

Bulletin 2006-22

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New Well Logging Requirements—Surface Casing Interval

The Alberta Energy and Utilities Board (EUB) is proposing changes to well logging requirements in an effort to gain more information on near surface geology. The intention is to add logging requirements for the surface casing interval for all new wells drilled in the province after November 1, 2006. By way of this bulletin, the EUB is seeking feedback on this proposal, specifically with respect to alternatives that might provide an equal or higher level of information.

Background

The significant increase in exploration and development drilling targeting the shallow geologic column has led to increasing public concern that this activity may have a negative impact on shallow aquifers.

Existing regulations do not require collection of geological information from the base of surface casing to surface. As a result, industry voluntarily collects and submits minimal data for this interval. The vast majority of geological information (geophysical well logs, core, and drill cuttings) obtained during the drilling of oil, gas, and oil sands wells covers intervals below the base of surface casing. The EUB believes additional information will greatly enhance the understanding of the geological strata behind surface casing, as it will provide valuable information for geological mapping and characterization of the shallow strata. These data will assist all parties in the evaluation of the potential impact of oil and gas activity on shallow aquifers. Improved geological mapping of the shallow strata will assist by

- improving geological understanding and identification of groundwater resources and their distribution, connectivity, and relationship to other geological units,
- improving mapping of the base of groundwater protection, and
- enhancing the ability to identify porous and/or permeable strata that may act as conduits for fluids.

New Requirements

There are a number of options for gathering additional information for this interval, such as sample collection and lithology logging; however, the EUB has determined that enhancing logging requirements is the most cost-effective means of obtaining the necessary information. The existing regulations (*Oil and Gas Conservation Regulations*, Section 11.140[1]) require the taking of an acceptable log to measure the resistivity and spontaneous potential of the strata from the total depth of the well to the base of surface casing, but there are no logging requirements for the surface casing interval.

The EUB is planning to implement the following minimum requirements for well logging through casing from the base of surface casing to surface for all new wells. The requirements of Section

11.140 of the *Oil and Gas Conservation Regulations* will be amended to require the taking of logs to measure the

- natural gamma ray response through casing from the base of surface casing to surface, and
- neutron response through casing from the base of surface casing to 25 metres below the surface (as the neutron tool is a radioactive device, to protect workers safety it cannot be run to surface).

Requests for Comments

Prior to implementing the new logging requirements, the EUB is seeking stakeholder input on the proposed additional well logging requirements. Specifically, the EUB is interested in feedback with respect to alternative measures that could be taken to collect equivalent or better information over the subject interval. Any feedback received will be considered prior to implementing a change in requirements. Comments and feedback may be forwarded by e-mail to the EUB at shallowlogging@gov.ab.ca prior to September 1, 2006.

A directive announcing the final data collection requirements for the surface casing interval will be issued subsequent to considering all feedback.

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