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September 15, 2006

Our File: 43173.1

By E-mail and Delivery

EXHIBIT 03-036-2006-09-15

ALBERTA ENERGY AND UTILITIES BOARD

640 – 5th Avenue S.W.
CALGARY, Alberta
T2P 3G4

ATTENTION: Mr. P. Ferensowicz, Energy Team Secretariat

**RE: Part 2 of AEUB Proceeding No. 1457147
Bears paw Petroleum Ltd., Carbon Development Partnership,
Devon Canada Corporation, Encana Corporation and Fairborne Energy
Ltd., Clive, Ewing Lake, Stettler and Wimborne Fields**

Please find herewith an electronic copy of the Submission of Carbon Development Partnership in relation to the Application of both Fairborne Energy Ltd. ("Fairborne") and Devon Canada Corporation ("Devon") marked as Exhibit 03-036-2006-09-15.

12 copies of the Submission are being couriered to you with the original copy of this letter and electronic copies will be submitted to the interested parties.

A book of the authorities referred to in our Submission and Professor Lucas' report will be provided early next week.

Yours truly,

FIELD LLP


W. T. Corbett

cc: All Interested Parties

{C0384789 DOC;2}

ALBERTA ENERGY AND UTILITIES BOARD

IN THE MATTER OF THE *ENERGY RESOURCES
CONSERVATION ACT*, CH. E-10 OF THE REVISED
STATUTES OF ALBERTA 2000;

AND IN THE MATTER OF PROCEEDING NO.
1457147 RESPECTING A REVIEW HEARING IN
CONNECTION WITH THE ISSUANCE OF CERTAIN
WELL LICENCES IN THE CLIVE, EWING LAKE,
STETTLER AND WIMBORNE FIELDS

(THE "PROCEEDING")

PART 2

SUBMISSIONS OF CARBON DEVELOPMENT PARTNERSHIP,
SUCCESSOR IN INTEREST TO PRAIRIE MINES AND ROYALTY LTD.,
FORMERLY LUSCAR LTD.
RESPECTING APPLICATIONS MADE BY FAIRBORNE ENERGY LTD.
AND DEVON CANADA CORPORATION

September 15, 2006

PART 2

SUBMISSIONS OF CARBON DEVELOPMENT PARTNERSHIP (“CDP”), SUCCESSOR IN INTEREST TO PRAIRIE MINES AND ROYALTY LTD. (“PMRL”) (FORMERLY LUSCAR LTD. (“LUSCAR”))

I INTRODUCTION

1. CDP (which, for the purposes of this submission, shall include PMRL or Luscar as the context requires) is an affected party pursuant to Section 40 (1) of the *Energy Resources Conservation Act* (the “ERCA”) in relation to five well licence applications (the “Fairborne Applications”) submitted by Fairborne Energy Ltd. (“Fairborne”) in the Clive Field on May 26, 2005 and February 10, 2006, the particulars of which applications are as identified in the Notice of Hearing (hereinafter referred to as the “Fairborne Application Properties”) of the Alberta Energy and Utilities Board (the “Board”).
2. CDP is also an affected party in relation to 12 well licence applications and an application for a holding order (collectively the “Devon Applications”) submitted by Devon Canada Corporation (“Devon”) in the Wimborne Field (hereinafter referred to as the “Devon Application Properties”).
3. To summarize advice previously filed with the Board, effective May 4, 2006, Luscar Ltd. changed its name to Prairie Mines and Royalty Ltd. and, effective June 1, 2006, PMRL sold its entire interest in the coal underlying and within the Fairborne Application Properties and the Devon Application Properties to Carbon Development Partnership (“CDP”). Copies of the coal titles underlying the Fairborne Application Properties and standing in the name of Luscar Ltd. were filed with the Board as part of Exhibit 04-007. Copies of the coal titles underlying certain of the Devon Application Properties and standing in the name of Luscar Ltd. were filed with the Board as part of Exhibit 03-002 (Section 9-34-26 W4M), Exhibit 03-007

(Sections 8 and 17-34-26 W4M). These coal titles are collectively referred to as the "CDP Coal Lands".

NATURE OF A SECTION 40 HEARING

4. Section 40(1) of the ERCA allows a person affected by an order or direction made by the Board without the holding of a hearing to apply to the Board for a hearing. If the Board finds that the person is affected by the Board's order or decision and an application for a hearing is made within 30 days following the issuance of the order or decision, Section 40(5) requires that the Board hold a hearing, following which hearing the Board may "confirm, vary or rescind the order or direction, as to the Board seems just".
5. CDP applied for a hearing pursuant to Section 40(1) in respect of each of the Board's decisions:
 - a. to issue well licences to Fairborne in respect of each of the Fairborne Applications; and
 - b. to issue well licences and grant a holding order to Devon, in respect of the Devon Applications.
6. In its decision dated March 9, 2006, the Board found that CDP was affected by the Board's decisions and, in consequence, called this Proceeding.

7. The purpose of Section 40 is to enable parties who oppose a resource application an opportunity to have their views heard. If such opposition were voiced prior to the issuance of the Board's order or decision, the Board is required to hold a public hearing to hear all of the relevant evidence from all affected parties, before issuing its order or making its decision.

8. Although frequently referred to as a "review", a hearing pursuant to Section 40 of the ERCA is effectively a hearing of first instance or a hearing *de novo*. The Board has expressly recognized this principle in connection with this Proceeding. At page 2 of its letter of April 21, 2006 (Exhibit 01-021), the Board stated:

"Given that the requests for review have been accepted by the Board pursuant to s. 40 of the *Energy Resources Conservation Act*, the applicants for the original applications under review (as opposed to the review applicants) are considered to be the applicants in the review hearing process."

9. Each of the applicants must bear the onus of demonstrating that it has satisfied the statutory requirements to justify the Board's issuance of well licences or holding orders. No inference can be drawn from the prior determination of the Board in each of the Fairborne Applications and the Devon Applications, simply because those decisions were made on the basis of incomplete evidence.

10. There is no presumption in favor of the gas owners, and whether or not either the gas owners or the coal owners have pursued a judicial determination of ownership of CBM is irrelevant.

II. APPLICABLE LEGISLATION

Well Licence

11. In order to even apply for a licence to drill a well in Alberta, the applicant must fulfill the requirements of the *Oil and Gas Conservation Act* (RSA 2000. c. O-6, as amended) (the "O&G Conservation Act") and of Directive 56 (formerly Guide 56). It is self-evident that the jurisdiction of the Board is contained in and constrained by this applicable legislation.

Section 16(1) of the O&G Conservation Act states,

"16(1) No person shall apply for or hold a licence for a well

(a) for the recovery of oil, gas or crude bitumen,
or

(b) for any other authorized purpose

unless that person is a working interest participant and is entitled to the right to produce the oil, gas or crude bitumen from the well or the right to drill or operate the well for the other authorized purpose, as the case may be."

(emphasis added)

This language is mirrored in Section 7.9.11 of Directive 56, entitled "Right to Produce or Operate", which states in part:

"37) Prior to submitting a well licence application, the applicant must ...

b) be entitled to the right to produce the oil, gas, or crude bitumen from the well or have the right to drill or operate the well for the authorized purpose;

c) acquire the right to produce from the intended formation for the complete drilling spacing unit (DSU);"...

