Concession Conflicts in Coal Seam Gas Queensland, Australia

by

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1 Executive summary

1.1 Coal seam gas

The occurrence of coal seam gas in association with the valuable commodity, coal, naturally creates the potential for concession conflicts between the holders of separate rights to extract these resources.

The rapid development of the coal seam gas industry in Queensland necessitated broad legislative change to govern the rights and priorities of the holders of coal and petroleum rights over the same areas of land.

1.2 Queensland regime

In 2004 Queensland introduced a comprehensive legislative regime to govern the potential conflicts between holders of coal seam gas and other concessions. Broadly, the regime is divided into the following two limbs:

(a) regulation of the grant and development of the concessions and priorities through legislation; and

(b) requirements for, and Ministerial recognition of, commercial arrangements between concession holders in relation to overlapping areas of land.

Three pieces of legislation, the *Petroleum Act 1923* (Qld), *Petroleum and Gas (Production and Safety) Act 2004* (Qld) and the *Mineral Resources Act 1989* (Qld) detail the processes for grant and development of coal seam gas and other resources. The Acts address potential concession conflicts through measures such as mandatory consultation and negotiation between concession holders and requirements to obtain and share data, including in relation to detailed development plans and timing. In certain circumstances, the Minister is also given the power to resolve a conflict between overlapping resource developments through the making of a 'preference decision'.

The Acts allow and even encourage 'coordination arrangements' to be entered into between holders of coal seam gas concessions and coal or oil shale mining concessions. Once agreed, these arrangements may be approved by the Minister and override the terms of the concessions, to the extent of any inconsistency. Recent industry practice has been to agree confidential co-development agreements, in addition to the coordination arrangements contemplated by the legislation.

This paper provides an overview of the Queensland regime and the arrangements entered into by participants in the Queensland coal seam gas and mining industries to resolve conflicts over concessions on the same area of land.

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2 Coal seam gas – The basics

2.1 Occurrence

Coal seam gas is a natural gas found in association with coal beds. Referred to in Australia as coal seam gas (**CSG**), other parts of the world use the terms 'coal seam methane', 'CSM' and 'coal bed methane'.

CSG consists principally of methane and, as such, is similar to conventional natural gas. CSG typically has a lower heating value than conventional natural gas due to the lack of heavy gas compounds.[2]

CSG is characterised by gas bonding to the surface of coal, with the gas being trapped both within the coal and within the fractures of the coal seam (**cleats**). The gas is trapped in place by water and ground pressure. The fractures within the coal seam increase the internal surface area of the coal. This increased surface area allows coal seams to hold larger volumes of gas than conventional reservoirs.

2.2 Production

Production of CSG can be challenging. Coal seams are often flooded with water. While this water contributes to the CSG remaining trapped in place, it must be removed to allow extraction of the gas. Commercial production of CSG initially requires the drilling of wells into the coal seam to pump water from the seam to the surface. This reduces the hydrostatic pressure of the seam and allows CSG to be released from the cleats within the seam and 'de-adsorbed' from the coal surfaces.

Due to the high volumes of water contained in coal seams, coal seam wells will often initially produce only water, with 'dewatering' occurring over time. As the volume of water produced from the seam decreases, the volume of gas that flows to the surface will increase.

The permeability of the reservoir will, as with conventional gas fields, greatly impact on the volumes of gas produced. The coal seam cleats are the principal factor in determining the permeability of the coal seam. Methods for increasing the permeability of the seam, such as increasing pressure and fracturing (or 'fraccing') the coal, can also be used.

Once the CSG is brought to the surface, the methane is separated from the water and any other gases present. The CSG can then be processed for delivery to market.

3 Concession conflicts – History of the Queensland regime

3.1 Industry growth in Queensland

For many years CSG was seen as a hazardous by-product of coal mining. The gas presented both safety and environmental risks for coal miners. More recently, CSG has been recognised as a valuable commodity in its own right.

