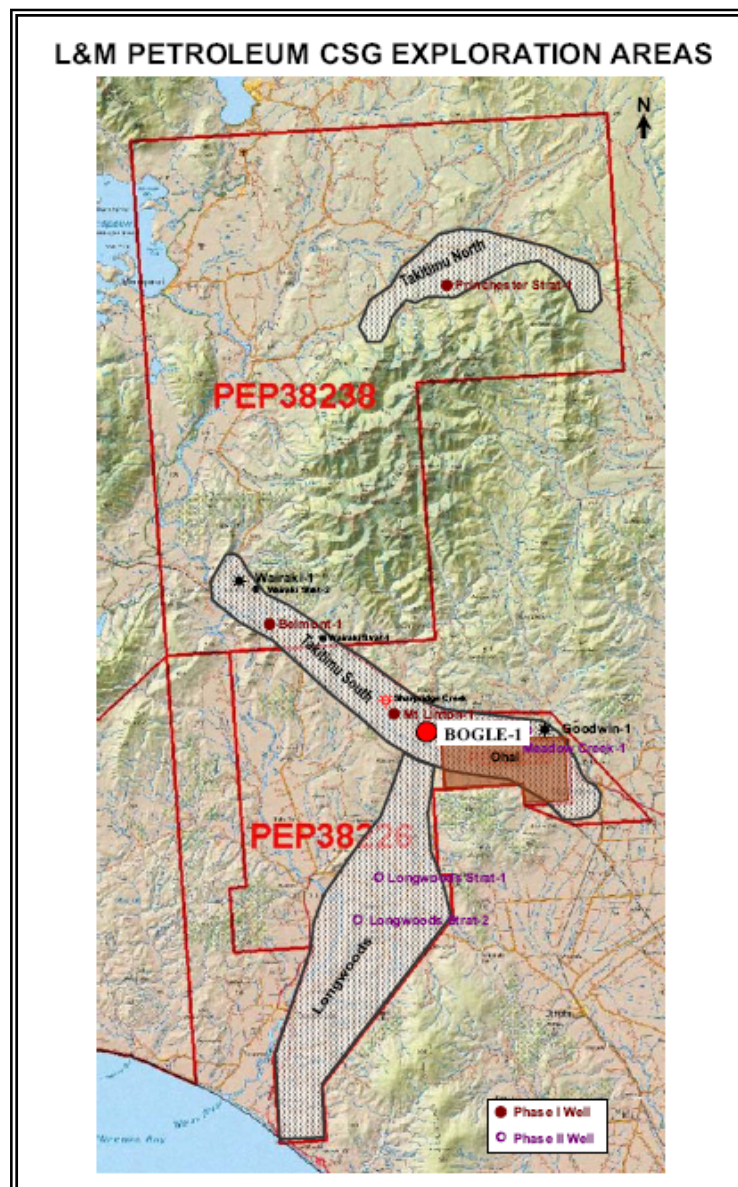
##### **AUSTRALIA : BG Group and WestSide Corp in partnership to explore Tilbrook area. — UG27-2**

BG Group Plc is set to expand its search for reserves in Queensland State, with drilling due to start soon in a venture with WestSide Corp. A \$5.4 million drilling program between BG's QGC unit and WestSide will seek to confirm coal-seam gas reserves at the Tilbrook project, which could hold almost 3 trillion cubic feet of gas, Brisbane-based WestSide.

The partners will also explore areas to the north of Tilbrook. The Tilbrook project is to the north of the producing Moranbah coal-seam gas venture run by Arrow Energy Ltd. The second venture between BG and WestSide, involving the Paranui tenements. (Bloomberg, March 18, 2009)

**NEW ZEALAND : L&M Petroleum starts its 2009 coal seam gas drilling program. — UG<sub>27-3</sub>**

L&M Petroleum Limited announced recently that drilling operations are set to commence in the company's petroleum exploration permits, PEP 38226 (Waiiau) and PEP 38238 (Blackmount) located in onshore Western Southland Basin on the South Island of New Zealand. The drilling program is designed to confirm the coal seam gas potential in the onshore Western Southland Basin permits, which initial analysis indicates may hold up to 300 PJ of CSG potential resources. The 2009 CSG drill program will see up to a further four wells drilled, including the first stratigraphic wells programmed to confirm the extent of the Beaumont coals in each of the Takitimu North and Longwoods coal trends. (L&M Petroleum press release, April 2, 2009)



Source : L&M Petroleum Limited

## ***PRODUCTION***

### **AUSTRALIA : Walloons coalbed methane project approved by Blue Energy's Board.**

#### **— UG27-4**

Blue Energy Limited announced recently that its board approved an initiative to develop CSG from the Walloons Coal Measures in its tenement ATP 854P. The Walloons coal is a significant CSG producer in the Surat Basin. Blue Energy plans to drill 3 wells in the 2nd quarter of 2009, with at least one pilot later in 2009, leading to gas certification in 1st quarter of 2010. This program will target an initial 300 PJ potentially contained in the permit. (Blue energy press release, March 11, 2009)

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### **UNITED STATES : Researchers use isotopic ratio to evaluate water produced with coalbed methane. — UG27-5**

Research at the University of Wyoming, sponsored by the U.S. Department of Energy (DOE) Oil and Natural Gas Program has recently found a way to distinguish between groundwater and the water co-produced with coalbed natural gas. Researchers used the isotopic carbon-13 to carbon-12 ratio to address environmental issues associated with water co-produced with coalbed natural gas. Dealing with co-produced water has been one of the most difficult issues for researchers involved in finding the best, most environmentally sound methods for recovering natural gas in Wyoming's Powder River Basin. That issue is significant for the nation's energy and environmental health because the number of coalbed methane wells in the basin

increased from 18,077 total wells in December 2004 to 27,280 in November 2008 an increase of 50 percent.