(emphasis added)

12. It is clear and unequivocal from the O&G Conservation Act and from Directive 56, that, firstly, Fairborne and Devon, as applicants, must, as a matter of law, be entitled to the right to produce CBM from the CDP Coal Lands in order to satisfy the requirements of the legislation and the Board in support of their applications. Secondly, the onus of demonstrating that entitlement to produce CBM is upon the applicants, not upon CDP, as the objecting party.
13. In order to be entitled to a well licence, the applicant must comply with Section 16. The legislature has delineated in Section 16 the statutory standard or requirement that must be met by an applicant if a well licence is to be issued. With respect, the Freehold Petroleum and Natural Gas Owners Association, in paragraph 19 of its submission, has incorrectly identified what it describes as the point in issue. The requirement, under Section 16, is for a licence applicant to show that it is entitled to produce the resource that is the subject of the well licence application, not for the coal owners to show that they have legal entitlement to CBM.
14. Madam Justice Fruman, in *Alberta Energy Company Limited v. Goodwell Petroleum Corporation Limited and the Alberta Energy and Utilities Board* correctly described the effect of Section 16 at paragraph 93 of the decision as follows:

“These sections will be contravened if the person who holds the well license does not possess the right to produce the hydrocarbon authorized by the well license. ... Again, the application of the sections depends upon the interpretation of the instrument that grants the rights.”

Holding Order

15. In order to qualify for a holding order, Devon must meet the statutory standards contained in the *Oil and Gas Conservation Regulations* (AR 151/71, as amended) (the "Conservation Regulations").

Section 5.005(2) of the Conservation Regulations states:

*"(2) No well shall be produced **unless there is common ownership** throughout the drilling spacing unit."*

(emphasis added)

Section 5.200 of the Conservation Regulations states:

*"5.200 A holding **shall contain only***

(a) a single drilling spacing unit, or

*(b) whole, contiguous drilling spacing **units of common ownership.**"*

(emphasis added)

Common ownership is defined in Section 1.020(2)4. of the Conservation Regulations as follows:

"4. "common ownership", when that term is used in connection with a block, holding or project, means that

*(i) **the ownership of the lessors' interests throughout the block, holding or project is the same** and the ownership of the lessees' interests throughout the block, holding or project is the same, or*

(ii) the owners of the lessor's interests and the lessee's interests throughout the block, holding or project have agreed to pool their interests;..."

(emphasis added)

16. The use of the word "shall" in these sections invokes a mandatory obligation. CDP disputes the ownership of the natural gas owner (the

natural gas lessor) to the CBM underlying and within these lands. The ownership of the lessors' interests throughout the proposed holding is not the same. Consequently, in the absence of a definitive court ruling in favour of the natural gas owner, Devon could not and cannot demonstrate that there is common ownership throughout Devon's proposed holding. As a consequence, Devon is therefore not entitled to a holding order from the Board.

17. The other alternative available to Devon to demonstrate "common ownership" would have been to prove to the Board that all owners of the lessors' interests and the lessees' interests throughout the holding have agreed to pool their interests. Devon has not requested that CDP (nor has CDP agreed to) pool its lessor's interest in CBM underlying these lands with Devon or with any other person. Consequently, Devon could not and cannot establish such a pooling and thereby avail itself of the benefit of "common ownership".
18. Although the Board has no jurisdiction to determine ownership in the global sense, so as to bind the parties and determine ownership for all purposes, it has the jurisdiction to address the statutory standard that must be met and whether the Applicants have met (or can meet in the circumstances) that statutory standard.

III. CDP SUBMISSIONS

Background and Context of the CBM Issue

19. This is addressed in the expert report of Professor Alastair Lucas (the Lucas Report") which is attached hereto as Appendix "A" and whose C.V. is attached hereto as Appendix "B".

The Science of CBM

- 20 This is addressed in the expert report of Dr. Jeffrey R. Levine (the "Levine Report") which forms part of the joint submission of CDP and Encana Corporation filed herein.

Entitlement

21. Entitlement—specifically the word "entitled"—has been considered by a number of Canadian courts in several different contexts. In *LeBlanc v Canada*¹ the court quoted the following dictionary definitions of "entitle":

... *Jowitt's Dictionary of English Law* (1977), 2nd Ed., p. 706, offers this definition of "entitle":

Entitle. In its usual sense, to entitle is to give a right; therefore a person is said to be entitled to property when he has a right to it.

The *Oxford English Dictionary* (1961), Vol. III, D-E, p. 219 in its definition of "entitle" provides, *inter alia*:

4. To furnish (a person) with 'title', to an estate. Hence gen. to give (a person or thing) a right, claim to a possession, privilege, designation, mode of treatment, etc.

Black's Law Dictionary (1977) 5th. Ed. p. 477, defines "entitle" as follows:

Entitle. In its usual sense, to entitle is to give a right or legal title to. *Schmidt v. Gibbons*, 101 Ariz. 222, 418, p. 2d 278, 380.

To qualify for; to furnish with proper grounds for seeking or claiming. In ecclesiastical law, to entitle is to give a title or ordination as a minister.

¹ (1990), 75 D.L.R. (4th) 343 (Ont. Gen. Div.) at 348, affirmed 80 D.L.R. (4th) 641 (Ont. C.A.)

22. To be consistent with these definitions, the gas producers must prove their ownership of the CBM, or their status as the lessee of the proven owners, in order to prove its entitlement to produce for the purposes of Section 16.
23. In *Gordon v Gordon*² the court interpreted a separation deed which provided for the payment of maintenance by the husband to the wife until either: dissolution of the marriage on the husband's petition; or the commission by the wife of an act which would entitle the husband to obtain a dissolution of marriage. The wife had committed adultery and the husband sought to cease payments on the basis that this act entitled him to a divorce (which was only available by a specific act of parliament). The court disagreed with the husband, essentially on the basis that until the divorce was a sure thing his entitlement was unproven.
24. The *Canada Labour Code*³ contains a provision that employers must pay severance to employees who are terminated for reasons other than just cause but that the employee is deemed not to have been terminated where "... the employee is **entitled** to a pension...". In *Thompson v Motorways*⁴, an employer shut down its Canadian operations, putting numerous employees out of work, some of whom were eligible to retire. This group of employees did not intend to retire and declined to apply for their pension benefits. The court agreed with the arbitrator that they were nonetheless **entitled** to a pension, since there was nothing keeping them from the pension except their own choices, which were within their own control.

In the tort and insurance law context there are numerous decisions that are consistent with the view that, to be entitled to a benefit, one must have

² (1916), 32 D.L.R. 626 (Ont. C.A.)

