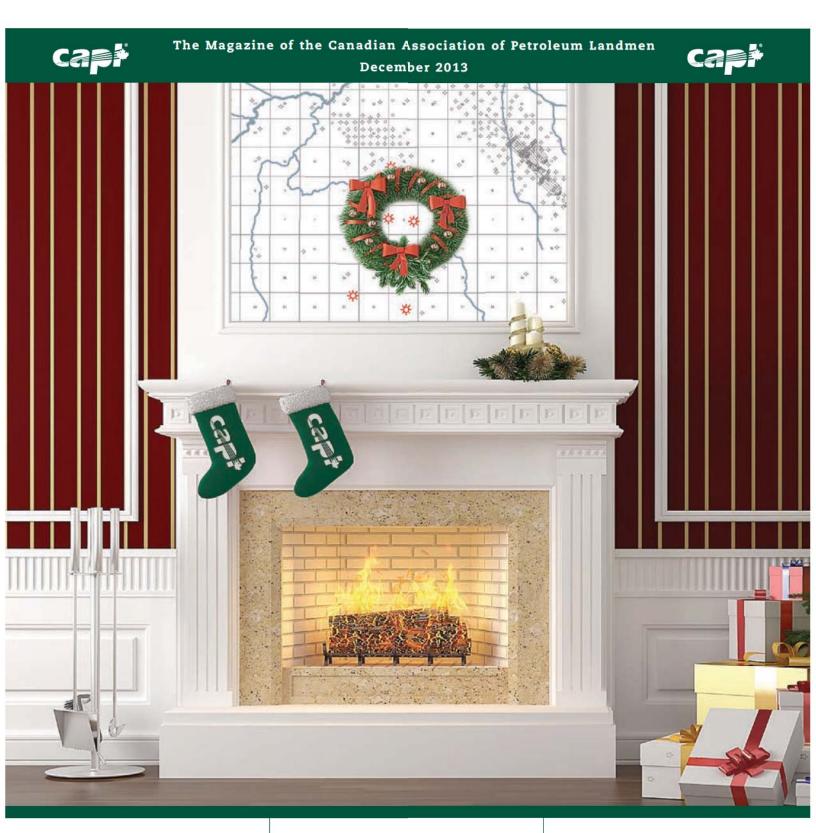
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A Cautionary Tale Regarding Unitization and EOR Schemes

WHACK, WHACK, WHACK. HEAR THAT SOUND.

It's me beating a dead horse. Futile I know, but here I go again.

Today I will, once again, talk about the need to bring back the Unit Agreement to allow for the proper tenure and regulatory structure for enhanced oil recovery (EOR) and unconventional tight oil and gas plays where freehold lands are in play.

I can see your eyes glossing over already and I can hear your brain screaming "it's toooo hard" and "the engineers just don't care". True enough, but perhaps the following cautionary tale from

Sooo, we have an EOR Approval in a pool for which an edge of the pool is not included. Happens more often than you might imagine.

the Alberta Energy Regulator (AER) will change your mind. Actually, this is the one time your engineers might actually care since the decision directly impacts one of their fancy pants EOR schemes and nicely illustrates how an AER Approval is not the same thing as a Unit.

Butte: The Facts

The AER decision in question is Butte Energy Inc. (2013 ABERCB 005). The decision is a classic example of how to try to game a "window" (in this case an edge) in a pool and Approval, i.e., a situation where the affected pool is not fully covered by the operators freehold leases, Unit and Approval. Happens quite a bit actually. The gaming in this case was by way of a regulatory holding application for the window, so that the non-unitized operator could take advantage of an EOR scheme, without contributing to the costs of same.

Butte applied under section 5.190 of the Oil & Gas Conservation Regulations to establish a holding on three quarters of a section of land for which it was the lessee under a freehold mineral lease (Sec. 35). An objection was filed by Glencoe Resources Ltd., who was the operator of the Chigwell Viking Units surrounding Sec. 35. The story starts nicely. Glencoe actually created new Units in 2007 and 2009 (what!, I know, it can be done). Glencoe also held an EOR Approval for an experimental scheme for enhanced recovery of oil by miscible displacement using CO2 within the unitized area. Perfect.

The problem with this very nice set of facts is that Glencoe simply could not get the Sec. 35 fee simple mineral owner on the edge of the pool to agree to lease terms and, therefore, chose to cut the lands out of the Unit and Approval. Sooo, we have an EOR Approval in a pool for which an edge of the pool is not included. Happens more often than you might imagine.