The changing status of CSG has been obvious with the remarkable growth in the Queensland CSG industry over the last 15 years. For example, the number of CSG

[2] See, for example, A Kidnay and W Parrish, *Fundamentals of gas processing* (2006) and Vivek Chandra, *Fundamentals of natural gas: an international perspective* (2006).

wells drilled in Queensland has increased from 10 in the early 1990s to approximately 600 drilled in 2007–2008,[3] as shown in Figure 1 below.

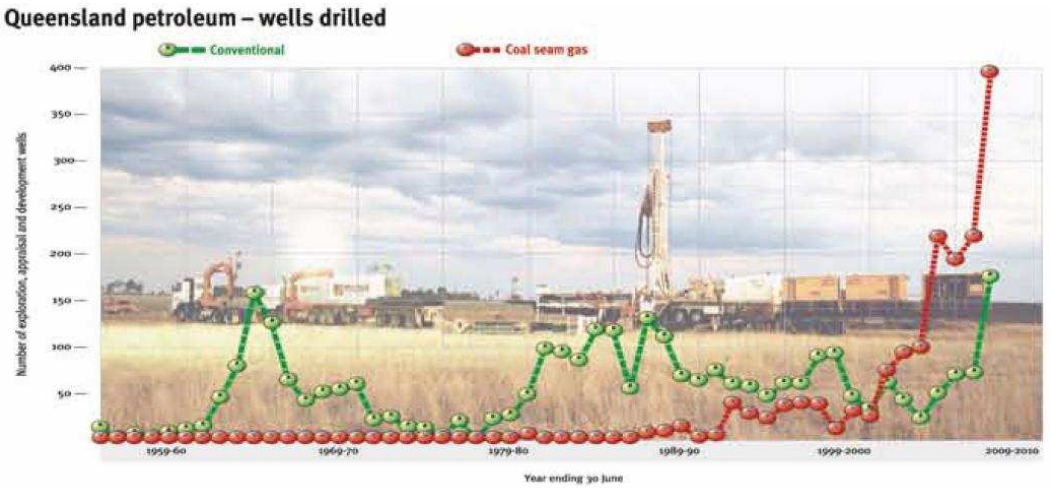

Figure 1: Number of conventional and coal seam gas wells drilled in Queensland by decade from 1959 to 2009[4]

3.2 Coal and petroleum concessions – Rights to CSG

The rapid development of CSG as a standalone commodity in the 1990s highlighted the deficiencies in the regulation of coal and petroleum rights. The most fundamental issue which arose in Queensland was whether a coal concession gave the holder the right to extract CSG for commercial purposes. This issue was highlighted by two Queensland Government decisions made in 1995. Both decisions concerned areas of land the subject of overlapping coal and petroleum rights.

The first conflict involved Shell Coal as the holder of a coal exploration permit and mining lease and BHP Petroleum as the holder of a petroleum authority to prospect. Both Shell and BHP considered they had the rights to mine CSG in the overlapping area. The Queensland Government decided in favour of Shell Coal, the holder of the coal mining concessions.[5]

The second conflict arose between BHP and Mitsui as holders of coal mining tenure and ConocoPhillips as the holder of a petroleum authority to prospect over BHP/Mitsui's Moura mine. In a decision that appears inconsistent with the previous Shell/BHP decision, the Queensland Government granted ConocoPhillips a petroleum lease to allow extraction of CSG.[6]

This inconsistency was addressed in the *Petroleum Amendment Act 1996* (Qld), which inserted a new section 150 into the *Petroleum Act 1923* (Qld) (**PA**), stating:

> '…(2) To remove any doubt, this Act applies, and is taken always to have applied, to the petroleum interest as if coal seam gas were petroleum.

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3 Queensland Department of Employment, Economic Development and Innovation 'Queensland's coal seam gas overview' August 2009.

4 Queensland Department of Mines and Energy.

5 Susan Johnson, *Whose Right? The adequacy of the law governing coal seam gas development in Queensland* (2001) 20 AMPLJ 258 at 262.

6 Ibid.

> … (4) A person is not, and never has been, authorised to extract and produce, or mine, coal seam gas merely because an Act authorises the person to mine coal.'