³ R.S.C. 1970, c. L-1 sec 61(2)(b), and R.S.C. 1985, c. L-2 sec 235(2)(b)

⁴ 1996 CarswellNat 2136 (I.D.), affirmed 1998 CarswellNat 2790]

an "unfettered and unconditional" right that is "beyond dispute"⁵ or "absolute"⁶. These cases arise where a defendant (tortfeasor or insurer) is liable to make payment (either damages or insurance benefits) to an injured plaintiff but is permitted to reduce the payment for any benefits from other enumerated sources which the plaintiff has received or is entitled to receive from another source (for example, lost income damages can be offset by amounts received or to be received as income replacement under a disability policy). Another situation is where an insurer's obligation to pay no-fault benefits hinges on the insured not being entitled to receive workers' compensation benefits. In these contexts the courts have consistently found that entitlement means an absolute right "unqualified by either substantive or procedural considerations"⁷ and more specifically the courts have found:

- A person whose claim for benefits has been rejected is not "entitled" to benefits: "To so describe him would be to prejudge the merits of the grounds on which the insurer had rejected him."⁸ Similarly, entitlement is not proven where benefits have been terminated and no judgment rendered on the merits of that termination.⁹
- Where, on the facts, nothing stands between the person and his right to the benefits but the person's own failure to claim them, the person is "entitled" to the benefits.¹⁰

⁵ *Moore v Haw* 1997 CarswellOnt 3902 (Gen. Div) at para 23-4]

⁶ *Nutikka v Rental Services Inc* 1996 CarswellOnt 4123 (Gen. Div) at para. 20

⁷ *Brown v Bouwkamp* 1975 CarswellOnt 338 (Ont S.C.) at para 14] affirmed 1976 CarswellOnt 479 (C.A.)

⁸ *Brown v Bouwkamp* supra (C.A.) at para 11];
Coderre v Lambert 1993 CarswellOnt 422 (C.A.) at para. 23.

⁹ *Boudreau v Sante* 1980 CarswellOnt 687 (C.A.)

¹⁰ *Madill v Chu* 1976 CarswellOnt 419 (S.C.C.)

- Where the issue turns on a person's future entitlement to benefits, the court requires certainty of future entitlement and will not accept as proof future entitlement on a balance of probabilities; nor will it apply a standard of proof of "substantial possibility." Entitlement is not proven when there is any evidence that the benefit payor retains a right to review entitlement in the future or has not committed itself, without reservation to making future payments, regardless of how slight the chance that it will, in fact, stop payment of benefits.¹¹ "It must be beyond dispute that the plaintiff qualifies in every way [for benefits]"¹²

25. In the face of the various dictionary and judicial definitions of "entitled", the Board cannot reasonably be satisfied that the gas producers are **entitled** in accordance with Section 16 when the issue of underlying ownership of CBM is unresolved. If the gas producers were first to obtain a judgment declaring that their entitlement to produce natural gas includes entitlement to CBM, this would be proof of entitlement, because it would be certain and beyond doubt. Anything less falls short of the high standard of proof enunciated in the above cases, which standard is the only reasonable one to apply in this case.
26. It is clear that there is a *bona fide* and serious arguable issue as to the ownership of CBM and, in the face of that *bona fide* serious arguable issue, it is impossible for the Board to determine that the gas producers are entitled to produce the CBM.

Coderre v Lambert supra at para 22

¹¹ *Chrappa v Ohm* 1996 CarswellOnt 1742 (Gen Div.) affirmed 1998 CarswellOnt 1746 (C.A.) at para 28-9 *Nutikka v Rental Services* supra]; *Moore v Haws* supra at para. 15-16, 18, 20, 21, 23-4, 26, 28

¹² *Chrappa v Ohm* (Gen Div) supra at para 46, quoting from *Coderre v Lambert* supra.

Standard of Proof Required

- 27 The Board's governing legislation provides us with some direction as to the standard of proof required. Section 16(2) requires entitlement to be proved "... to the satisfaction of the Board, ..."
28. In *Gonzalez v Driver Control Board*¹³ the issues concerned the powers of the respondent provincial administrative tribunal to affirm or reverse on appeal the administrative suspension of the applicants' drivers licences by peace officers. The enabling legislation provided that the tribunal must cancel the suspension, where satisfied that there was no alcohol-related driving, but must confirm the suspension, where satisfied that there was alcohol-related driving.¹⁴ In considering the appropriate standard with respect to the tribunal being satisfied, the court discussed as follows:

To resolve this issue, it is helpful to examine the appeal provisions (set out in para. 10 supra) more closely. The test is that the Board be "satisfied" about the presence or absence of alcohol-related driving. All the parties proceeded on the assumption that "satisfied" means "on a balance of probabilities", **but I note that "satisfied" is a fluid term.** As Harvey, C.J., said (dissenting) in *R. v. Anderson* (1914), 5 W.W.R. 1052; 7 Alta L.R. 102; 26 W.L.R. 783; 22 C.C.C. 455; 16 D.L.R. 203 (C.A.), at p. 1054 [W.W.R.]:

"With the meaning I attach to the word 'satisfy', I find myself unable to conceive how I can be satisfied that a thing is so if I have any reasonable doubt that it is so."

Beck, J., for the majority, took a different view at p. 1059:

"... but the question remains whether there is a difference between telling the jury that in order to give effect to the defence of insanity, they must find insanity proved 'beyond a reasonable doubt', and

¹³ 2001 CarswellAlta 1162 (Q.B.) at para. 105-106, affirmed 2003 CarswellAlta 1276 (C.A.), leave to appeal refused 2004 CarswellAlta 501 (S.C.C.)

¹⁴ at para. 10.

telling them that, for that purpose, the defence must be proved 'to their satisfaction' or 'clearly' proved.

"Whether there is in psychology an admissible distinction of meaning in these three expressions, and if so, what that distinction is, it seems to me it is not necessary to inquire. **The expression 'satisfaction beyond a reasonable doubt' has become consecrated by long judicial usage as pointing to a state of mental satisfaction in some sense greater than 'satisfaction' simpliciter, or that state of mind induced by proof that is merely 'clear'.**"

In **Standards of Proof** (1955), 33 Can. Bar. Rev. 665, G.H.L. Fridman commented as follows:

"The truth is submitted to be that standards of proof (whether civil or criminal) are impossible of precise and definitive distinction by mere words, however technical the language used. All that can be said is that judges and jurors alike must be 'satisfied' of the truth of allegations or denials of fact. **What amounts to 'satisfaction' will vary with the issues involved. The more trivial the question, the more easily and swiftly will 'satisfaction' materialize. The more momentous and serious its consequences, the greater the caution and deliberation demanded, that is, the greater amount of cogent evidence before there can be any 'satisfaction' about where the truth lies.**"

I agree that the burden of being "satisfied" must depend on the context. Here, in an administrative context, where the burden is on the citizen to prove an excuse, I take "satisfied" to mean "established on a balance of probabilities having regard to the consequences, namely that a person's driving licence is at risk". Whether this standard is met in a particular case is for the Board. (emphasis added)

29. The same "...the Board is satisfied..." statutory language was considered in *Pepper v Alberta (Transportation Safety Board)*, wherein the court remarked that "on a theoretical spectrum, a standard of proof could be set at mere possibility, reasonable and probable grounds, balance of

probabilities, highly probable, or beyond a reasonable doubt."¹⁵ In short, there is no magic to the word "satisfied". It has no fixed meaning fit for all circumstances. The requirements for being "satisfied" will vary with the circumstances and, particularly, with the consequences which flow from the decision maker's decision. It means only that the point in issue must be proven to the applicable standard. In a criminal proceeding, that standard will be beyond a reasonable doubt. In administrative proceedings, it may be on a balance of probabilities (as in the *Gonzalez* case) but it may also be a more strict standard, depending on the circumstances. In a civil proceeding, it will commonly be on a balance of probabilities though, as the cases discussed above on the meaning of "entitlement" demonstrate, it may also be to a standard of certainty in some circumstances.