Butte, being the lessee of the leases on Sec. 35, was the proud owner of wells which everyone agreed had no further potential for primary production. They were already getting the benefit of Glencoe's CO2 flood from these existing wells. Their application was to increase well density on Sec. 35 by virtue of establishing a holding. In short, Butte wanted to create a holding (increase well density) and, therefore, add more wells to Sec. 35 to suck up the oil being pushed and greased through the pool under Glencoe's CO2 flood.

The AER was not amused.

Holdings - A Primer

Under Part 5 of the Oil and Gas Conservation Rules ("OGCR"), an operator applies for regulatory authority to exceed standard spacing rules (one well per pool) by way of blocks, projects and holdings. The regulatory process is a balance between:

- · maximum ultimate recovery (holding); and
- conservation and prevention of waste (minimize capital expenditures to get production, i.e., limit the number of wells).

With the emergence of enhanced oil recovery (EOR) and tight oil and gas plays, the world is quickly changing. In our aging basin and via new technologies, holdings are usually granted in normal course by regulators. This is especially true now that density drilling applies to much of Alberta and one well per pool is pretty much dead through the WCSB. One might call this the "death of the spacing unit". Hmmm, I think I just thought of the title of my next article, but I digress.

Holdings and Tenure

It is important to note that the regulatory holding is only part of the picture. A holding does not, in any way, address tenure ownership, but rather assumes tenure has been dealt with. See 5.200 of the OGCR which states:



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Toll Free (866) 412-5263 www.hmaland.com | www.rpsgroup.com 5.200 A holding shall contain only:

- (a) a single drilling spacing unit of common ownership, or
- (b) whole, contiguous drilling spacing units of common ownership.

The "common ownership" requirement is met by combining all of the underlying tenure documents (Crown mineral leases and Freehold mineral leases) and the working interest holders therein, under some type of document that allows for common ownership (or revenue sharing) of production from all wells within the holding. I think we just defined a Unit Agreement.

The Problem – Lack of Compulsory Unitization in Alberta

The tenure issue in the Butte decision is that Glencoe simply could not get the fee simple mineral owner in Sec. 35 to sign a lease and join the Unit. Sadly, this does not help my drive to convince landmen to consider unitization. It actually supports the sad fact that sometimes unitization is too hard. D'oh!

In Butte, the AER speaks to this issue at par 90:

...With respect to Butte's statement that it had offered to return the CO2 it produces to Glencoe, the ERCB does encourage operators to cooperate with one another in the development of a pool. However, the ERCB does not have jurisdiction to force parties to enter into unit agreements

even where it may be an appropriate tool to ensure orderly development of a pool.

What the AER is really saying is that it does not have the authority to force unitization by way of a statutorily (compulsory) unitization when tenure owners in a pool cannot find a way to agree to terms on their own. I must admit that I had never really considered this unitization problem before. Note - I believe Alberta is the only province that does not have compulsory unitization rules in place. Hence, there is no excuse for not using compulsory unitization in Saskatchewan, Manitoba or BC.

Although I am not one to support more governmental control over property rights, I am now convinced that the fulsome application of Unit Agreements over EOR schemes in Alberta will require a change to the OGCR so that compulsory unitization (much like compulsory pooling) is provided for under the regulations. Second Note - this is not some clever insight I came up with on my own. See Nigel Bankes Ablowg.ca blog on Butte for the original argument for this regulatory hole and the need for a change.

Establishment of a Holding Test - Low Threshold

Now the legal stuff. There is a three part test section 5.190(c) of the OGCR to allow for a holding:



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Establishment of Holdings

- 5.190 (1) The Regulator, on application and by order, may establish holdings.
 - (2) An application to establish holdings must be made in accordance with Directive 065 and must include any other information that the Regulator requires.
 - (3) The Regulator shall not grant an application for an order pursuant to subsection (1) unless, in the opinion of the Regulator, the applicant shows that (a) improved recovery will be obtained,
 - (b) additional wells are necessary to provide capacity to drain the pool at a reasonable rate that will not adversely affect the recovery of the pool, or
 - (c) the proposed holding would be in a pool, in a substantial part of which there are existing drilling spacing units or holdings with similar provisions.

The "or" means that only one of the three requirements needs to be met. The AER found that Butte met the requirements of 5.190(3)(c):

[24] ... The examiners do not agree with Glencoe's argument that clause 5.190(3)(c) is not met because increased well density for primary recovery is different than the increased well density already established in the E Pool for EOR since clause 5.190(3)(c) does not differentiate between different recovery mechanisms, but considers whether the existing approved spacing has similar provisions.

