



U-Gas News Report

Unconventional Gas Activities in the World

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Main News

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CHINA: Regulation. — UG73-10

China plans to subsidize energy companies working to develop shale gas resources.

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Polish government wants to tax hydrocarbon extraction at an estimated 40% of the eventual gross profits on extraction.

GAS HYDRATES

JAPAN: Discovery. — UG73-15

Methane hydrates have been found under the sea in the Sea of Japan and another in the Sea of Okhotsk off Hokkaido.

COALBED METHANE

EXPLORATION - DISCOVERIES

INDIA: Reserves estimate. — UG73-1
Oil and natural gas Corporation (ONGC) will be able to award its coal-bed methane blocks to interested bidders. ONGC holds four CBM blocks in Jharia, Bokaro, north and south Karanpura - in Jharkhand and Raniganj in West Bengal. It is the operator in the Raniganj north block, with 74 per cent stake, while Coal India holds the rest. At Jharia, it holds 90 per cent stake and CIL 10 per cent. At Bokaro and north Karanpura, too, it is the operator, with 80 per cent. In these blocks, Indian Oil Corporation holds

the remaining stake. Production from the blocks is slated to rise 600-fold to six million standard cubic metres a day in 10 years. The company has maintained it needs to bring in a joint operator. According to ONGC estimates, the Jharia block holds about 85 billion cubic metres of gas reserves. North Karanpura has 62 bcm, Bokaro holds 45 bcm and Raniganj North 43 bcm. Currently, ONGC produces 8,000-10,000 mscmd from the Jharia block. (November 3, 2012)

INDONESIA: Planned project — Approval. — UG73-2

CBM Asia announced recently that it has received formal notification from the Director General of Oil & Gas to begin a **Joint Study of the 1,382 km² Riau Area CBM Block**. Under the Joint Study Agreement CBM Asia and its partner PT Tranaco Utama will conduct geological studies in cooperation with an Indonesian University to determine the economic viability of potential coalbed methane within the study area. If the study area is deemed economically viable CBM Asia and Tranaco will hold the right to apply for a Production Sharing Contract for the area.

The Riau study area is located in Central Sumatra; with its southern boundary sharing the northern boundary of the company's 70% held and operated Hulu PSC. CBM Asia has signed a Heads of Agreement with Tranaco under which CBM Asia will hold an 80% participating interest in the Riau Area CBM Block and will be the Operator. The Joint Study is expected to take 4 months to complete. CBM Asia also announces that it has made formal applications to conduct an additional three Joint Studies in prospective CBM areas in Sumatra and Kalimantan with a combined area of 7,704 km². (October 1, 2012)

INDONESIA: Ongoing project — Update. — UG73-3

NuEnergy Gas Limited said recently that preliminary permeability tests at the **Maura Enim well #2** site in **South Sumatra**, Indonesia have shown 11 millidarcy of permeability. The permeability result is important for coalbed methane production as it indicates that gas can flow from a coal seam at a rate which will support an economic project. Process of dewatering

will proceed at the pilot development site to physically demonstrate gas and water production rates and assess water quality in order to generate peak gas and water flow data information per well. Maura Enim has certified prospective gas resources of **4.2 trillion cubic feet of gas**. (October 16, 2012)

PRODUCTION

AUSTRALIA: Acquisition - Approval. — UG73-4

China's **National Development and Reform Commission** approved recently **PetroChina's purchase of Molopo Energy's Queensland Bowen Basin coalbed methane assets**. PetroChina had already secured approval for the transaction from Australia's Foreign Investment Review Board (FIRB). PetroChina Australia will acquire 100% of Molopo's coal seam gas assets in Queensland. (October 18, 2012)

CHINA: Ongoing project - Update. — UG73-5

Petromin Resources Ltd announced recently that **TerraWest Energy Corp** is moving forward with exploration activities in the field at its **Liuhuanguo** coalbed methane project in Xinjiang, China. The 2012 Field Program involves drilling, casing and completing production wells at two key selected locations. Estimates suggest that

the area contains gas in the range of (low) 70.00 Bcf to (best) 147.43 Bcf to (high) 514.07 Bcf. TWE holds a 47% interest in and is the operator of the Liuhuanguo CBM production sharing contract. China National Petroleum Corporation (CNPC) holds the remaining 53% of the PSC. (November 1st, 2012)

SHALE GAS

EXPLORATION - DISCOVERIES

ALGERIA: Regulation. — UG73-6

Algeria plans to start **linking taxes on foreign energy firms to profits instead of turnover**, according to draft amendments to its hydrocarbons law aimed at making the sector more attractive to investors. The draft also offers fiscal incentives for companies wishing to invest in unconventional energy resources and offshore exploration.

