



PRESS RELEASE

(Stock Symbol "CLT" – TSX)

March 22, 2010

Calgary, Alberta

CELTIC OBTAINS A FACILITY LICENCE AMENDMENT AT KAYBOB AND PROVIDES AN OPERATIONS AND EXPLORATION UPDATE

Celtic Exploration Ltd. ("Celtic" or the "Company") has received a licence permit from the Energy Resources Conservation Board to amend the existing licence permit for the sour gas facility located at Kaybob. This licence permit allows the Company to make modifications to the existing sour gas facility that will result in a gas processing capability of 150.0 MMCF per day of raw gas. The Company estimates that it will cost approximately \$35.0 million in capital expenditures to complete the project. Currently, a significant portion of the Company's gas production from Kaybob is processed at a third party facility. Constructing and operating this gas processing facility would give Celtic operational control over the majority of the Company's production. In addition, the Company will realize significant reductions in operating expenses and will benefit with higher production volumes resulting from lower gas shrinkage.

Operations Update

Celtic has had an active drilling season year-to-date in 2010. To date, the Company has drilled 19 gross (13.2 net) wells, with an overall net success rate of 92%. The breakdown of wells drilled is as follows:
Kaybob – 13 gross (10.5 net) wells;
Kaybob BHL Unit #1 – 3 gross (0.3 net) wells;
Drumheller, southern Alberta – 1 gross (0.4 net) well; and
Other, west central Alberta – 2 gross (2.0 net) wells.

In addition, the Company expects to complete the drilling of 3 gross (2.3 net) wells prior to March 31, 2010. The majority of these wells will be put on production in March and April 2010. As a result, the Company expects to show significant growth in production in the second quarter compared to the first quarter of 2010.

Celtic is forecasting production in 2010 to average between 18,500 and 18,700 BOE per day. On a quarterly basis, average production is estimated as follows:

Q1 – 16,800 BOE per day (reflects Kaybob production down-time resulting from the KA Plant outage for five days during the quarter);
Q2 – 18,800 BOE per day (reflects the previously announced disposition of approximately 500 BOE per day);
Q3 – 19,000 to 19,400 BOE per day; and
Q4 – 19,400 to 19,800 BOE per day.

The Company's forecasted production for 2010 would represent growth of over 30% compared to average production in 2009 of 14,192 BOE per day.

Exploration Update

Celtic has accumulated 46,400 acres (72.5 sections) of undeveloped land at 100% working interest in new "exploration" resource plays in west central Alberta, targeting the Montney, Bluesky, Notikewin and Cardium formations in these potential gas reservoirs. With success in these tight gas reservoir plays, the Company would follow-up with a development project utilizing horizontal drilling and multi-stage fracture completions, similar to the program that Celtic has implemented at Kaybob. To date in 2010, Celtic has drilled two wells on these exploration plays and expects to drill seven more wells by the end of summer. Results from this exploration program will be made available in the second half of 2010.

In the Kaybob area of Alberta, Celtic owns Devonian Duvernay rights in 93,920 gross (87,476 net) acres of land and expects to drill its first well in this gas shale play by the end of summer in 2010. The Company's lands targeting the Duvernay are in close proximity to the location of the sour gas facility that Celtic is planning to modify (see above).

Design specifications of the proposed gas processing facility at Kaybob, which is currently based on existing and forecasted Montney, Bluesky and Notikewin production, would have to be re-evaluated with success and development in the Duvernay.

Celtic is in the process of evaluating timing requirements with respect to construction of the gas processing facility at Kaybob and expects to make an announcement by this summer as to whether it will proceed with construction in 2010 or 2011.

Forward-looking Statements

This press release contains expectations, beliefs, plans, goals, objectives, assumptions, information and statements about future events, conditions, results of operations or performance that constitute "forward-looking information" or "forward-looking statements" (collectively, "forward-looking statements") under applicable securities laws. Undue reliance should not be placed on forward-looking statements. Forward-looking statements are based on current expectations, estimates and projections that involve a number of risks and uncertainties, which could cause actual results to differ materially from those anticipated by the Company and described in the forward-looking statements. We caution that the foregoing list of risks and uncertainties is not exhaustive. Events or circumstances could cause actual dates to differ materially from those estimated or projected and expressed in, or implied by, these forward-looking statements. The forward-looking statements contained in this press release are made as of the date hereof and the Company does not intend, and does not assume any obligation, to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise unless expressly required by applicable securities laws.

The information set out herein with respect to forecasted 2010 production is "financial outlook" within the meaning of applicable securities laws. The purpose of this financial outlook is to provide readers with disclosure regarding Celtic's reasonable expectations as to the anticipated results of its proposed business activities for 2010. Readers are cautioned that this financial outlook may not be appropriate for other purposes.

Other Measurements

All dollar amounts are referenced in Canadian dollars, except when noted otherwise. Where amounts are expressed on a barrel of oil equivalent ("BOE") basis, natural gas volumes have been converted to oil equivalence at six thousand cubic feet per barrel and sulphur volumes have been converted to oil equivalence at 0.6 long tons per barrel. The term BOE may be misleading, particularly if used in isolation. A BOE conversion ratio of six thousand cubic feet per barrel is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead.

References to oil in this discussion include crude oil and natural gas liquids (“NGLs”). NGLs include condensate, propane, butane and ethane. References to gas in this discussion include natural gas and sulphur. Sulphur volumes have been converted to natural gas equivalence at one long ton per 10 thousand cubic feet.

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