

December 17, 2010

OIL SANDS TENURE INFORMATION BULLETIN 2010-11

Subject: Acquisition and Submission of Evaluation Data for Oil Sands Agreements

The *Oil Sands Tenure Regulation* (the “Regulation”) and its Guidelines describe the evaluation requirements for oil sands agreements. This information bulletin provides more explicit instructions regarding Alberta Energy’s oil sands agreement evaluation requirements; particularly those regarding wells necessary to evaluate oil sands zone (or zones) included in the agreement. In addition, this bulletin also provides more detail regarding the information to be included in applications for a lease selection (i.e., permit to lease conversion) or applications for a primary lease to be continued (i.e., lease continuation). Finally, this bulletin is to be read in conjunction with the Regulation and as a supplement to its Guidelines. The Regulation and Guidelines should be referred to for any matter not specifically referred to in this bulletin.

Evaluation Data Required

All oil sands agreements must be evaluated by evaluation wells that must be located on every section, or partial section, of the agreement. The evaluation wells must be drilled through all oil sands zones present within the leased rights, irrespective of whether a lessee considers only one specific zone to be prospective. A minimum of 25% of those wells require core to be taken of each of the oil sands zones included in the agreement. As well, a full suite of well logs needs to be taken for all evaluation wells. As an example, the Mannville Group in the Cold Lake Oil Sands Area consists of many zones that have the potential to host bitumen. If the leased rights included the entire Mannville Group, then all oil sands zones in the Mannville Group must be evaluated. Evaluation wells would have to be drilled from the surface to the base of the Mannville Group. In this case, Alberta Energy would consider the Colony, Waseca, Sparky, General Petroleum, Rex, Lloydminster, Wabiskaw, and McMurray zones all to have the potential to contain bitumen. As such, a minimum 25% of those evaluation wells would have to core completely the full interval of each of those zones. The remainder of the evaluation wells would have to be logged from the top of the Mannville Group through to the base of the Mannville Group.

Alberta Energy may consider granting exceptions to the drilling and coring requirements if a designated representative provides evidence that drilling into a specific zone was not, or would not be, allowed by the Energy Resources Conservation Board.

Alberta Energy has allowed oil sands lessees to retain sections with producing wells despite there not being an appropriately cored evaluation well. The acceptance of bitumen producing well was not intended as a replacement for the core requirement of an evaluation well. Rather, this reflects Alberta Energy's intention to avoid not continuing an already producing section. Typically, an average of 40 barrels per day over the last three months of the agreement's term would be accepted from an individual well to preserve the section if it is located within the agreement. Production from a vertical or deviated well can apply only to one specific section. Production from a horizontal well may be applied to two sections depending on the productivity and productive portions of the well. Horizontal well production for more than one section will be at the discretion of Alberta Energy.

A lessee has the flexibility to drill evaluation wells on 60% of the sections, or parts of sections, of the agreement if seismic or electromagnetic data can be obtained for the remaining sections. The amount of seismic required is 3.2 kilometres on each section (prorated for partial sections). The seismic data should result in a seismogram that provides clear resolution of all oil sands zones to the top of the Devonian and should be appropriately "tied" to an evaluation well of the oil sands agreement. Seismic lines should be planned to "tie" no further than 100 metres from an evaluation well's borehole.

Alberta Energy has determined that a seismic program that covers all leased oil sands zones and results in a subsurface interval spacing of 10 metres with a minimum fold of 15 for the shallowest oil sands zone included in the agreement would be accepted for evaluation purposes. Unlike evaluation well data, seismic data is subject to a fair amount of individual interpretation. If lessees want to conduct seismic programs that result in longer interval spacing or less fold, then they should discuss their seismic program parameters with Alberta Energy before conducting the program.

Primary leases and permits have the same technical evaluation requirements. However, the timing of when that technical evaluation may be undertaken is different. All evaluation well data for permits has to be acquired during the term of the permit and any seismic data has to be processed or reprocessed during the term of the permit. There are no similar timing restrictions regarding the evaluation data for leases; lease evaluation data may be from any time prior to, or during, the term of the primary lease.

Operators should be aware that some special considerations may apply to drilling and coring data gathered prior to or during the 2010/2011 drilling season. These considerations will be outlined in Information Bulletin 2010-12.

Advance Rulings

The designated representative may apply for an advance ruling on a proposed work plan, or upon the completion of a work program, to receive comments on whether the evaluation would be, or is, sufficient. The advance ruling process is intended primarily for situations that may require the application of ministerial discretion. All advance ruling requests and decisions must be in writing. Advance rulings are agreement specific, are based on specific circumstances, and are not precedential in nature. Advance rulings are not appealable.

Requests for advance rulings can occur at any time prior to the beginning of the last term year of the agreement. This should afford the lessees at least one year to address any evaluation deficiencies identified by Alberta Energy. It is suggested advance ruling requests be submitted two or more years prior to the last term year, if the request involves large leases or significant

variation of standard evaluation requirements. Advance ruling requests require submitting the same type of information as will be described later for lease selection and lease continuation applications. Alberta Energy intends to respond to advance rulings within 45 working days. All responses will be in writing; no verbal responses will be provided.

