

ASX Release 12 August 2013

# **Hammamet West-3 production test update**

Jacka Resources Limited ("Jacka" or the "Company", ASX: JKA) is pleased to provide the following operational update on the Hammamet West-3 ("HW-3") well in the Bargou Block, offshore Tunisia, as advised by the Operator Cooper Energy Limited.

## Key highlights:

- 27-33°API Black Oil recovered to surface (figure 2)
- Strong flow rates observed during clean-up
- Main flow test still to be conducted

As advised, production testing of Hammamet West-3 commenced at 19:30 hours on Monday 5 August, with an attempt to flow the well naturally. The initial flow period, of 2 hours 11 minutes, produced 25 barrels of fluid to surface from the open-hole section (Figure 1). The well was shut in to obtain an accurate measurement of reservoir pressure, as planned.

Clean-up flows were conducted during a 6.5 hour period on 6 August. During the clean-up flow period, 111 barrels of fluid (formation oil, base oil and drilling brine) were produced to surface tanks along with formation gas. Flow rates, measured by 15-minute tank dips, averaged 413 barrels of fluid/day with surges up to a maximum of 1,700 barrels of fluid/day. Gas flared at surface contained 3%  $CO_2$  and no  $H_2S$ . Acid was not used to stimulate the well during the clean up flow.

Prior to commencing the main flow period, coiled tubing operations were conducted in preparation for the introduction of acid into the wellbore. During these operations, the coiled tubing became stuck inside the production tubing due to an accumulation of loss circulation material produced from the Abiod formation. Operations to free the obstruction have been unsuccessful to date.

It is intended to remove the coiled tubing so that testing operations may resume. Specialised cutting equipment has been mobilised to the rig to assist removal of the coiled tubing from the well bore. It is expected that, depending on the results of the 'cutting' operations, testing operations may recommence in another 7 to 14 days.

The Company takes a lot of encouragement from results to date and notes the comments from Operator, Cooper Energy Executive Director- Exploration and Production, Mr Hector Gordon:

"While the well has continued to progress slowly, the results have been positive. Our pre-drill reservoir model has been confirmed by the fractures defined while drilling and the oil recoveries to date. We are confident that the Hammamet West structure contains a material oil resource. Whilst there have been delays, the results so far are very encouraging" said Mr Gordon.

As the testing program is likely to continue throughout the week and the early flow rates are not necessarily indicative of the final flow rates after wellbore clean-up and/or acid stimulation the Joint Venture does not

<sup>&</sup>lt;sup>1</sup> Base oil: refined oil introduced into the wellbore to produce a pressure difference between the formation and the wellbore to assist the initial well flow during testing



anticipate announcing the test results until the testing program has been completed. The weekly drilling updates have therefore been suspended.

Participating interests: Jacka 15%

Cooper (Operator) 30% Dragon Oil 55%

Under the terms of a farmin agreement with the operator of the well, Cooper Energy (ASX: COE), Jacka has contributed 30% of the well cost up to a gross well cost of US\$27.2 million after which Jacka will contribute at its participating interest of 15%.

#### **Background**

As advised on 6 August, the production test will be conducted over the entire 432 metres of Abiod Formation drilled to date (Figure 1). The actual production test period is expected to be 4-8 days, depending on the flow rates recorded during the test. The first phase (1-2 days) of the test will attempt to flow the well naturally. If it proves necessary, after this first phase it is then planned to introduce acid into the well bore to break down any plugged formation caused by the drilling operations and to stimulate flow. This is a common practice when production testing fractured carbonate reservoirs. The subsequent main flow period (inclusive of shutin) will occupy 3-6 days. After flowing, the well is "shut-in" and the reservoir pressure response determined.

It should be noted that the well test equipment is limited to a maximum flow rate of approximately 3,000 barrels of oil per day.

The production test of the near-horizontal wellbore drilled through the naturally fractured Abiod Formation is the primary objective of the Hammamet West-3 well. The near-horizontal wellbore was drilled along a path designed to intersect open fractures and associated dissolution zones, which are believed to be the reservoir for an oil accumulation in the Abiod Formation.

The well results to date have validated the play concept. Key results are summarised below and on Figure 1:

- The Abiod Formation was encountered at 3,011 mMDRT<sup>1</sup>, 40 metres shallower than expected, which, along with the results of Hammamet West-2, suggests a vertical oil column in excess of 200 m.
- The near-horizontal sidetrack was drilled through the Abiod Formation to 3,443 mMDRT and significant hydrocarbon shows were encountered in association with predicted fracture zones.
- Oil shows on drill cuttings were observed over approximately 110 metres of the total 432 metres of Abiod Formation drilled in the sidetrack.
- Elevated gas levels with gas composition ratios<sup>2</sup> indicative of oil were also encountered, generally in association with the oil shows noted above.
- The oil and gas shows coincide with anomalies on Logging While Drilling image logs that are indicative of fractures.
- Drilling mud losses experienced while drilling these intervals are an indicator that the well has likely encountered an open, porous fracture system in the Abiod.
- During recent operations oil has been observed in the drilling mud (18-20%) circulated to surface and samples have been collected for analysis.

ABN: 79 140 110 130



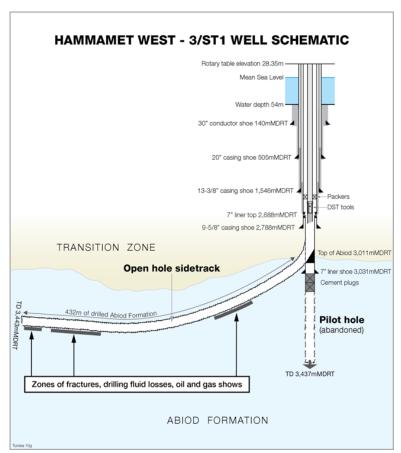


Figure 1: Hammamet West-3 wellbore schematic

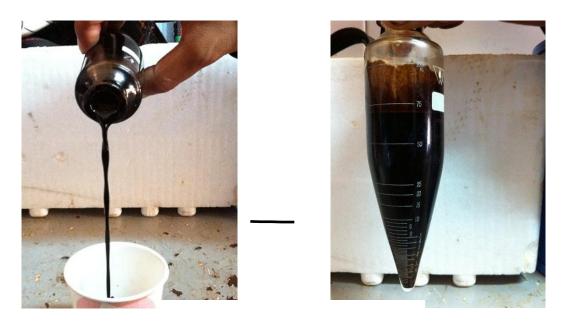


Figure 2: Samples of recovered 27-33°API oil at Hammamet West-3

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#### **Footnotes**

- 1. mMDRT measured depth in metres below the rotary table or drilling floor
- Total hydrocarbon gas is measured as a percentage of the air/gas mixture extracted from the drilling fluid.
  The main components of the hydrocarbon gas are also measured and an increase in the ratios of the heavier gases (propane, butane, pentane components of LPG) to methane ("natural gas") is indicative of the presence of oil.

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Pursuant to the requirements of the ASX Listing Rules 5.11, 5.11.1, 5.12 and 5.13, the technical information provided in this company update has been compiled by Justyn Wood, Technical Director of Jacka Resources Limited. Mr Wood is a qualified geophysicist with over 18 years technical, commercial and management experience in exploration for, appraisal and development of oil and gas resources. Mr Wood has reviewed the results, procedures and data contained in this announcement. Mr Wood consents to the inclusion in this announcement of the matters based on the information in the form and context in which it appears.

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