3.3 Coal and CSG - Concession conflicts

While the 1996 amendment to the PA addressed rights to commercially extract CSG, many aspects of the relationship between the holders of petroleum and coal concessions remained uncertain. In particular, the priority between coal tenure and petroleum tenure held over the same area of land was not clear.

The Queensland Government released a number of policy and discussion papers around these issues. The reform process culminated in the enactment of the *Petroleum and Gas (Production and Safety) Act 2004* (Qld) (**P&G Act**) and amendments to the PA and the *Mineral Resources Act 1989* (Qld) (**MRA**).

4 Current Queensland legislative regime

4.1 Key features of the Queensland legislation

The exploration for and extraction of CSG in Queensland is currently governed by 3 pieces of legislation; the P&G Act, the PA and the MRA (together, the **Acts**). The key concessions granted under these Acts, as they relate to CSG, are summarised in Figure 2 below.

	P&G Act and PA	MRA
Regulates (among other things)	Exploration for and production of petroleum in Queensland	Exploration for and mining of minerals in Queensland
Exploration tenure	Authority to Prospect (ATP)	Exploration Permit or Mineral Development Licence
Exploration tenure authorises	Exploration for petroleum, testing of petroleum and evaluation of the feasibility of petroleum production	Exploration for the minerals specified in permit or licence. Exploration permits are generally granted either for coal or for all minerals other than coal (s 130 MRA)
Production tenure	Petroleum Lease	Mining Lease
Production tenure authorises	Exploration for petroleum, testing and evaluation of petroleum production and petroleum production (including CSG)	Mining of the minerals specified in the lease. Coal seam gas cannot be specified as a mineral in a mining lease (s 234 MRA)

Figure 2: Some key features of Queensland legislation relevant to CSG.

4.2 Rights to extract CSG

Under the Acts, rights to extract CSG are held exclusively by petroleum lessees, except in relation to 'incidental' CSG, which is defined in the Acts as CSG mined, or proposed to be mined, by the holder of a mining lease where the mining:

(a) is a necessary result of coal or oil shale mining;

(b) is necessary to ensure a safe mine working environment; or

(c) is necessary to minimise fugitive emission of methane during the course of coal mining operations.[7]

Where CSG is extracted by a mining lessee in one of these circumstances, the ability of the mining lessee to dispose of the CSG is severely restricted.

A mining lessee may only use incidental CSG for the purposes of mining under the mining lease (for example in power generation for the mine) or to give it to a petroleum lessee with a tenure over the land where the petroleum lessee has given the mining lessee written notice that it will accept the gas.[8] The MRA specifically states that a mining lessee cannot use incidental CSG for 'a purpose other than for mining under the mining lease or for giving it to a petroleum lease holder'. Purposes other than mining will include selling or transporting the incidental CSG.

4.3 Negotiation

The Acts impose various obligations on applicants for petroleum or coal tenure over areas the subject of concessions held by third parties. For example, an applicant for a petroleum authority to prospect must 'use reasonable attempts' to consult with the holder of a coal tenement in the same area in relation to the applicant's development plan and safety plans.[9] Similarly, the holder of the coal exploration tenement must respond to such consultation and make 'reasonable attempts to reach an agreement' that 'provides the best resource use outcome without significantly affecting the parties' rights or interests'.

The Minister may also, in certain circumstances, require that further negotiations be conducted.[10] Failure to comply with negotiation and consultation obligations can result in the concession application being refused.[11] Compliance with these provisions can also be included as conditions on the existing concessions.

4.4 Ministerial preference decision

The Minister has the power to make a 'preference decision' to allow a petroleum development or a coal development to have precedence over an opposing concession application.[12] Prior to making a preference decision, the Minister must refer the matter to the Land Court, with the Land Court making a recommendation on what the decision should be. [13]

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7 s318CM MRA.

8 s318CN MRA.

9 s310 P&G Act.

10 See, for example, s311 P&G Act.

11 See, for example, s312 P&G Act.

12 ss318 and 319 P&G Act and part 7AA, division 2 MRA.

