

Frequently Asked Questions

Directive 079: Surface Development in Proximity to Abandoned Wells

January 2024

General

Q1. How can I determine if a well is abandoned?

A1. A third party can see if it is abandoned by checking Abandoned Well Map (see the System & Tools Portal of our website <https://www.aer.ca/>). A well is considered abandoned if it has a licence status of “Abandoned”, “RecCert”, or “RecExempt”. See “Obtaining Abandoned Well Site Records” section of *Directive 079* for additional information.

Q2. How do I determine if there is an abandoned well in the proposed development area?

A2. To determine whether an abandoned well is within the development area, landowners and developers are required to check the Abandoned Well Map (see the System & Tools Portal of our website <https://www.aer.ca/>).

Additional information on how to use the abandoned map viewer may be found by selecting the help file in the viewer.

An alternative method is to use [GeoDiscover](https://geodiscover.alberta.ca/) (<https://geodiscover.alberta.ca/>). Both viewers use the same data, and therefore one is not more accurate than the other.

Information regarding a well’s location is provided to the AER by industry when a well is licensed. As a result, the information and its accuracy are dependent on the accuracy of industry submissions. Technology and processes in surveying and reporting well locations to the AER has changed over time; therefore, the well centres on older wells may vary from the submitted well coordinates. These maps will help determine if there is potentially a well on your property but cannot be solely relied upon for the exact well location. To discover a well on your property, please contact the licensee to obtain the exact well location.

Q3. How do I identify the licensee on record?

A3. Information about the licensee on record can be obtained from the Abandoned Well Map (see the System & Tools Portal of our website). You can search by legal land description or well licence number.

If you are unable to contact the licensee of record using the information provided, the AER may be able to assist. Please email your request to inquiries@aer.ca and provide the licensee name, UWI, and well licence number using the subject line “Additional Contact Info Request - Licensee Name.”

Q4. If the well is abandoned (well licence status of Abandoned, RecCert, or RecExempt), does that mean there is no licensee?

A4. All wells, including abandoned wells, have a licensee of record. As per section 29 of the *Oil and Gas Conservation Act*, the licensee remains responsible for the control or any further abandonment of the well.

Q5. Are abandoned orphaned wells subject to the requirements of Directive 079?

A5. Yes. All abandoned wells, including orphan wells, must comply with *Directive 079*.

Q6. Are orphaned wells included in the map viewer?

A6. Yes.

Q7. How do the setbacks apply in a case where an existing building is being expanded or is being demolished and rebuilt?

A7. Modification or expansion of existing structures and buildings cannot encroach on the minimum five metre setback requirement as set out in *Directive 079*.

Q8. What is the purpose of the five metre setback?

A8. The setback allows access to the abandoned well for ongoing monitoring.

Q9. Does the five metre setback apply for temporary structures?

A9. The AER recommends that the five meter setback be applied to temporary structures because access to the site may be needed for methane anomaly testing.

Q10. Is locating and testing an abandoned well required if development is occurring outside of the five metre setback?

A10. As per *Directive 079*, locating and testing abandoned wells is required whenever the well falls within, or in proximity to “existing or planned surface development.”

Q11. What distance is considered to be “within proximity” of a proposed development?

A11. The AER recommends wells within 25 metres of the area of proposed development are located and tested.

Q12. If there is no active licensee (i.e., the licensee is defunct) does the five metre setback requirement still exist?

A12. Yes, the five metre setback requirement applies to the well not the licensee.

Q13. Who is responsible for the locating and testing costs of complying with *Directive 079*? Is it the licensee of the well or the developer of the property?

A13. The licensee has a legal duty to locate and test when an applicant for a subdivision contacts the licensee of the abandoned well.

Q14. Who is responsible for the locating and testing costs of complying with *Directive 079* when the licensee is defunct?

A14. To obtain an approval for a development permit from the municipality, the well must be located and tested during frost free months as per *Directive 079* requirements. The developer may choose to hire competent professionals to locate and test the well and assume the associated costs. As per *Directive 079*, part 6.0, if a methane anomaly is detected, the test results must be immediately submitted to the AER at Directive079@aer.ca. An Internet search can assist in identifying which vendors can perform the location and gas migration testing that would be in compliance with the AER directives. Requesting a sample copy of a gas migration report, referrals, references and contact information, as well as quizzing the vendor whether the report is in compliance with the associated AER directives may assist in determining whether the vendor is competent to perform the required work.

Q15. To assist in locating an abandoned well, where do we obtain an original copy of the application for licence to drill a well?

A15. It can be ordered by email through InformationRequest@aer.ca.

Q16. In the event that an abandoned well cannot be located, *Directive 079* states that a 1 metre grid pattern should be used across “the entire property” to determine if a methane anomaly exists. What size area is considered “the entire property”? Would this be the entire property that is allocated to be developed (as this could be extremely large)? Or based on a certain radius from the expected well centre?

A16. “The entire property” refers to at least the original surveyed well lease site.

If the well is found during excavation, development must be halted until the well is tested as per *Directive 079*.

If the well is contacted during construction activity, the licensee and the AER (1-800-222-6514) must be contacted immediately.

Q17. Our well has a methane anomaly; however, when we obtained gas samples and conducted carbon isotope analysis, the analysis indicated the gas was from a biogenic source. Is this adequate to confirm the well is not the source?

A17. Carbon isotope analysis is one tool for identifying gas sources and their origin; however, samples taken of gas migrating through soils to surface can lead to inconclusive or misleading results. The recommended method to determine if the well is not the source of methane is to expose the well and subsequently test the capping system for leakage and conduct an in-soil gas migration test immediately adjacent to the buried casings in four directions. This may provide further assistance in determining if the source of the methane anomaly is the well or not. Exposing the abandoned well casings and testing the capping system can only be performed by the well licensee.