30. It is essential then to consider the circumstances and the consequences that result from a decision by the Board. In *Gonzalez*, the competing interests were the driver's right to retain his licence versus the protection of the public from a possible drunk driver. In *Chrappa* and all the other insurance/tort cases concerning "entitlement" the courts settled on a standard of certainty, because of the potential future consequences to the injured person's property rights if there was any chance of that person no longer being "entitled" to benefits in the future. CDP submits that the present circumstance is analogous and, therefore, the Board should apply a similar standard of certainty. If there is any chance of a court determining in the future that the gas producer's lessor is not the owner of CBM, the Board should not consider itself satisfied of the gas producers' entitlement. It would be wrong for the Board to pre-judge the merits of the respective claims to ownership over CBM and grant a well licence on that basis. The potential consequence would be that the gas producers had irreversibly interfered with the true owner's property right in the CBM. While the true owner could claim damages for trespass and conversion

¹⁵ 2006 CarswellAlta 750, 2006 ABQB 303 at para 34.

from the gas producers, it could not put the CBM back underground. It would have permanently lost a fundamental attribute of property ownership, its right to exclude others from its property and to extract that resource on its own timetable and according to its own drilling program.¹⁶ The legislature, in choosing the wording of Section 16, cannot have intended that the Board interfere with property rights in that manner. For that reason, it chose to make eligibility for a well licence contingent on an applicant's proof of "entitlement" (absolutely and without condition). The Board cannot be "satisfied", if it must to take a guess, no matter how educated and considered, about which contender will likely be adjudicated to be entitled to produce CBM.

Whether CBM is Natural Gas is not useful in determining the issues

31. Some of the gas producers (eg. Quicksilver Resources Limited in its submission, paragraph 25) have argued that in order for a gas producer to show entitlement to a well licence, it is only necessary for that gas producer to show that it holds a natural gas lease. This approach is not consistent with the language of Section 16 of the O & G Conservation Act, as it ignores the specific language of the section which requires the applicant to prove entitlement to produce the subject matter of the well licence application. Section 16 requires the Board to look at the hydrocarbon that is being produced and the formation from which the hydrocarbon is being produced. Where, as here, it is clear that CBM is being produced from coal seams, and that ownership of that CBM is in dispute, the Board is precluded from issuing a well licence or granting a holding application.
32. The suggestion that, by virtue of I.L. 91-11, the Board considers CBM to be a form of natural gas, and consequently determinative of "entitlement" under Section 16, fails to consider the dictionary and judicial

¹⁶ Ziff, *Principles of Property Law* 4th ed. (Carswell, 2006) at pp 5-6.

interpretations of entitlement discussed above and the other relevant factors outlined in the Lucas Report and the Levine Report.

33. Similarly, the suggestion that, because Section 67(1) of the *Mines and Minerals Act* addresses the ownership of CBM on Crown land, that Section 67 somehow applies to freehold lands is equally without merit. If the legislature had intended to address either the ownership of CBM or freehold lands or how the Board should treat CBM for the purposes of issuing well licences or holding applications, it would have specifically done so. In the absence of such specific direction from the legislature, we must conclude that it intended to retain the status quo and the normal rules of statutory interpretation would apply to freehold lands.

Applicable Authorities for Determining Entitlement to CBM

34. As discussed above, entitlement springs out of ownership. Ownership of CBM is disputed as between CDP and EnCana, as coal owners and the lessors of the applicants. Ownership of CBM will ultimately be determined by the courts in large part on the basis of the tests set out in the *Borys and Anderson v. Amoco* cases (see *Lucas Report, pp. 3-5*). The appropriate time is the time of the grant of mines and minerals by the CPR, reserving coal (that is, 1906 to 1912). The applicable test is the intention of the parties as to what was to be included in the reservation of “coal”. In the absence of evidence of the expressed intention of the parties (and there is none), the appropriate measure of that intent is, in part, the vernacular meaning of “coal” at that time. In the absence of clear and undisputed ownership, there can be no entitlement.”

U.S. Position

35. Some of the Applicants and Interveners have referred the Board to U.S. authorities and in particular the decision of the U.S. Supreme Court in *Amoco Production Co. v. Southern Ute Indian Tribe et al* (98-830) 526

U.S. 865 as authority for the proposition that CBM is not included in a coal reservation. The Supreme Court of the United States was dealing with a statutory reservation and the intention of congress at the time the *Coal Lands Act* of 1909 and the *Coal Lands Act* of 1910 were passed. However, there is American authority to the effect that the right to drill through coal for gas did not include the right to recover the adsorbed CBM (see *United Steel Corp. v. Hoge* 468 A.2d1380(Pa 1983)). The U.S. jurisprudence on CBM is of limited value, as many U.S. states have adopted theories of ownership that are not necessarily consistent with Canadian jurisprudence.

Logical Limitations of the Gas Producers Position

36. Fairborne and Devon suggest to the Board a chain of logic comprised of three links:
- a. first, that CBM is treated like conventional natural gas for all operational purposes by the Alberta legislature and the Board;
 - b. secondly, that the coal owners have not led any evidence to distinguish CBM from conventional natural gas; and
 - c. thirdly, that none of their leases expressly excludes CBM and, consequently, rights to CBM must be included in their rights to produce natural gas and the Board should find the leases conclusive evidence of entitlement to produce CBM.

With respect, all three of these postulations must be conjunctively accepted, in order for the applicants to have any chance of success. However, upon analysis, each of the three questions is irrelevant in the Board's determination of entitlement.

37. With the exception of the *Mines and Minerals Act*, all of the statutes and regulations cited by Devon and Fairborne address operational matters

relating to the production, measurement and accounting for CBM once it is removed from the coal. From the perspective of legal entitlement to the CBM *in situ*, at the time of the reservation, as required by *Borys* and *Anderson*, this is too late to be of any relevance. As identified above, the *Mines and Minerals Act* applies only to Crown lands. As such, it has no bearing on the freehold dispute over CBM ownership (and consequent entitlement to produce).

38. CDP has already acknowledged that, once removed from the coal, CBM has little to distinguish it from conventional natural gas. However, since the question itself is irrelevant, lack of evidence of any distinction is also irrelevant. The fact that there was nothing or little to chemically distinguish solution gas from gas cap gas in the *Borys* decision did not enter into the Court's determination of who owned the solution gas. In *Borys*, Lord Porter concluded that evidence attempting to distinguish between hydrocarbons (in that case petroleum and gas) is irrelevant.