13 See, for example, s320 P&G Act.

The Minister must then consider the recommendation, along with the 'CSG assessment criteria' which form part of the petroleum concession application. The CSG assessment criteria include development plan requirements, the legitimate business interests of the petroleum and coal or oil shale mining parties and, for example, the effect of the proposed petroleum lease on the future development of coal resources from the land.[14]

The Minister (and the Land Court in its recommendation) must comply with section 321 of the P&G Act, which provides that a coal or oil shale development preference may only be given if the Minister is satisfied that:

(d) a coordination arrangement (discussed in detail at section 5 below) between the concession holders in the future, in relation to petroleum production and coal mining, is unlikely or is not commercially or technically feasible;

(e) the public interest in petroleum production and coal or oil shale mining and any incidental CSG mining would be best served by not granting a petroleum lease to the petroleum lease applicant first;

(f) in relation to a brownfield coal or oil shale resource, it is critical to the continuance of that operation or the efficient use of infrastructure in relation to that operation and the petroleum development plan is incompatible with the future development of the resource; and

(g) in relation to a greenfield coal or oil shale resource, it is commercially viable and coal or oil shale mining will start within 2 years of the grant of a coal or oil shale mining lease.

4.5 Sharing of information and data

The Acts impose several requirements on concession holders in relation to the recording and provision of information. This process is to assist in achieving the best resource use outcome for all concessions. For example, it is a condition of coal mining leases that the holder meters and records the volumes of CSG mined in the area of lease and lodges annual reports in relation to CSG amounts, locations and other statistics.[15]

The Acts also require the applicant for a mining lease or a petroleum lease which overlaps the area of an existing opposing lease to submit a development plan stating the effect on the existing lease and coordination arrangements relating to the land.[16]

4.6 Coordination arrangement is a pre-condition to grant of lease

The Acts provide a mechanism by which holders of mining and petroleum leases can agree the terms of a 'coordination arrangement' which, if approved by the Minister, will, to the extent of any inconsistency, override the terms of the relevant petroleum or mining lease.[17]

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14 See, for example, s305 P&G Act.

15 ss318CU – CV MRA.

16 See, for example, s305 and division 4, subdivision 2 of the P&G Act.

17 s239 P&G Act. Note: the P&G Act limits the scope of the matters the parties can agree in a coordination arrangement, which are inconsistent with the terms of the P&G Act and MRA (see ss234(3) and (3A) P&G Act).

Under the Acts, negotiation and entry into a coordination arrangement, and Ministerial approval of that coordination arrangement, is a precondition to the grant of:

(a) a petroleum lease that overlaps an existing coal or oil shale mining lease;[18] and

(b) a coal or oil shale mining lease that overlaps an existing petroleum lease.[19]

It is also a consideration when assessing certain lease applications, as the entry into or the 'potential' of an applicant to enter into, a coordination arrangement forms part of an applicant's assessment criteria.[20]

Coordination arrangements are discussed in detail in section 5 below.

5 Coordination arrangements

5.1 What is a coordination arrangement?

As noted above, the Acts provide for concession holders to enter into 'coordination arrangements'.[21] The P&G Act provides that an applicant for, or holder of, a petroleum or mining lease may make a coordination arrangement in respect of the following matters:

(a) the orderly production of petroleum from a natural underground reservoir under more than one of the leases;

(b) the orderly carrying out of an authorised activity for any of the leases by any party to the arrangement; and

(c) petroleum production from more than one natural underground reservoir under more than one of the leases.

5.2 Terms of coordination arrangement

The coordination arrangement may:

(a) be for any term (including a term in excess of the duration of the relevant mining or petroleum lease);

(b) include persons who are not the holder or proposed holder of the relevant mining or petroleum lease;

(c) provide for a matter that is not addressed in the relevant mining or petroleum lease;

(d) provide for a matter that is inconsistent with certain prescribed terms of the petroleum or mining lease, including the time by which a lease holder must commence production;

(e) provide for the subleasing of, or an interest in, a petroleum lease; and

18 ss350 P&G Act.

19 s318CB MRA.

