



AUSTRALIAN SECURITIES EXCHANGE ANNOUNCEMENT  
15<sup>th</sup> October 2007

## South Wales (U.K.) Coal Bed Methane Exploration Update

### HIGHLIGHTS

- **Second Coal Bed Methane well of South Wales (U.K.) farm-in project drilling ahead at 200m.**
- **Drilling of first well completed at 429m.**
- **Encouraging preliminary gas content results (up to 9m<sup>3</sup>/t) with gas content increasing with depth.**
- **Encouraging moderate to high permeability results (18mD and 44mD).**
- **Nett Coal intercepts of 15.8m in 12 seams, thickest seam 2.4m.**
- **Major potential customers and gas pipelines within licence area.**
- **High UK gas prices.**

#### *Second well commenced: Llangeinor 1 – Cwmcedfyw area*

The Directors of Eden Energy Ltd (ASX: EDE) are pleased to announce that the second well of the current drilling programme is drilling ahead at 200m. The well is centrally located in PEDL100 at Cwmcedfyw farm; about 10km east of the first well drilled at Port Talbot (see Figure 1). This second hole has been named Llangeinor 1 by the British permitting authorities.

Eden is earning a 50% interest through farming into three of Eden Petroleum Exploration and Development licenses (PEDL100, PEDL148, and PEDL149) which have a total area of 430km<sup>2</sup>.

Llangeinor 1 is planned to drill to a depth of approximately 800m and to take three to four weeks to drill. The main target coal measures begin at around 300m depth, with the first seam of significance for CBM, the Two Feet Nine seam, not expected until around 570m depth. Around 300m of coal measures are expected to be drilled with at least seven thick coal seams interpreted to be present in the sequence below the Two Feet Nine seam, and with a similar number of coal seams present above the Two Feet Nine seam. The hole is being drilled using tri-cone mud rotary to minimise costs until the target seams are reached at approximately 500m, thereafter the hole will be drilled using HQ triple tube coring.

An old British Coal Board drill hole is located only 500m from Llangeinor 1, so the expected geology in the upper part of Llangeinor 1 is well known and no fault zones are expected until well past 700m depth. These faults are likely to have repeated the coal sequence leading to a greater number of seams at this location.

For personal use only

The test results from Llangeinor 1 are of particular interest for the longer-term prospectivity of PEDL 100 since depths of the coal seams in this hole are similar to much of the area of the licence.

### ***Results from First well – Aberavon 1 – Port Talbot Area***

The first of Eden's initial three Coal Bed Methane exploration stratigraphic holes, Aberavon 1, at Port Talbot in South Wales, UK, 3km from the Corus steelworks (see Figure 1), was completed in September.

It is pleasing to report that preliminary gas content and permeability results are very encouraging. Final results, including gas composition data, are still outstanding but expected shortly.

Aberavon 1 reached a total depth of 428.91m, and intersected a total of 12 seams ranging in drilled thickness between 0.25m and 2.35m for an aggregate drilled thickness of 15.81m.

Pre-collars for the three initial CBM exploration holes were completed prior to commencing the coring programme.

Core recoveries were excellent, and high quality samples were obtained from all of the coal seams, despite the difficult ground conditions.

The hole encountered substantial drilling problems, with very poor ground conditions and excessive caving caused by widespread and unexpected local thrust faulting, with steep dips in places. Unfortunately the hole could not be continued to the base of the coal measures sequence where thicker and gassier seams were expected. The faulting has complicated interpretation of the stratigraphy, but the current interpretation shows that only about half of the coal measures were intersected at Port Talbot.

Wireline logs – gamma, density and calliper – were run through the rods and in portions of the hole that remained accessible.

### ***Aberavon 1 – Gas Content and Permeability Results***

All of the seams thicker than 0.25m were tested for gas content, and selected samples also tested for gas composition by Ticora Geosciences, Inc. Preliminary results show the gas content increasing steadily with depth from a low of about 1 cubic metre per tonne (m<sup>3</sup>/t) at 100m to over 9m<sup>3</sup>/t at 400m.

Final gas content results are awaited, as well as results of isotherm tests on selected samples, which are used to estimate the relative gas saturation of the seams, and gas composition analysis results.

Two seam intervals, 93m to 115m (1.5m nett coal) and 231m to 250m (1.86m nett coal), were tested for permeability also by Ticora Geosciences, Inc.

The amount of permeability was encouraging with the shallower zone being highly permeable (44mD) and the deeper zone was moderate (18mD).

Persistent collapse/bridging of the hole at around 250m unfortunately would not allow for the seams deeper in the hole to be tested.

### ***Discussion of Aberavon 1 Results***

The permeability results are very encouraging, being the equivalent or better than similar areas in Australia. For example, in the Sydney and Bowen Basins, permeabilities at similar depths, range from <1mD up to the order of 500mD. Producing seams of similar depths and thicknesses from the Moranbah Coal Measures of the Bowen Basin have permeabilities ranging from 3mD to 300mD, and gas contents of 6-9m<sup>3</sup>/t.