They really pretty much had to. The EOR Approval created a holding over the unitized lands and everyone agreed that the pool included both the Unit lands and Sec. 35. In addition, CO2 was already coming out of the wells on Sec. 35, which pretty much confirmed that the pool covered both sets of lands.

AER Discretion - The Public Interest

But this was not the end of the story. Section 5.019(1) provides that the Board "may" establish holdings. The AER loves the word "may". "May" allows all kinds of discretion. Here the Board exercised its discretion by appealing to the public interest:

[25] Having found that the application meets the test, the examiners conclude that the Board's authority to grant the application for the holding is established and the Board may approve the application if it finds that it is in the public interest.

[26] The examiners note that section 4(a) of the OGCA states that one of the purposes of the OGCA is to effect the conservation of, and to prevent the waste of, the oil





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This allows the AER to do the right thing (in my humble view) and deny Butte the right to piggy-back, even more than it already is under the existing wells...

and gas resources of Alberta. Waste is defined as wasteful operations, which include

(a) the locating, spacing, drilling, equipping, completing, operating or producing of a well in a manner that results or tends to result in reducing the quantity of oil or gas ultimately recoverable from a pool under sound engineering and economic principles. [Emphasis added.]

Accordingly, the examiners must ensure that approval of increased well density in the application area would not cause a reduction of ultimate oil recovery from the E Pool.

Public Interest vs. Rule of Capture

It must be remembered that a regulator's concern about conservation and waste are always subject to the rule of capture under standard spacing. Ergo, no one can prevent you from drilling under standard spacing and draining your neighbour. This is basic oil and gas law due to the migratory and fugacious nature of oil and gas. This is also why the existing Butte wells could not be shut-in or otherwise challenged by Glencoe.

However, after primary recovery ends and we are into EOR, the rule of capture becomes fuzzier. This was important to the Board:

[62] The examiners note that both Butte and Glencoe agree that the E Pool, including the area of application, was produced to depletion under primary recovery and that the oil being recovered from the E Pool is now due to Glencoe's injection of CO2 into the reservoir.

This allows the AER to do the right thing (in my humble view) and deny Butte the right to piggy-back, even more than it already is under the existing wells, by way of an approval for a holding (which would allow Butte to drill more wells on Sec. 35).

[78] It is evident to the examiners that the portion of the E Pool underlying Sec. 35, or at least the southwest quarter, is being influenced by Glencoe's EOR scheme and oil recovery is occurring under the same recovery mechanism as that in the pool on the offsetting land. This is based on the oil production obtained by Butte from its 4-35 well,



the CO2 content in the produced gas, and the pressure measured at the well. The examiners conclude that Butte is receiving the benefit of EOR without implementing its own EOR scheme for Sec. 35 or participating with Glencoe in its EOR scheme.

Finally, the Board makes it clear that Butte is being too clever by half:

[79] The examiners find inconsistency between Butte's argument that Sec. 35 is actually under EOR and therefore should have increased well density to improve recovery and Butte's inaction to seek approval of its own EOR scheme on Sec. 35. By not being within an approved EOR scheme, there are no obligations regarding EOR for development of Sec. 35, such as replacing voidage and maintaining reservoir pressure at or above the MMP. As a result, Sec. 35 is correctly administered as a primary production area, subject to the rules for primary production.

[80] ... the examiners are not convinced that approving increased well density in an area where the wells are being severely restricted due to ERCB requirements would result in orderly and efficient development. The examiners believe that it would be more appropriate for any approval

of increased well density in the application area to be done in conjunction with approval of an EOR scheme. This would allow Butte to replace reservoir voidage and have any MRL and GOR penalties on its wells removed.

Lucky Break vs. Best Practise

At the end of the day, I think Glencoe got a bit lucky that the AER denied the application. Public interest is a bit of a stretch and always an exercise of discretion that can never be guaranteed. Clearly not the best practise. Had Glencoe lost, they would have had a pretty good size tenure hole in the pool, through which (even more) production, pressure and CO2 would have been lost. That being said, I am not sure they had much choice in the absence of compulsory unitization.

Best practise is to ensure that the entire pool is subject to the EOR scheme (AER Approval) through common ownership under unitization. Just unitize damn it. Failure to properly unitize the whole pool creates drainage problems (such as in *Butte*) and can create all kinds of other unintended consequences such as offsets and lease continuation issues.

Best practise is hard, but a lack of common ownership in a pool (or a tight play) is probably worse. \blacksquare