An advance ruling represents significant work for the designated representative as well as Alberta Energy. Designated representatives should carefully and comprehensively describe their evaluation program or results, as only one advance ruling will be given for an agreement. Alberta Energy typically does not retain any information provided by the designated representative during the advance ruling process. It will be the responsibility of designated representatives to describe comprehensively and evidence the evaluation work completed when they subsequently apply for lease selection or lease continuation.

Requirements for Lease Selection or Lease Continuation Applications

The processes for applying for a lease selection (i.e., permit to lease conversion) or applying for a primary lease to be continued (i.e., lease continuation), are very similar.

Only the designated representative may apply for lease selection or lease continuation. A separate submission package is required for each permit or primary lease that is due to expire. Submissions must be in paper form. A copy of the entire submission on CD/DVD is not necessary, but would be appreciated. Each submission requires a combination of non-technical and technical information.

The submission package must include the following non-technical information:

- All details of the existing agreement (e.g., agreement number, term effective and expiry date, size of the agreement, descriptions of the specific surface location and subsurface rights).
- Explicit request for either a lease selection or a lease continuation. If it is a lease continuation request, identify whether a producing or non-producing status is being sought.
- The sections being requested for lease selection (include how they are to be configured and if multiple leases are being requested) or the sections being continued from the primary lease (all sections must remain in the same lease).
- The specific provision of the Regulation under which the evaluation was completed (i.e., section 3(2) or 3(3)).
- A map showing the leased sections, the sections to be included in lease selections or to be continued, and all wells drilled through the oil sands zones. Evaluation wells should be highlighted (distinguish logged vs. cored) and seismic lines (with identifiers). The map should be of a scale of 1:30,000 or lower.
- A copy of any advance ruling that may have been received from Alberta Energy regarding the evaluation work.
- A written description that provides an overview of how the evaluation requirements were met and any unforeseen difficulties where discretion may need to be applied.
- A list itemizing all technical evaluation data being submitted.

The submission package must include the following technical information:

If an application is being made solely on the basis of evaluation well data, then the information in the following six bullets is required.

- A summary of the evaluation submitted for each section (e.g., section 03-058-04W4M logged well; section 04-058-04W4M cored well; section 05-058-04W4M 3.2 km seismic; section 06-058-04W4M no evaluation). The summary should include who performed the work and when (i.e., drilled the well or conducted the seismic program). Note that only one well should be submitted for any individual section.
- Summary of the drilling or coring activity for each evaluation well (e.g., who/when drilled, drill/coring time, rate of progress, etc). Well ticket and Geograph drilling records represent the type of information Alberta Energy is interested in obtaining.
- Full suite of well logs for each evaluation well. This includes logs for Spontaneous Potential, Resistivity, Gamma Ray, and Neutron Density. The well logs must include header information (i.e., well id, spud date, measured depth and total vertical depth), indicate where core was taken, and identify formation tops. All must be of equivalent scale.
- Deviation surveys, borehole schematics and map view of well bore path for every horizontal or deviated well submitted.
- Analysis of cores and any core photographs taken.
- Full completion reports for any well that produced. Include open-hole portions and/or slotted liner locations.

If an application is being made using a combination of evaluation well data and seismic data, then the information in the following three bullets must be submitted in addition to the previous six bullets.

- The actual shot point map highlighting all shooting and recording parameters and the well-tie. The map must also identify who acquired the data and the date they acquired it. The map must include a base layer with sections, townships, and ranges.
- Seismograms (with full header) for each seismic line submitted. The seismograms must indicate its fold, who processed it, the date it was processed, and all other relevant parameters.
- Synthetic seismograms for each seismic line's well tie.

If an application is being made for a continued lease with a producing status, then the information in the following bullet also would be required. This information is in addition to either the first six bullets or the nine bullets depending on the evaluation program undertaken.

- List of producing wells on the agreement and each well's production history (fluids, volumes, dates).

It is the responsibility of the designated representative to submit a comprehensive application that includes all the required information and data to support their request for lease selection or lease continuation. Incomplete or incorrect information or data may result in the desired oil sands rights not being included in a new primary lease (i.e., from a permit) or a continued lease. Conversely, Alberta Energy will not accept applications that are submitted with excessive evaluation wells or data that are beyond what is necessary for an application. It is the designated representative's responsibility, not Alberta Energy's, to decide which evaluation wells or data should or should not be part of the application.

Designated representatives should make a lease selection or lease continuation application before the expiration date of their agreement. If no application is received by the agreement's expiry, Alberta Energy will proceed to cancel the agreement. Alberta Energy will endeavour to evaluate and respond to applications within 45 working days. All responses will be in writing; no verbal responses will be provided.

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