*"Inasmuch as the respondents claim all the material in liquid form, including gas in solution, and also all gas associated with petrol in the same container, much of the evidence was directed to a distinction between petroleum and gas. But this is a different problem from an enquiry whether gas in solution is included in a reservation of petroleum. No light on this matter is thrown by the recognition going back as far as 1906 of petroleum and natural gas as different substances. The question is not whether there are two separate substances, but what is included in each."*¹⁷
(emphasis added)

39. Assuming for the moment that each of the natural gas leases pursuant to which Fairborne and Devon claim entitlement to produce CBM actually do purport to convey the rights to CBM as part of the natural gas (which assumption may be challenged by CDP at or before the conclusion of the

¹⁷ *Borys v C.P.R. and Imperial Oil Ltd* ICPC [1936] 2.L.R. page 7

hearing), that proposition is also irrelevant in the face of the uncertainty of title faced by the conventional natural gas lessors in granting those leases in the first place. The legal principle embraced by the maxim *nemo dat quod non habet* is applicable to the current circumstances.

"The basic idea of risk allocation can be succinctly explained. A centuries-old principle of property law is captured by the phrase nemo dat quod non habet, which means - one cannot give that which one does not have. The maxim states a seller cannot confer a greater title than that which he or she holds. When this rule applies the buyer must determine if the seller can confer good title; the "buyer assumes the risk."¹⁸

"The common law principle of nemo dat quod non habet (nemo dat) states that no one can give better title than she herself has. So the unwitting passerby who buys a stolen watch from a street corner vendor, or the bargain hunter at a garage sale who buys a set of dining room furniture for which the vendor has not paid, can claim no better title to the goods than the thief who stole the watch or the purchaser who has yet to complete payment and acquire title to the table and chairs. This occurs despite the fact that the purchaser is innocent, otherwise bona fide and has paid value for the goods."¹⁹

40. As can be seen, the essence of the principle is that a seller (or, in this case, a lessor) can give no better title to a buyer (in this case, a lessee) than the seller (lessor) has. In other words, if Devon's and Fairborne's lessors cannot prove title (and, consequently, entitlement) to CBM, then they cannot give any title (and, consequently, entitlement) to CBM to Devon and Fairborne, as lessees. By way of analogy, where the owner of conventional natural gas in the south half of a section is different than the owner of conventional natural gas in the north half of the same section, the owner of the conventional natural gas in the south half could purport to lease the conventional natural gas in the north half, but the lease would

¹⁸ Principles of Property Law, Third Edition, 2000 Ziff, Bruce Carswell, at p 412.

¹⁹ Understanding Property: A guide to Canada's Property Law, 1997 Benson, Marjorie and Bowen, Marge-Ann, Carswell, pp 50 & 51

not convey any rights to the lessee, because of a failure of the underlying title to the conventional natural gas. This analogy also demonstrates the fallacy of alleging that the natural gas leases ought to be conclusive evidence and the Board ought not look behind the leases to underlying legal title. On the face of the lease, the lessee has all right to the conventional natural gas in the north half, yet the lessee has no rights, whatsoever. The *nemo dat* principle is elucidated in the Borys decision, in which the Court determined that, since the CPR did not have any rights to associated natural gas other than the solution gas, the lease to Imperial did not convey any such rights to Imperial.

IV. CONCLUSIONS

- 41 As a creature of statute, the Board's jurisdiction is governed by its legislation. The Board's jurisdiction in addressing both well licence applications and holding orders precludes it from issuing either well licences or granting holding applications, unless the Applicant can show entitlement or common ownership, respectively.
- 42 It is clear from both the existing jurisprudence and the evidence that there is a *bona fide* serious arguable issue as to the ownership of CBM.
- 43 In the face of a *bona fide* and seriously arguable issue as to the ownership of CBM, the Board cannot issue well licences or grant holding applications.
- 44 Suggesting that CBM is a form of natural gas is a tautology, does not address the underlying entitlement or common ownership requirements of the Board's governing legislation and is not helpful in determining the issues before the Board.

45. The Applicant gas producers have not satisfied and cannot satisfy the Board that they are entitled to either well licences or holding orders.

All of which is respectfully submitted this 15th day of September, 2006

CARSCALLEN LOCKWOOD LLP

Per: _____

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Report on Background and Context of the CBM Issue

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Prepared at the Request of Carbon Development Partnership

September 13, 2006

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1. Historical Context - How the Issue Arose

Historically, the seeds of many disputes concerning ownership of CBM were sown with the original land grants made by the Dominion Crown to private grantees in Western Canada following the Hudson's Bay Company's surrender of Rupert's Land in 1868. If these patents contained no reservations, the patent title grantees are considered to have received the entire estate, including all mineral rights.¹ The largest such grantee was the CPR which, as part of the historic transcontinental railway deal, received some 25 million acres.² However, by the early 20th century, the Crown had begun to reserve certain minerals, notably coal, in its grants. At the same time, private grantees, particularly the CPR, reserved initially "all coal", or "coal and petroleum", and eventually "all mines and minerals", in grants to settlers.

These various grants created severed mineral estates – split titles – of various kinds. Ownership of particular minerals depends on specific grants and the precise language used in those grants.

Broadly speaking there are three categories of grants:

First, the Dominion Crown sometimes made fee simple grants of certain specified minerals. This was the situation in the famous "variable royalty" case of *Huggard Assets Ltd. v. A-G Alberta*,³ where the grant in question was made under a special 1913 federal Order in Council which authorized the grant of petroleum and natural gas rights in a specified tract of land. Thus, the coal rights remained with the Crown.

¹Codified by s. 7 of the Law of Property Act, R.S.A. 2000, c L-7.

²The origin of the CPR grant was summarized by Fruman, J in *Anderson v. Amoco*, [1999] 3 W.W.R. 255, para. 6-12.

³[1949] 4 D.L.R. 211 (Alta., S.C.T.D., aff'd [1950] 1 D.L.R. 823 (Alta App. Divis.); rev'd [1951] 2 D.L.R. 305 (S.C.C.))

Late 19th Century Crown grants sometimes reserved some, but not necessarily all, of the mines of minerals underlining lands. Again, the *Huggard Assets* case⁴ is illustrative since, for a second parcel of land, the Crown grant reserved "all mines and minerals except petroleum and natural gas." The result here too was that the Crown retained the coal rights. Eventually, in 1887, PC 1070 provided for reservation of all mines and minerals from all Dominion patents as of October 31, 1887.

Secondly, private owners of Crown granted land, in turn granted parcels of land to other parties, reserving rights to some, but not all, mines and minerals. The major category of grants of this kind is the settler grants made by the CPR. Reservations included "coal", "coal and petroleum" and "coal, petroleum and valuable stone." By 1912, the CPR began to reserve all mines and minerals in these land transfers.

Thirdly, there have been reservations of certain substances, but not others, in freehold oil and gas leases, as well as in other dispositions such as farm-outs. Typical is the grant in freehold leases of petroleum, natural gas and all other hydrocarbons with "coal" or "coal and valuable stone" reserved. This is the essence of both the 1991 and 1999 CAPL Petroleum and Natural Gas Lease.