The University of Wyoming researchers used stable isotopic tracers, along with available water quality data, to look at three separate issues in the Powder River Basin. They monitored the infiltration and dispersion of coalbed methane co-produced water into shallower subsurface areas, and then determined those locations where coal seams are isolated from adjacent aquifers and co-produced water was limited to coal. Finally, the researchers evaluated the information provided by isotopic analyses of carbon, oxygen, and hydrogen in the co-produced waters. (DOE Techline, March 26, 2009)

More information at:

[http://www.fossil.energy.gov/news/techlines/2009/09020-Technology\\_Enhances\\_Gas\\_Recovery.html](http://www.fossil.energy.gov/news/techlines/2009/09020-Technology_Enhances_Gas_Recovery.html)

## ***RESERVES***

### **AUSTRALIA : Arrow acquires stake in the CBM Tipton West venture. — UG27-6**

Arrow Energy has recently increased its coal seam gas exposure in Queensland after acquiring Beach Petroleum's stake in the Tipton West venture for up to \$400 million. Arrow's Australian chief executive Shaun Scott said the transaction would simplify the Tipton West joint venture structure and streamline its liquefied natural gas strategy. Arrow Energy operates the Tipton West joint venture with a 42 per cent stake, with Beach holding 40 per cent and Shell holding the balance. The transaction will increase Arrow's 1P (proven) reserves by 43 per cent, 2P (proven and probable) reserves by 40 per cent and its 3P (proven, probable and possible) reserves by 30 per cent. (The West, April 6, 2009)

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### **CHINA : Fortune Oil announces independent evaluation of Liulin CBM block. — UG27-7**

Fortune Oil provided recently the results of the independent resource evaluation of the Liulin coal bed methane block in Shanxi Province conducted by petroleum consultants Netherland, Sewell & Associates, Inc. (NSAI). The estimates of reserves and resources were prepared in

accordance with the most recent definitions and guidelines approved by the Society of Petroleum Engineers of USA. Using the exploration data available up to 31 December 2007, NSAI issued its report on 28 March 2008 and appraised the total resource in the Liulin block in billion standard cubic feet as follows:

Possible Gas Reserves: 29.7

Contingent Gas Resources: 86.8 (Low estimate, 1C) 268.7 (Best estimate, 2C) 630.5 (High estimate, 3C)

Prospective Gas Resources: 18.7 (Low estimate) 57.9 (Best estimate) 135.8 (High estimate)

NSAI has also estimated the value of these resources assuming full development of the Liulin block over the remaining contract life.

The gas price parameters adopted by NSAI in its report were based on information provided by Fortune Oil. The compressed natural gas price for wellhead CBM purchased by Fortune Oil in Shanxi Province is currently 4.7 US\$/MMBTU. NSAI has used a forecast that this price will increase by 40 per cent at Liulin over the next five years to 6.6 US\$/MMBTU in 2012, which is still below the price currently charged by Fortune Oil near Beijing. (Reuters, March 31, 2009)

## ***SHALE GAS***

### ***EXPLORATION - DISCOVERIES***

#### **UNITED STATES : St. Mary Land & Exploration Company announces gas discovery in Haynesville shale. — UG27-8**

St. Mary Land & Exploration Company announced that its first operated Haynesville shale well, the Johnson Trust 1-2 (SM 90% WI), was recently completed and turned to sales. The well, located in the Spider Field in central De Soto Parish, Louisiana, had a total measured depth of 15,100 feet. The 24 hour production rate from the well reported to the State of Louisiana was 4.1 MMcf of gas and 525 Bbls of load water at a flowing casing pressure of 3,150 psi on an 18/64th inch choke. (Oilonline, April 6, 2009)

## ***GAS HYDRATE***

### ***EXPLORATION - DISCOVERIES***

#### **JAPAN : Drilling program for methane hydrate to begin in 2009. — UG27-9**

According to a program adopted by the Ministry of Economy, Trade and Industry Japan will drill for methane hydrate in waters off the Pacific coast. The trial drilling will take place in selected offshore areas of the Tobu Nankai Trough in the seas between the prefectures of Shizuoka and Wakayama in the development program for the period between fiscal 2009 and fiscal year 2015. The ministry's program calls for both maritime experiments and onshore production tests abroad. The ministry intends to collect data and establish technology to produce methane hydrate stably in large amounts, aiming for commercial production, its officials said. (Energy Current, March 24, 2009)

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