

## Adjudicating on waterflood enhanced recovery schemes: is it time for compulsory unitization in Alberta?

By Nigel Bankes

### Cases Considered:

[Hunt Oil Company of Canada Inc: Applications to amend enhanced recovery scheme approval No. 10848 and Pool Delineation Kleskun and Puskwaskau Fields, December 23, 2008, ERCB Decision 2008-130, December 23, 2008.](#)

Hunt and Galleon (and perhaps others) have interests in the same small oil pool and indeed a series of oil pools that are all “in communication” by virtue of a common aquifer. But evidently they cannot agree on how best to develop the pool, or perhaps they cannot agree on how to share the costs and benefits of joint development including the allocation of resulting production. As a result, each of them operates separate waterflood schemes in the same pool. Each such enhanced oil recovery (EOR) scheme needs to be approved by the ERCB under s.39(1)(a) of the *Oil and Gas Conservation Act (OGCA)*, R.S.A. 2000, c. O-6.

The present application originated when Hunt applied to change its EOR approval to have the Board approve additional saline injector wells. Galleon objected. Galleon accepted the need for additional injector wells but believed that there were more efficient options for implementing such a scheme and considered that there was some risk of premature breakthrough of the injected water (i.e. that the water, rather than pushing the oil in front of it from the injector well to the producer well, might break through and thus lead to unacceptably high water oil production ratios). Either that, or Galleon simply wanted to delay implementation of this new scheme.

The Board sided with Hunt. The Board found that Hunt’s modeling of the reservoir was more plausible than that offered by Galleon, and, in the absence of evidence of the existence of narrow channels which would serve to facilitate breakthrough, it did not believe that there was much risk. It did, however, note that “it may be advisable to include additional monitoring” that “an effective monitoring program would require a joint effort between Hunt and Galleon” but that the design of such a program would go “beyond what is normally required by the ERCB” (all quotations at 19) and that therefore the examiners would “not recommend that the Board require a special monitoring program”.

Now all of this is pretty complicated technical stuff and I am in no position to second guess the ERCB and its expert examiners on the technical merits of the competing positions of Galleon and Hunt. But the decision does prompt two comments.

The first is to note the near absence of law in the Board's decision. Apart from reciting the two section numbers under which the applications were brought (pool delineation (s.33) and the EOR application (s.39(1)(a)) the Board and its examiners make no further reference to the *Act*. Which raises the question of what principles the Board should be applying in making reasoned decisions of this nature? Given that s.39 of the Act offers little guidance as to the principles and values at stake (and the same must be said for the Regulations (s.15.040)), an important starting point should be the purposes section of the *OGCA*:

### **Purposes of Act**

**4** The purposes of this Act are

- (a) to effect the conservation of, and to prevent the waste of, the oil and gas resources of Alberta;...
- (c) to provide for the economic, orderly and efficient development in the public interest of the oil and gas resources of Alberta;
- (d) to afford each owner the opportunity of obtaining the owner's share of the production of oil or gas from any pool;...

And given the Board's duty to provide reasons for its decisions, does not the Board have a duty to connect its disposition of the application with the terms of the statute that gives it its authority and guides the exercise of its discretionary powers?

The other place to look for guidance is [Board Directive 65 \(s.2.1.1.2D\)](#) which provides, *inter alia* that "If there are multiple well licensees within the approval area, the approval holder is expected to coordinate the scheme operations to ensure that maximum recovery is attained."

True, the examiners do discuss the relative merits of the proposed schemes in terms of costs and the incremental pool recovery factors associated with the competing options proposed by the two parties but we don't know whether a collaborative proposal might increase the pool recovery factor or be otherwise more efficient.

This leads directly to the second point which is highlighted in the title to this post: the question of compulsory unitization. Why is it that we have competing EOR operations occurring in the same field? Why do we not insist that pools such as this be operated as a single unit and if the parties cannot agree on tract participation factors then have the ERCB do it for them (as it will in the more geographically limited context of compulsory pooling, *OGCA* ss. 80 - 90). We have compulsory unitization on the books but it has never been proclaimed (with the exception of the specific legislation in relation to the Turner Valley Field).

I am told that in comparative terms, fewer pools proceed to enhanced recovery projects in Alberta than in other jurisdictions in North America (let alone the rest of the world, where

regulators frequently require pre-commencement unitization i.e. no production without unitization). If this is indeed the case (and if anybody in the blogosphere has real data on this I would love to hear from them) then we need to know why. If we are serious about doing more with less, about reducing the footprint of the industry, about increasing recovery rates for conventional reservoirs and fully meeting the stated purposes of the Act, then isn't it time that we required unitization rather than just encouraging it as the Act currently reads (*OGCA*, s. 79)? Compulsory unitization (or the threat thereof) may not address all of these problems but short of the equivalent of a royalty review committee or an Auditor General Report that investigates the question and sheds some light on the matter I will be putting my money on the absence of any regulatory mechanism to require unitization as a significant cause of the low rate of introducing but also (as here) optimizing EOR schemes in Alberta.