

Operational Policy

Assessment of applications to use steel casing in horizontal wells

MIN/2019/4838

Version 1.01

Last Reviewed 05/06/2019

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Version History

Version	Date	Comments
1.00	29/05/2019	Initial version for publication
1.01	05/06/2019	Minor update to correct typographical errors

Approval

Position	Name	Date
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1 Purpose

This operational policy provides guidance on how the Department of Natural Resources, Mines and Energy (DNRME) will assess applications for an exemption made under section 63 of the Petroleum and Gas (Safety) Regulation 2018 (P&G Safety Regulation) from the requirement in section 44 of the P&G Safety Regulation to ensure steel casing is not used to drill or complete a horizontal well.

The information provided in this policy does not limit the exercising of discretion nor does it override relevant legislative provisions.

2 Application of this policy

This operational policy applies to applications for exemption in two general scenarios:

- Overlapping or adjacent coal and coal seam gas (CSG) tenure (referred to as 'overlapping areas' in this operational policy)
- CSG tenure only - Authority to Prospect (ATP) or Petroleum Lease (PL)

This policy does not apply if the applicant is:

- the holder of a 1923 Act lease, or the operator or proposed operator of a well under the 1923 Act in the area of a 1923 Act lease, that was in effect immediately before 31 December 2004; and
- the area of the lease does not include land that is in the area of the coal or oil shale mining tenement.

3 Background

The use of steel casing in horizontal wells is prohibited unless an exemption is given by the Chief Inspector of Petroleum and Gas, with the consent of the Chief Inspector of Coal Mines.

As petroleum companies move into more technically challenging areas, different techniques are required to economically develop CSG resources. This development must occur in a way that protects the safety of workers in the resources sector and the community. Consideration will be given to whether steel casing can be used in horizontal wells having regard to the circumstances of each case and the overarching objective of optimising the safe and sustainable development of coal and CSG resources.

4 Legislative framework

The main relevant provisions of the P&G Safety Regulation are outlined below.

- Section 44 requires an operator of an operating plant to ensure steel casing is not used to drill or complete a horizontal well.
- Schedule 7 defines horizontal well to mean 'a petroleum well, any part of which travels in a generally horizontal direction along a coal seam'. Within the petroleum industry, horizontal wells are generally accepted as wells with an inclination equal to or greater than 85 degrees. These definitions should be considered in any well design and in determining whether an exemption is required.
- Section 62 allows for an exemption from the requirement under section 44 in relation to: a petroleum well drilled or to be drilled under a stated petroleum tenure; a stated petroleum well; or a stated coal seam.
- Sections 63 to 66 set out the process for making, considering and deciding an application for exemption.

5 Application requirements

5.1 Pre-application (overlapping areas)

Approximately ninety per cent of Queensland's CSG tenure is in an overlapping situation, making this the most likely scenario in which an application for exemption will occur.

The overlapping tenures legislative framework¹ places obligations on coal and CSG parties to consult on a proposed Joint Interaction Management Plan (JIMP) and to have regard to any reasonable proposals in relation to the management of risks and hazards, and provides for arbitration to resolve any failure to agree.

The process set out in the legislation in regard to JIMPs should be carried out prior to making the application for exemption under section 63 of the P&G Safety Regulation.

Overlapping or adjacent coal or oil shale mining tenement holders will be given an opportunity to make submissions regarding the application once it is made.² It is recommended that the applicant enter into discussions with these parties before the application is made. Failure of any party to engage in discussions in good faith will be a relevant consideration in deciding the application for exemption.

5.2 Application for an exemption

An application may be made by the operator or the proposed operator of an operating plant, using the approved form.

The application should include all relevant information listed on the form, including: the reasons for seeking the exemption; the location of the operating plant; coal seam intersection information; the proposed operation; the likely impact on the future safe and efficient mining of coal, including realistic expectations of removing steel casing; and any proposed alternative safety measures.

Applicants are encouraged to discuss with the Inspectorate the circumstances upon which an exemption application may be based, as soon as is practicable.

6 Assessment of application

The Chief Inspector of Petroleum and Gas may give the exemption, with or without conditions, if the Chief Inspector is reasonably satisfied:³

- the likely impact on the future safe and optimal mining of coal is low;
- the likely level of risk to a person or property associated with the mining or future mining of coal is an acceptable level; and
- the likely impact and level of risk are easily and reliably quantifiable.