20 See, for example, ss121 and 305 P&G Act and ss318AP and 318AT MRA.

21 See, for example, ss234-243 P&G Act and s318AJ MRA.

(f) provide for a party to the coordination arrangement to be granted a pipeline licence to transport petroleum or a prescribed gas storage on land subject to the agreement.[22]

5.3 Approval of a coordination arrangement

Once the parties have agreed the terms of the coordination arrangement, the parties will jointly apply to the Minister for approval of the arrangement. The Minister may approve the proposed coordination arrangement if he or she is satisfied that:

(a) the arrangement is in the public interest;

(b) any inconsistency between the arrangement and any lease condition in the proposed coordination arrangement is appropriate;

(c) the spatial relationship between the relevant leases for the arrangement is appropriate;

(d) the arrangement is consistent with the P&G Act and the MRA;

(e) the appropriate development plan has been approved; and

(f) the arrangement clearly identifies the safety responsibilities of each party in relation to the land.[23]

The P&G Act also provides that the Minister may refuse to approve proposed coordination arrangements which contemplate that a party to the arrangement will be granted a pipeline licence, if certain criteria are not met. For example, if the Minister considers that the pipeline licence will not be granted.[24]

5.4 What is the effect of a coordination arrangement?

Once the coordination arrangement has been approved and the lease has been granted:

(a) the coordination arrangement will, to the extent of any inconsistency, override the terms of the relevant petroleum and/or mining lease;[25]

(b) the lease holder must continue to be a party to the relevant coordination arrangement and must not carry out authorised activities if a relevant coordination arrangement is not in place;[26]

(c) the parties must not amend or cancel the coordination arrangement without the Minister's consent;[27] and

(d) a transfer of the tenement will not be approved unless the proposed transferee is a party to the coordination arrangement.[28]

The coordination arrangement will effectively operate as a licence condition, unless the Minister exercises his or her power to cancel the coordination arrangement.[29]

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22 ss234(3) – (4) P&G Act.

23 s236 P&G Act.

24 s236(3) P&G Act.

25 s239 P&G Act. Note: the P&G Act limits the scope of the matters the parties can agree under the coordination arrangement, which are inconsistent with the terms of the P&G Act and MRA (see ss234(3) and (3A) P&G Act).

26 s365(2) P&G Act and s318CT(2) MRA.

27 s241 P&G Act.

28 s379 P&G Act and s318DO MRA.

6 Co-development agreements

6.1 Terms of co-development agreements

In addition to coordination arrangements, it is common for mining and petroleum leaseholders and applicants to enter into a co-development agreement which governs the parties' rights and obligations in a defined area (**co-development area**).

A co-development agreement is an overarching agreement which sets out the terms on which parties will develop their interests in a co-development area, including how the parties will apply for, and cooperate in relation to, applications for production leases. In this regard, co-development agreements will usually require the parties to consent to the grant of a production lease and will facilitate the execution of a coordination arrangement over those parts of the co-development area that are subject to the proposed production lease.

A co-development agreement will govern each party's rights in relation to CSG and will expressly provide who can apply for a petroleum lease or a mining lease within the co-development area. In effect, a co-development agreement provides a contractual mechanism by which the parties can:

(a) coordinate their activities;

(b) facilitate regulatory approvals;

(c) allocate risk and liability; and

(d) agree safety, rehabilitation and compensation regimes and other miscellaneous matters.

Each of these matters is considered below.

6.2 Coordination of activities

In order to ensure that the parties are able to operate in a safe, efficient and expedient manner, the parties will generally agree a 'co-development plan', which details the proposed development of the co-development area.

A co-development plan will generally address the location of infrastructure, the nature and timing of activities (including exploration, construction and production activities), the sharing of data and the other processes required to enable day-to-day activities to occur. Among other things, it is designed to minimise the risk of liabilities being incurred, or injuries suffered, by a party or third party.

The co-development plan will usually be assessed and monitored by a committee comprising representatives from both parties, which meets regularly to discuss and review:

(a) the nature, location, commencement and duration of any proposed activities in the co-development area;

(b) the completion of activities and rehabilitation in the co-development area;

(c) any amendments to the co-development plan; and

[29] s242 P&G Act. If the Minister wishes to cancel a coordination arrangement, the Minister must give notice to each leaseholder of the proposed cancellation and the reasons for such cancellation; and must consider any submissions lodged by the lease holder, the likely impact of the cancellation on the relevant leases and the public interest prior to cancelling the relevant coordination arrangement.