2. Interpretation of Severance Documents

(a) Intent of the Parties

In interpreting a grant or lease to determine what substances are included in a mineral grant or reservation, the objective is to determine what the parties intended. This requires taking into

⁴*ibid.*

account the surrounding circumstances, including, as Parlee JA pointed out in the Alberta Supreme Court Appellate Division in *Borys v. CPR*,⁵ the scientific knowledge and thus the relative sophistication of both parties. He said:

“... we must ascertain the knowledge of the parties at the time of the original agreement and all the surrounding circumstances to determine, as best we may, what the parties to the agreement intended by the reservation. Scientific knowledge of petroleum, Simon Borys evidently did not have and there is no sufficient evidence that the railway company intended any meaning different than the one in common use.”⁶

But it is not the subjective intent of the parties that is critical. According to the Privy Council in *Borys*,

“... their Lordships have not taken into consideration the view or belief of either Mr. Borys or the CPR in 1906 or thereafter as to what was included in the term petroleum. Probably they and none, and, in any case, it has to be remembered that what has to be sought is the *vernacular meaning* of the word “petroleum” and not what opinion was held by the parties to the grant.”⁷

(b) Vernacular Meaning

The meaning of particular words or phrases in granting documents is to be determined in its vernacular sense, that is, the common usage of ordinary people at the time of the grant.⁸ As Lord Porter said in *Borys*,

⁵[1952] 3 D.L.R. 218.

⁶*Ibid.* at 229

⁷[1953] 2 D.L.R. 65 at 74 (P.C.) emphasis added

⁸*Ibid.* at 74

"... their Lordships would observe that they find it difficult to believe that either landowners, business men or engineers, or indeed, the staff of the CPR or Mr. Borys would at any time have differentiated between oil and gas in solution. They would in the view of the Board, have included in petroleum all the liquid substance in the mine, ..."⁹

This interpretive theory was based on previous English authority, including *Glasgow Corporation v. Farnie*.¹⁰ It was also the approach taken by Alberta courts in *Borys*. Hewson, CJTD at trial referred to: "...the meaning given to the word "petroleum" in common parlance, "or in the vernacular of the mining world, the commercial world and landowners", in the "popular sense", or in the language of "plain men ..."¹¹ Parlee JA in the Appellate Division agreed with the trial judge that the question was the meaning given to petroleum and natural gas "by common usage".¹²

Since *Borys*, the vernacular meaning at the time of the grant approach has been consistently applied by Canadian courts. This was Fruman J's analysis at trial in *Anderson v. Amoco*,¹³ which was confirmed by the Supreme Court of Canada¹⁴ with the reference to *Borys*.

(c) Commercial Context

It is significant that the idea of "vernacular" or "common usage" is not merely that of ordinary people. Rather, it is that of people reasonably knowledgeable about the commercial context of the transaction effected by each granting document. Thus, Lord Porter in *Borys* referred to "landowners

⁹*Ibid.*

¹⁰(1888), 13 App. Cas. 657, 659.

¹¹[1951] 4 D.L.R. 427 at 432 (Alta. S.C.T.D.).

¹²*Supra* note 5 at 230.

¹³*Supra* note 2, para. 70

¹⁴*Anderson v. Amoco*, 2004 S.C.C. 49, para. 28.

business men or engineers.”¹⁵ He also considered that in *Glasgow v. Farie*,¹⁶ Lord Halsbury LC had “[said] of mines and minerals that in construing the expression it has to be determined what these words mean in the vernacular of the mining world, the commercial world and landowners at the time the grant was made”¹⁷ and specifically agreed with this method of interpretation.¹⁸

3. Commercial Context of Coal and CBM

To determine CBM ownership, the method of interpretation for determining the meaning of “coal” reserved in any granting document would involve assessment of the commercial context, including the coal industry, the oil and gas industry and the understanding of reasonably knowledgeable landowners at the time of the grant in question. This would include the relative stage of development of the coal and CBM industries and the related understanding of landowners.

In the case of the coal industry, granting documents have reflected the nature and particularities of mining operations. This is supported by legal principles originally established in England and continued through application of English law by Canadian courts.

A good illustration is the Alberta Supreme Court Appellate Division’s decision in *Little v. Western Transfer and Storage Limited and Edmonton Collieries Limited*.¹⁹ The court had to interpret a coal lease by Little, owner of the coal and surface rights in a parcel of land, to a coal company. The

¹⁵*Supra* note 7 at 74.

¹⁶*Supra* note 10.

¹⁷*Supra* note 7 at 70.

¹⁸*Ibid.*

¹⁹[1922] 3 W.W.R. 356 (Alta. S.C. App. Divis.).

issue was the scope of the coal rights granted, and particularly whether these included the right to use the mine to remove coal mined on separate adjoining leases.

The court interpreted the coal lease by analyzing the language in the commercial context of the transaction to determine the intention of the parties. Part of this context was English mining tradition reflected in the concept of "outstroke." This is the right to mine out sufficient passageways to bring the coal to the surface. The leading cases dealt with grants, exceptions and reservations.²⁰ This idea led English courts to conclude that in coal grants, the grantor's total interest was intended to be dealt with in parallel horizontal layers. The grantor retained only the parallel layer at the surface.²¹

This meant, as explained in *Bowser v Maclean*, that "the grantee has the property and exclusive right of possession on the whole space occupied by the layer containing the minerals; and, after the minerals are taken out, is entitled to the entire and exclusive user of that space for all purposes."²²

The result is that the lessee owns the property in the coal strata and all substances that the strata contain and that this ownership continues after the coal has been removed. Beck, JA in *Little* concluded that the lessees had this right. His conclusion was based on this concept of "outstroke" in the context of the parties' course of dealing.²³

²⁰ *Bowser v Maclean* (1860), 17 Eng. Ruling Cases 452; *Batten-Pooll v. Kennedy*, [1907] 1 Ch. 256; Halsbury (1911) Vol. 20, para 1415 cited in *Little* at 363.

²¹ *Batten-Pooll v. Kennedy*, *supra* note 20 at 264.

²² *Supra* note 20 at 452.

²³ *Supra* note 19 at 364.

4. Historical Responsibilities of Coal Owners for CBM – Mine Safety Regulation

In the early part of the 20th century, coal mining was a significant economic activity in Alberta. This importance is evidenced by the breadth and rigour of the mining legislation of that era. The Mines Act enacted in 1913²⁴ was a detailed code for the safe operation of mines – particularly coal mines – for the protection of mine workers and the public. The Act imposed duties on mine operators that include obligations to deal with coalbed methane in the course of mine operations.

These duties included provision of adequate mine ventilation or order “to dilute and render harmless noxious gases.”²⁵ The “noxious” characterization of CBM is a reflection of the mine safety objectives of the statute. Where “inflammable gas” was found in any mine, “examiners” appointed under the Act were obliged to inspect and, if necessary, take appropriate action.²⁶ Section 64 of the Act addressed withdrawal of mineworkers by reason of “gases prevailing” in mines. Safety lamps were required where there is likely to be an accumulation of inflammable gas.²⁷

These provisions make clear that the historic Alberta Mines Act placed legal responsibility for dealing with CBM with coal owners and their mine operators.

²⁴S.A. 1913(i) c. 4, R.S.A. 1922, c. 190.

²⁵*Ibid.*, s. 59.

²⁶*Ibid.*, s. 60.

²⁷*Ibid.*, s. 65.

5. Interpretation is Fact Driven

The discussion above makes it clear that the analytical approach to interpretation of mineral grants and reservations is highly fact sensitive. This follows from both the governing interpretive objective of determining the intent of the parties and the contextual approach to making this determination. The ideal of “vernacular” is always governed by the particular commercial context and the nature and relative sophistication of landowners.