The consent of the Chief Inspector of Coal Mines is also required to give the exemption.

These matters will be assessed within the context of the fundamental safety objectives of the *Petroleum and Gas (Production and Safety) Act 2004* and the *Coal Mining Safety and*

¹ The overlapping tenures framework is governed by the *Mineral and Energy Resources (Common Provisions) Act 2014*, the *Mineral Resources Act 1989*, the *Coal Mining Safety and Health Act 1999*, the *Petroleum Act 1923*, the *Petroleum and Gas (Production and Safety) Act 2004* and related subordinate legislation.

² Section 64 of the P&G Safety Regulation.

³ Section 66 of the P&G Safety Regulation.

Health Act 1999, and having regard to all relevant considerations, including those listed in section 6.1 below.

6.1 Relevant considerations

Resource-specific considerations:

- The level of understanding of, and potential value of, the coal resource affected or the gas resource in question
- The number and location of wells
- The technical and commercial maturity of the resource and timeframes for production of both the coal and gas resource
- The nature of the coal resource (e.g. underground or open-cut, thickness, permeability and depth)
- The extent to which geology impacts operations, including whether coal and gas are separated or targeting the same seam
- The nature of existing coal and gas leases, tenures, approvals and licences relating to the land
- The nature and extent of enabling infrastructure.

Other considerations:

- The technical justification for the use of steel casing
- Whether there is agreement between the applicant and any relevant coal or oil shale mining tenement holders (noting that the Chief Inspector of Petroleum and Gas is not required to give the exemption solely because there is agreement)
- Where agreement does not exist, the extent to which the applicant and relevant coal or oil shale mining tenement holders have engaged in efforts to reach an agreement

These considerations are not exhaustive or exclusive, nor should it be assumed that each element will carry similar weight in decision-making. Each application will be assessed on its particular merits and circumstances.

6.2 Examples

The following examples describe application scenarios and are illustrative only.

Safety will be the principal consideration in decision-making. Within this context, avoiding circumstances which negatively impact on resource recovery is desirable. Where the applicant and affected tenure holders agree on a course of action, the pathway to a decision is less complicated, but still subject to risk assessment.

Example 1 – No overlapping areas

A thermal coal resource in an area that is well understood and unlikely to be economically mined in the next 25 years. There are no existing coal tenures in or adjacent to the area and little or no enabling infrastructure.

The gas resource in the same area is of significant scale, located at an optimum depth and is separated from the potentially mineable coal seam.

As there is no overlapping area, the ATP holder may apply to the Chief Inspector of Petroleum and Gas for an exemption. Subject to assessment of all relevant considerations, it is more likely than not that the exemption would be given in this example.

Example 2 – Overlapping area – agreement reached

A coal resource is situated in a well-developed basin. Multiple mineral development licences (MDLs) and mining leases (MLs) have been granted in the resource area. Significant enabling infrastructure has been developed and is readily accessible for the coal tenure holders.

The ATP holder and relevant ML holder have engaged in discussions and the ML holder supports the proposal to use horizontal wells with steel casing, with conditions agreed between the parties related to timing of operations and removal of casings at the cessation of operations. The agreement has been submitted with the application for exemption.

Subject to assessment of all relevant considerations, it is more likely than not that the exemption would be given in this example.

Example 3 – Overlapping area – no agreement reached

A coal resource is situated in a well-developed basin. Multiple MDLs and MLs have been granted in the resource area. Significant enabling infrastructure has been developed and is readily accessible.

The ATP holder has attempted to engage with the relevant MDL holder but has not been able to secure agreement to the proposal. The MDL holder is not currently actively mining the area.

The Chief Inspector of Petroleum and Gas will weigh all relevant considerations, in consultation with the Chief Inspector of Coal Mines, in assessing risk and safety implications prior to making a decision.

7 Overview of the application process



Notes:

- Steps 2 to 4 do not apply where there are no overlapping area considerations.
- Timescales have been included for information. Some timescales are based in the legislation and are not subject to the discretion of the Inspectorate (see boxes 3, 4 & 7). All other timescales are indicative.