(d) any other relevant matters,

and make recommendations to the parties.

6.3 Regulatory approvals

As a co-development agreement is intended to reflect the terms on which the parties will develop their interests in the co-development area, it is imperative that the co-development agreement specify the relevant consents and processes to be followed when a party to the agreement is applying for a petroleum or mining lease in the co-development area.

In this regard, parties are usually required to:

(a) use all reasonable endeavours to facilitate the grant of a production lease to the other parties, including by providing their consent to the grant of the application;

(b) provide information (including geological information) to assist in the preparation of the application for the production lease;

(c) consider and approve an initial development plan, subject to agreed criteria and restrictions;

(d) execute a coordination arrangement (usually in a pre-agreed form); and

(e) agree any amendments to a coordination arrangement requested by the Minister.

In addition to this, it is common practice for a co-development agreement to address consent requirements regarding entry to specified land and any compensation that may be payable.

6.4 Risk and liability

Risk allocation and the indemnity regime is always a contentious commercial issue but, in setting up the framework for their agreement, the parties should consider:

(a) the extent to which they will assume or exclude liability for consequential, indirect or special loss;

(b) whether the mining tenement holder should be liable for loss of 2P or 3P CSG reserves and, if so, whether there are any carve-outs to such liability; and

(c) whether a 'knock for knock' or negligence-based indemnity regime is appropriate.

To date, we understand that industry practice has been to incorporate a negligence-based indemnity regime, but to exclude liability for consequential loss and release the mining tenement holder from liability for loss of 2P or 3P CSG reserves (except to the extent caused by the mining tenement holder's negligence, breach or wilful default).

6.5 Safety, rehabilitation and compensation

As the parties' activities in the co-development area may overlap, the parties will generally agree a set of safety protocols, consistent with occupational health and safety legislation, to ensure that each party and its contractors and subcontractors are

able to minimise the risk of death or injury to any person or liability to the parties or any third party.

The parties will also need to agree their respective obligations in relation to the environment, rehabilitation and remediation, having regard to the fact that one party's activities may prevent rehabilitation or render another party's rehabilitation ineffective. In these circumstances, it is usual for the party whose activities have prevented or nullified the other party's rehabilitation efforts to assume all rehabilitation and remediation obligations in relation to the relevant land. In this regard, it is very important for the parties to continue to agree and update the co-development plan.

6.6 Other

As the co-development agreement is not submitted for approval to the Minister, there is scope for the parties to agree a range of confidential commercial matters. In other words, the terms of the co-development agreement are not limited to the matters contemplated in the P&G Act.[30]

As such, the parties may agree a number of other commercial issues, such as the sharing of the operational and capital costs associated with degassing or extraction of CSG, compensation for either the loss of access to a resource, delays in obtaining access to a resource or accelerated access to a resource and where there is limited water available, rights to coal formation water (which is a by-product of CSG extraction).[31]

7 Conclusion

The success of the Queensland legislative regime in dealing with concession conflicts between petroleum and mining lease holders is evidenced by the rapid growth of CSG production in the State and the number of LNG projects proposed to be built there. At the time of this paper, there are at least 6 separate LNG projects being planned for the export of LNG made from CSG produced in Queensland. Project proponents include major oil & gas companies such as Shell, BG, ConocoPhillips, Petronas and Santos. At the same time, Queensland is a major source of coal for overseas export and power generation within the State.

The Queensland legislative regime is clear, consistent and generally written in plain English, which makes it easier for non-legal persons to use it. We recommend this regime to other jurisdictions which have similar concession conflicts in relation to petroleum and coal or oil shale mining.

[30] Although the P&G Act does not limit the matters that the parties may agree in a coordination arrangement, it is common for the parties to limit the scope of the coordination arrangement to those matters sets out in the P&G Act, especially in circumstances where there may be confidential commercial information or terms.

[31] Dominic McGann, 'Coordination Agreements for Coal Seam Gas' (2005) *AMPLA Yearbook 2005* 380 at 387.