This means that very different vernacular of different industries – coal and oil and gas would have to be taken into account. Similarly, the different perspectives of sophisticated corporate landowners and private agricultural landowners would have to be recognized.

Also, differences in types of grants would be highly relevant. This includes, as discussed above, Crown grants and private grants, language of grant as opposed to language of reservation, and leases as opposed to mineral grants

6. Different Theories of Oil and Gas Ownership

Various theories of oil and gas ownership have been advanced by the counsel and by commentators. Though particular theories have been adopted by courts in a number of US states, Canadian courts have avoided specific recognition of particular ownership theories. This is discussed below.

(a) The main theories of ownership are:

- (1) *Absolute Ownership or Ownership in Place.* Under this theory, the landowner owns all minerals under the land "to the centre of the earth" as expressed by the maxim "possession of land includes that which is above and below it." This equates landowners' interests in oil and gas and in solid minerals. However, this is qualified by a rule of capture so that absolute ownership is lost if oil or gas migrates. Texas, a major source of US oil and gas law jurisprudence, accepts the ownership in place theory.²⁸ In a leading US CBM ownership case from Pennsylvania, this theory led to a conclusion that gas present in coal belongs to the coal owners so long as it does not migrate to the surrounding property.²⁹
- (2) *Non-Ownership.* Under this theory, ownership, like ownership of wild animals, is not acquired until oil or gas is actually produced and reduced to possession. Thus, in *NCNB Texas National Bank v. West*,³⁰ the Alabama court applied non-ownership theory in settling a dispute about CBM ownership where a grant conveyed all coal and connected rights, but specifically reserved gas. The conclusion was that CBM ownership depends on "its location at the time the gas is recovered or 'captured'."³¹ Thus, CBM recovered directly from unmined coal seams belonged to the coal owner.
- (3) *Qualified Ownership.* This theory recognizes that the oil or gas rights owner has exclusive rights to explore for the substances, a qualified title, that can be made absolute by "capture" and production. This is essentially the same *profit à prendre* right that is acquired under typical freehold oil and gas leases.

(b) Canada and US

Certain US states have adopted particular theories of ownership as indicated above. It is significant that though absolute ownership is the most common theory, there is considerable diversity among states.

In Canada though, the Privy Council in the *Borys* case discussed competing theories of ownership, the court *assumed*, for the purpose of the decision, that gas *in situ* is the property of the fee simple owner.³² However, it made no determination of ownership theory.

²⁸ *Texas Co. v. Daugherty*, 176 S.W. 717 (Texas 1915)

²⁹ *US Steel Corp. v. Hoge*, 468 A. 2d 1380, 1383 (Pa. 1983).

³⁰ 631 So. 2d. 212, 223-24 (Alabama 1993).

³¹ *Ibid.*, at 222

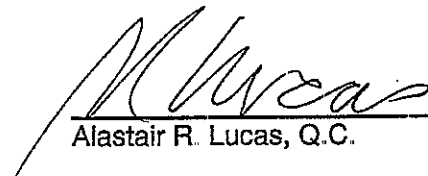
³² *Supra* note 7 at 77.

The result of this and subsequent cases, including *Anderson v. Amoco*,³³ is that Canadian courts have not settled on a theory of oil and gas ownership.

Lucas and Hunt in *Oil and Gas Law in Canada* (1990)³⁴ stated that:

The best can be offered is the *Borys* assumption that the substances can be owed *in situ* and the qualification imposed by the decision itself that gas may be lost as a consequence of oil production where ownership of the substances is divided. What may be inferred is qualified ownership of oil and gas in place, subject to the rule of capture, so that adjoining landowners may drain away and "capture" the substances. This suggests that a derivative approach identified by Lewis and Thompson,³⁵ which focuses on definition of rights in particular circumstances rather than on analogies and general concepts, is likely to prevail.³⁶

More recent cases such as *Anderson v. Amoco* have not changed this assessment.



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EUB - CBM Hearing.wpd

³³In *Anderson v. Amoco*, Fruman J. declined to make a determination of ownership theory, *supra* note 2 at para 100.

³⁴Toronto: Butterworths 1990

³⁵The updated reference is to Bennett Jones Verchere and N. Bankes (Eds) *Canadian Oil and Gas*, 2nd ed., para. 2.7 (Toronto: Butterworths, 1993).

³⁶*Supra* note 34 at 7

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SHORT BIOGRAPHY

Alastair R. Lucas, Q.C. is Acting Dean, Professor of Law, Chair of Natural Resources Law at the Faculty of Law and Adjunct Professor at the Faculty of Environmental Design, University of Calgary. Recent publications include *Regulating Energy and Natural Resources* (co-edited with B. Barton, L. Barrera-Hernández, and A. Rønne), Oxford University Press, 2006), *Human Rights in Natural Resource Development: Public Participation in the Sustainable Development of Mining and Energy Resources* (co-edited with Donald Zillman and George Pring), Oxford University Press, 2002, "Canada's Voluntary, Market-Based Approach to Energy Security". In B. Barton, C. Redgwell, A. Ronne and D. Zillman (Eds.), *Energy Security: Managing Risk in a Dynamic Legal and Regulatory Environment* Oxford University Press, 2004 and articles on voluntary programs and carbon sequestration as climate change policy instruments. His research is in domestic and international energy and environmental law. He is co-editor of Butterworths', *Canadian Environmental Law*, Emond-Montgomery's *Environmental Law and Policy* (3d Ed., 2003), co-author of *Oil and Gas Law in Canada* and author of various articles on energy, environment and natural resources law. He is a Special Legal Advisor to the North American Commission for Environmental Cooperation.

UNIVERSITY EDUCATION:

- 1967 LL.M., University of British Columbia (First Class Honours)
Area of concentration: Natural Resources and Environmental Law
- 1966 LL.B., University of Alberta
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DISTINCTIONS:

- 1966 Horace Harvey Gold Medal in Law, University of Alberta
- 1966 Editor, *Alberta Law Review*
- 1999 Law Society of Alberta/Canadian Bar Association, Distinguished Service Award for Legal Scholarship
- 2003 Appointed Queen's Counsel by Alberta Lieutenant Governor-in-Council
- 2003 President's Internationalization Achievement Award, Faculty Category, University of Calgary
- 2005 Alberta Centennial Medal

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PROFESSIONAL EMPLOYMENT:

2006 Acting Dean, Faculty of Law, University of Calgary

2005 (Winter Term) Visiting Professor, Faculty of Law, University of Copenhagen

2004 (Fall Term) Visiting Professor, Centre for Energy and Resources Law, Faculty of Law, University of Melbourne

2002-present Chair of Natural Resources Law, Faculty of Law, University of Calgary

1976-present Professor, Faculty of Law, University of Calgary

1988-present Adjunct Professor of Environmental Science, Faculty of Environmental Design, University of Calgary

1997-present Member, Academic Council and Instructor, Energy and Environmental Management MSc Program, University of Calgary/Latin American Energy Organization (OLADE)

1999-2001 Associate Dean (Research and Graduate Studies) Faculty of Law, University of Calgary

1998 (Winter Term) Visiting Professor, Asian Institute of Technology, Urban Environmental
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1994 (March-April) Visiting Professor, Faculté de droit, Université Laval