Despite being unable to undertake permeability tests on deeper zones in Aberavon 1, the starting values in this hole suggest deeper seams will have permeabilities suitable for commercial CBM development.

In the Australian context, where gas prices are much lower and infrastructure development costs, such as pipelines, are much higher, permeability values down to 5mD are considered attractive for options such as surface to in-seam development and/or fracking.

The South Wales Project also enjoys the benefits of potential customers and pipelines already ready in place within the licence area (see Figure 1) coupled with significantly higher gas prices than Australia. Consequently, a broader range of development options and commercial opportunities are available

### ***Ongoing Programme***

Drilling progress in South Wales has been slower than anticipated due to exceptionally poor ground conditions in the first well at Port Talbot and unseasonably wet weather affecting access.

The unexpectedly wide zone of faulting encountered at Port Talbot is considered unusual for the PEDL 100 area, though faults are very common in the South Wales Coalfields. Similarly problematic zones are not expected in the vicinity of the other planned exploration wells.

Drilling at Cwmcedfyw is expected to take 4-6 weeks to complete. Eden has arranged for a second drilling crew for the rig to accelerate progress, and this crew is expected to commence shortly.

The next well in PEDL100 to be drilled following Llangeinor 1 is Pencoed 1. This well is located on the eastern side of PEDL100, adjacent to a major consumer of gas in the Rockwool insulation plant. This area is considered very prospective for a development of a conventional CBM field – due to a large area of relatively flat open fields and good coal thicknesses at appropriate depths.

### ***Background***

Eden Energy Limited has a farm-in agreement with Coastal Oil and Gas Limited, a Wales, UK, based company, to explore the coal bed gas potential in Petroleum Exploration and Development Licences 100, 148, and 149 in South Wales. By carrying out an exploration programme, particularly the drilling of three stratigraphic core holes and testing the intersected seams for gas content and composition, and testing the permeabilities of selected seams, Eden Energy will earn a 50% interest in the PEDLs. The programme will also include the exploration for methane in abandoned mine workings, and the running of a seismic programme and the drilling of a deep well targeting Devonian sandstones. Gas prices in Britain are high, and gas will find a ready market either into existing pipelines or into local industry.

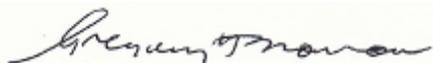
The three PEDLs which are the subject of the Eden farming cover more than 20% of the South Wales Basin, a coal bearing basin of Late Carboniferous age – the principal coal forming period in Europe. Coal has been mined in the basin from Roman times, through the Industrial Revolution, and up to the present; although diminished reserves and high mining costs have cut back the extent of mining in recent years. Improved mining technology and a resurgence in coal prices has seen a push to reopen some mines.

The basin contains a large number of individual seams, over 130 have been recognised, ranging in thickness upwards from less than 1m up to local developments of 5m or more. The type of coal in the seams is conducive to CBM development, being high in vitrinite (a coal component that is a major store of methane and can lead to good permeability) and commonly of High Volatile Bituminous rank (coal that is moderately metamorphosed, and can therefore

retain good permeability and gas content). Large-scale thrust faulting exists within the basin and in places this faulting has repeated seams and added geological complexity.

The coal seams are known to be gassy, and gas outbursts have been recorded from seams in a number of collieries. This is the gas that Eden Energy is evaluating from seams remote from and deeper than existing mine workings and from the abandoned mine workings themselves.

Further background details are contained in Eden Energy Ltd's ASX release on 17th May 2007.



Gregory H. Solomon  
Executive Chairman

#### ***About Eden Energy Limited***

Eden Energy Ltd is a diversified clean energy company that listed on the Australian Stock Exchange in June 2006. Eden has interests in hydrogen production, storage & transport fuel systems, including the low emission Hythane hydrogen-methane blend, coal seam & abandoned mine methane in the UK, conventional gas in SA, low temperature pyrolysis research into hydrogen production and geothermal energy production.

All these aspects of Eden's business are part of an integrated strategy to become a major global participant in the alternate energy market, particularly focussing on the clean energy transport market, producing hydrogen without any carbon emissions, transporting the hydrogen to markets & providing the engines to power hydrogen-based transport & energy solutions.

For further information please contact Greg Solomon (+61 8 9282 5889) or visit our website ([www.edenenergy.com.au](http://www.edenenergy.com.au)).

*Technical details in this report were compiled by Mr John Anderson, an independent CBM consultant retained by Eden Energy Ltd to manage the drilling programme in South Wales.*

*John Anderson completed a BSc (geology) degree from the University of Queensland in 1962, and an MSc Qualifying in 1972. He worked until 1970 in petroleum exploration including basin analysis, prospect evaluation, well site supervision, seismic survey planning and field mapping.*

*From 1970 to 1980 he was a member of the Queensland Geological Survey, Coal Section. Work included regional evaluation of coal measures, coal exploration drilling programmes and research into coal geophysics. He joined BP Coal in 1980 and subsequently CRA (now Rio Tinto), initially in Brisbane as their state representative, and subsequently in NSW working on regional issues and as a mine geologist.*