The amendments maintain state energy firm Sonatrach as a majority partner in all upstream and downstream projects. Investors in unconventional hydrocarbons would be granted prospecting licenses for up to 11 years and exploitation licenses of 40 years for shale gas and 30 years for shale oil. Conventional resource licenses were kept unchanged at seven years for prospecting and 25 years for exploitation, with a five-year supplementary period for natural gas deposits. (November 4, 2012)

ARGENTINA: Drilling campaign. — UG73-7

Americas Petrogas is announced recently that drilling has commenced on a **second unconventional, shale exploration well** on **Los Toldos II** block located in the **Neuquen Basin** of Argentina. Americas Petrogas is

the Operator holding a 45% working interest in the Los Toldos blocks; ExxonMobil also holds a 45% working interest, with the remaining 10% held by Gas y Petroleo del Neuquen. (October 16, 2012)

AUSTRALIA: Partnership agreement. — UG73-8

Central Petroleum Ltd signed recently a deal with **Total** to **explore for shale gas in central Australia**. Total said it signed a farm-in agreement with Central Petroleum for four shale gas exploration permits totalling about 25,000 km in the **South Georgina Basin**. Three permit areas are in Queensland and one is in the Northern Territory. Under the agreement,

Total has the potential to hold up to 68 per cent equity in the four permits after completing three exploration stages. Central will operate the areas for the first four years and after completion of stage three. At the end of the exploration stages, Total will operate 90 per cent of the acreage and Central will be responsible for 10 per cent. The farm-in agreement is subject to Queensland and Northern Territory regulatory approvals and approval from Australia's Foreign Investment Review Board. (November 6, 2012)

AUSTRALIA: Discovery. — UG73-9

Senex Energy Ltd. made recently a gas discovery at its Skipton-1 unconventional gas exploration well in the **South Australian Cooper basin**. Senex drilled the Skipton-1 exploration well to test the unconventional

gas potential of the **shale and tight gas sands** of the Roseneath- Epsilon-Murteree package as well as the tight gas sands and deep coal seams of the Patchawarra formation. (October 16, 2012)

CHINA: Regulation. — UG73-10

China unveiled recently plans to **subsidize energy companies working to develop shale gas resources**. Central government funds will back a subsidy of 0.4 yuan (6.3 U.S. cents) for each cubic meter produced by shale-gas extractors through 2015. Additional subsidies to spur development of the industry can be provided independently by local governments, the Finance Ministry said. China has targeted 6.5 billion cubic meters of annual shale-gas production by 2015, ramping up to 60 billion-100 billion cubic meters by 2020. (November 6, 2012)

PRODUCTION

AUSTRALIA: Ongoing project – Production start up. — UG73-11

Santos announced recently first commercial shale gas production in the Cooper Basin. The Moomba-191 shale well is flowing natural gas at a stabilised rate of 2.7 million standard cubic feet per day from the Roseneath, Epsilon and Murteree shale targets. Producing commercial quantities of natural gas from the Cooper's shale rock formations would provide the potential for ongoing energy security for South Australia

and eastern states, plus valuable export revenue, Santos said. Further drilling is planned for the area, including an ongoing vertical well appraisal program and Santos first horizontal shale well planned for early 2013. Santos has a 66.6% stake interest in the South Australian Cooper Basin Joint Venture. The other participants are Beach Energy and Origin Energy. (October 19, 2012)

POLAND: Regulation. — UG73-12

PM's Chancellery head Tomasz Arabski said recently that **Polish government wants to tax hydrocarbon extraction at an estimated 40% of the eventual gross profits** on extraction. That 40% rough estimate is built on a 5% tax on gas extraction, a 10% tax on crude oil extraction, and a 25% special tax based on cash flows designed to target profits on extraction and a PLN 24 per 1000 m³ fee. That new tax will be applied to "the surplus of revenues over expenses," the cabinet said. Arabski said it would apply to "cash flows - as a tax on exceptional profits." As such, "it will only really apply to investors in 10 to 15 years," officials suggested. Those fees and taxes should go into effect as of January 1, 2015, the official said. Tax receipts will go to the central budget as well as local government budgets. Poland will additionally create a national operator of hydrocarbons extraction NOKE, an institution that will participate in the supervision of unconventional resources extraction projects via ownership stakes in concessions. Existing license owners will have the possibility of inviting NOKE on a voluntary basis to the extraction consortium. (October 17, 2012)

RESERVES

ALGERIA: Resources estimates. — UG73-13

According to the country's **former minister of Energy and Mining**, Nordine Ait Laoussine, **Algeria has the potential to produce shale gas with similar levels of success to that of the US**. Laoussine said "Replicating the US shale industry success is possible in Algeria but it should only be seen at this stage as a long-term objective.

The achievement of such objective would require technological transfer from international oil companies and a favourable regulatory and investment framework". Algeria's government plans to boost investment in conventional and unconventional hydrocarbon development in mature and unexplored areas both on and offshore. (November 4, 2012)

TIGHT GAS

PRODUCTION

AUSTRALIA: Ongoing project - Update. — UG73-14

Transerv Energy's joint venture partner in the **Warro tight gas project**, Alcoa, has confirmed its commitment to continue with the Warro Project. This decision endorses the Warro Gas Project as an important initiative to create new supplies of domestic gas for its alumina operations in

Western Australia, Transerv said. The JV has recently applied for a Retention Lease over the Warro Field. This follows on from the granting of a Location over the field 4 years ago. An earlier review had found that the field could hold **3 to 4 trillion cubic feet of recoverable gas**. (November 5, 2012)

GAS HYDRATES

EXPLORATION – DISCOVERIES

JAPAN: Discovery. — UG73-15

Methane hydrates have been found under the sea in two areas of Japan's exclusive economic zone, a group of researchers said. The group also said it has collected methane hydrates in layers several meters below the seabed at **a spot in the Sea of Japan and another in the Sea of Okhotsk off Hokkaido**. The group, led by Meiji University, Kitami Institute of Technology and the University of Tokyo, said the discovery is only "the first step" toward determining whether the substance is a viable energy source. The group also said it has found an undersea column of methane gas off Tottori and Shimane prefectures, a discovery that suggests the existence of methane hydrates. (October 31, 2012)

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