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1987-1988 Acting Executive Director, Canadian Institute of Resources Law

1985-1987 Director of Research, Faculty of Law, University of Calgary

1983-84 (leave) Research in France on the legal position of European State Oil Companies, and French language study

1982-83 Executive Director, Canadian Institute of Resources Law

1980-82 Associate Executive Director, Canadian Institute of Resources Law

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OTHER PROFESSIONAL EXPERIENCE:

- 1968-present Consultant, particularly to Canadian energy and environmental boards and tribunals, on matters of administrative law, natural resources law, and environmental law; Since 1992, consultant to Miller Thomson LLP, Calgary
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- 1996-present Special Legal Advisor to North American Commission for Environmental Cooperation
- 1999-2002 Consultant to Council of Yukon First Nations on Environmental issues in Devolution Transfer negotiations
- 1997-present Arbitrator for International Chamber of Commerce and private oil and gas commercial arbitrations
- 1996-1997 Counsel to Nunavut Water Board
- 1996-1997 Consultant to Environment Canada
- 1992-1994 Consultant to Russian Federation, Ministry of Fuel and Energy (through Canadian Institute of Resources Law) on oil and gas regulation and rights disposition
- 1986-1992 Consultant, Canadian Environmental Advisory Council
- 1982-1990 Instructor, Society of Management Accountants, Rate Regulatory Seminars
- 1977-83 Faculty member, Banff Centre, School of Management, Resource Management Programs
- 1975-77 Consultant to Science Council of Canada — legal issues concerning hazardous substances (Policy and Poisons Study)
- 1973-74 Consultant on Administrative Law: B C Law Reform Commission - study of National Energy Board legal process
- 1974-75 Consultant on Administrative Law: Law Reform Commission of Canada
- 1974-75 (leave) Counsel for Canadian Arctic Resources Committee, Mackenzie Valley Pipeline Inquiry
- 1971-72 (leave) Policy Advisor, Policy, Planning and Research Service; Member of Departmental Task Force on Environmental Impact Assessment, Environment Canada, Ottawa
- 1967-68 Articled: Field, Hyndman, Edmonton

PROFESSIONAL MEMBERSHIPS AND POSITIONS:

- 2001-2003 Chair, Canadian Bar Association, Environmental Law Section (Southern Alberta)
- 1997-present Member, IUCN Commission on Environmental Law
- 1980-1983; 1991-present Member, Board of Trustees, Rocky Mountain Mineral Law Foundation

1982-present	Founding Member and Chair, 1992-1996, Academic Advisory Group, International Bar Association, Section on Energy and Natural Resources Law
1968-present	Member, Law Society of Alberta
1979-1983; 1985-1999	Member, Board of Directors, Canadian Institute of Resources Law
1992-1996	Member, Governing Council, International Bar Association, Section on Energy and Natural Resources Law
1981-1983; 1987-1996	Founding Member, Board of Directors, Alberta Environmental Law Centre
1985-1990	Member, Board of Directors, Canadian Research Institute For Law and the Family
1985-1987	Vice-Chairperson, Constitutional and International Law Section (S. Alta.), Canadian Bar Association
1974-1988	Member, Canadian Arctic Resources Committee
1981-1983	Chair, Canadian Arctic Resources Committee
1980-1983	Member, Canadian Environmental Advisory Council
1976-1982	Member, Board of Directors, Canadian Petroleum Law Foundation
1977-1983	Law Society of Alberta, Representative on Environment Council of Alberta, Public Advisory Committee
1977-1981	Member, Board of Directors, Legal Education Society of Alberta
1972-1973	Member, National and Provincial Councils, Canadian Bar Association; Founding Member and first National Chairperson, Environmental Law Section
1970-71; 1976-1977	Member, Canadian Association of Law Teachers; Chairperson, Environmental Law Section; Chairperson, Administrative Law Section
1975-1991	Member, Law Society of Northwest Territories

CURRENT RESEARCH:

- 1 Climate change law and regulation – building on previous SSHRC funded research publication.

Analysis including constitutional jurisdiction of the Federal Climate Change Plan 2005, Proposal to Regulate Large Final Emitters of Greenhouse Gases, and Offsets System Proposal.

Disputes and dispute resolution in the proposed Federal Offsets System (funded by BIOCAP Canada), is part of a collaborative project with Dr. Elizabeth Wilman (University of Calgary Economics), derived from earlier collaborative research on carbon sequestration in agricultural soils, with Dr. Wilman, Steven Kennett (Canadian Institute of Resources Law) and Arlene Kwasniak (University of Calgary Faculty of Law) that was supported by Alberta Environment and BIOCAP.

2. Water resources law

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- Associate Dean (Research and Graduate Studies) (1999-2001)
- Director of Research (1985-1987)
- Chair, Academic Planning Committee (three separate terms)
- Member and Chair, Admissions Committee
- Chair, Special Studies Committee (which developed and carried University of Calgary LL.M. proposal through the Faculty and University approval process) (1982-83; 1984-88)
- Member, Recruitment Committee, and Chair of Natural Resources Law Selection Committee
- Member of Study Groups that developed proposals for establishment of the Canadian Institute of Resources Law (C.I.R.L.) (1978-80), and the Canadian Research Institute for Law and the Family (C.R.I.L.F.) (1985-86)
- Member and Chair, Promotion and Merit Increment Committee
- Chair, Graduate Studies Committee
- Member, Ad Hoc Curriculum Review Committee (1989-1995)

University level duties have included:

- Member, University of Calgary Institute for Sustainable Energy, Environment and Economy (ISEEE) Academic Development and Operations Committee.
- Member, Advisory Selection Committee, Dean of Graduate Studies/Associate Vice-President (Graduate and Post-Degree Programs)
- Member, Joint Faculties Research Ethics Committee
- Member, Appointment, Promotion and Dismissal Committee
- Member and Chair, University Research Policy Committee; member RDPC

- Member, Institutional Policy and Priorities Committee
- Law Faculty Representative on General Faculties Council, and Graduate Studies Faculty Council
- Member, General Promotions Committee
- Co-Chair, IPPC Special Committee to Review St. Mary's College Affiliation Proposal
- Member, Advisory Selection Committee for Associate Vice-President (Academic)
- Chair, University Intellectual Property Policy Review Committee

OTHER SCHOLARLY ACTIVITY:

- 1993-present Annual Survey Correspondent for, Environmental Liability (Sweet & Maxwell/Law Text, U.K.)
- 1990-present Member, Editorial Board, Journal of Environmental Law and Practice (Carswell Canada)
- 1989-2004 Member, Editorial Committee, University of Calgary Press; Chair 1994-1997
- 1983-present Member, Editorial Board and Canadian Rapporteur, Journal of Energy and Natural Resources Law (IIP/International Bar Association)
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BOOKS/MONOGRAPHS:

Barton, B., Barrera-Hernández, I., Lucas, A., and Rønne, A., (eds.), *Regulating Energy and Natural Resources*, Oxford: Oxford University Press, 2006

Hughes, I., Lucas, A. and Tilleman W. (eds.), *Environmental Law and Practice* Toronto: Emond Montgomery, 3^d Ed., 2003.

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