*John left company employment in 1995 and set up as a consultant. Because of the broad experience in both petroleum and coal exploration and operations, he has specialised in coal and coal seam gas exploration, and has been directly involved in coal and coal seam gas exploration and evaluation in the Bowen, the Surat, the South Wales and the Gunnedah Basins, and evaluating prospects in the Sydney, the Ipswich and in Chinese basins.*

*John is a member of PESA, the Bowen Basin Coal Geologists Group (inaugural Chairman) and was inaugural Chairman of the Sydney Basin Coal Geologists Group. He received the first Award for Excellence in Coal Geology from the then NSW Standing Committee in Coal Geology.*

*Mr John Anderson has consented to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

*The interpretations and conclusions reached in this report are based on current geological theory and the best evidence available to the authors at the time of writing. It is the nature of all scientific conclusions that they are founded on an assessment of probabilities and, however high these probabilities might be, they make no claim for absolute certainty. Any economic decisions which might be taken on the basis of interpretations or conclusions contained in this report will therefore carry an element of risk.*

*It should not be assumed that the reported Exploration Results will result, with further exploration, in the definition of an economic gas resource.*

For personal use only

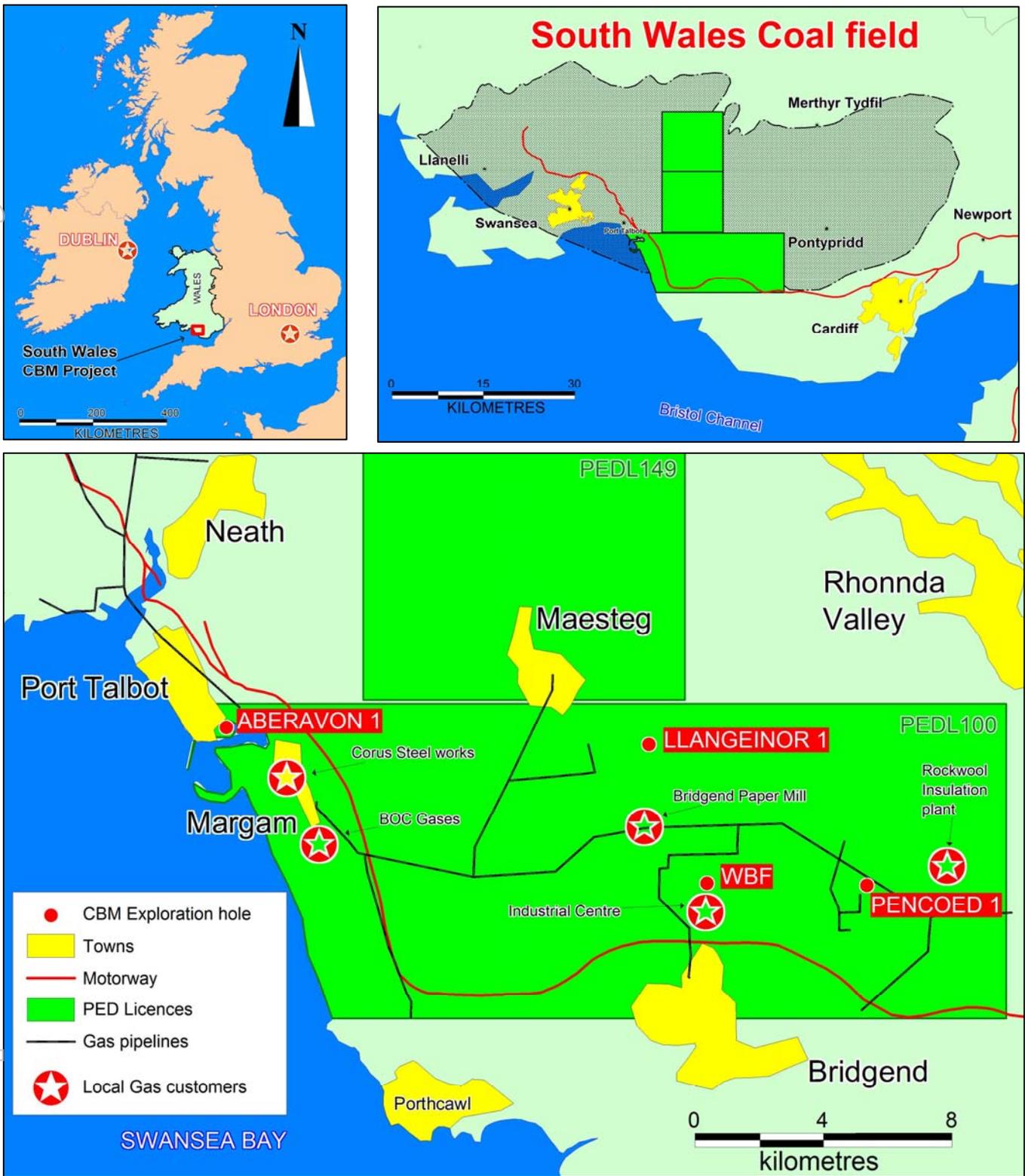


Figure 1: South Wales Project Location