Q18. What does the AER consider a “surface structure” under *Directive 079*?

A18. Includes any building or other thing constructed or placed on, in, over or under land and includes; underground facilities, railways, pipelines, canals, dwellings, industrial plants, aircraft runways or taxiways, buildings used for military purposes, greenhouses, farm buildings, schools, churches, public facilities, etc., but does not include a highway or road or a bridge that forms part of a highway or road.

Q19. Do the requirements of *Directive 079* apply to abandoned wells that were licensed by the AER and that were drilled to a depth of less than 150 metres?

A19. Only abandoned wells which are *not licensed* to the AER that were drilled to a depth of less than 150 metres are exempt from the requirements of *Directive 079*.

Landowners & Homeowners

Q20. What is required to obtain a development/building permit when an abandoned well is on the property being developed?

A20. Refer to Q13 & Q14.

Q21. The abandoned well is licensed to a licensee that no longer exists (i.e., defunct), how should I proceed?

A21. Refer to Q14.

Q22. We are developing land near a reclaimed oil well (with a reclamation certificate). I am aware that there are development setback requirements, but once development occurs, who is responsible for ongoing maintenance of the well (i.e., mitigation of any leaks, releases, etc.)? Are there circumstances under which the surface rights holder would become responsible?

A22. The licensee remains responsible for maintenance of the well; however, anyone, including a developer or landowner, that caused or contributed to the cause of a release may be responsible for the clean-up and other costs pursuant to Part 5 of the *Environmental Protection and Enhancement Act* and section 104 of the *Oil and Gas Conservation Act*.

Q23. We are developing land near an abandoned well that has not been reclaimed. Is it possible for the developer or landowner to incur reclamation obligations with regards to the site or the well?

A23. Yes, it is possible that the developer or landowner may incur reclamation obligations if they undertake certain types of activities on the site of an abandoned well that has not been reclaimed. Developers or landowners are strongly encouraged to contact the AER (inquiries@acr.ca) before undertaking development activities.

Developer Inquiries

Q24. At what point in the development process is an abandoned well required be located and tested?

A24. The well must located and tested before requesting a development permit approval from the appropriate regulating municipal department. The AER recommends that the developer engage the licensee early in the process as the development plans may need to be modified depending on the well location. The wells should be located and tested for methane anomalies during non-freezing months.

Q25. What if the licensee does not respond within a reasonable timeframe or refuses to locate and test the well?

A25. The developer may contact the AER at Directive079@acr.ca.

Q26. Is it allowable to place a road such that the road bed would cover an abandoned wellbore?

A26. Although it's possible to place a road on top of a well, the AER recommends that the road be designed to (1) minimize lateral migration of methane if an abandoned well were to leak and (2) provide sufficient access to the abandoned well to allow for the ongoing testing and monitoring where the surface will not be disturbed. The abandoned well licensee should be

consulted and agree with the construction plans because the licensee will be required to test the well as per *Directive 079*.

Q27. Can abandoned well casing stubs be lowered to accommodate construction? Is there any approval required from the AER before completing this work?

A27. Only the licensee of the well is permitted to lower the casing stubs of an abandoned well, which requires approval from the AER. In the case where the licensee is defunct, the Orphan Well Association (<http://www.orphanwell.ca>) may lower the casing stubs on behalf of the licensee. The cost of the services will be borne by the developer.

Q28. The location of the well is incorrect. How do I go about getting this changed?

A28. Please send the GPS coordinates (longitude and latitude in NAD-83/UTM zone 12N to six decimal place accuracy) to Directive079@aer.ca. The Abandoned Well Map viewer will then be updated with a revised well location. If you are the well licensee, please see Q32. It should be noted that a typical handheld GPS unit is incapable of providing the accuracy required. If a GPS unit is being used, the unit must be capable of differential correction to the decimeter accuracy.

Licensees

Q29. How do I determine the appropriate risk sum for an abandoned well using the AER Abandoned Well Assessment Risk Model?

A29. The AER is refining the risk model to more accurately reflect risks based on the information provided by licensees. We intend to share the abandoned well risk assessment model in more detail in due course.

Q30. Licensees have sold properties to purchasers who, under the terms of the sales agreement, have agreed to assume responsibility for existing abandoned wells. However, current Alberta regulations do not allow for the transfer of licences of abandoned wells with a well licence status of RecCert or RecExempt. Would it be acceptable to the AER if purchasers carried out the activities required by *Directive 079*, including reporting to the AER, on behalf of the licensee?

A30. It is acceptable to have competent professionals do the locating and testing work on behalf of the licensee. The AER will send all communication to the licensee and will expect to receive the locating and testing information back from the licensee. As long as the work meets the requirements of *Directive 079*, it does not matter who conducts the work. If the work or the person conducting the work does not meet locating and testing requirements, or otherwise contravenes AER requirements, then the licensee would be held responsible.

Q31. May a licensee complete these tests and obtain relevant well data proactively (i.e., before being contacted by the developer)? Is there a time limit after which the survey and associated documentation would not be accepted (i.e., it occurred too far before receiving the request from the developer)?

A31. A licensee may complete the locating and testing of abandoned wells at any time and retain the information, as required in *Directive 079*, in its records. There is no requirement to submit the test results to the AER at this time except for those wells that were identified as potential conflicts in urban areas or if a methane anomaly is identified; however, it is recommended that the results be submitted to the AER at Directive079@aer.ca.

The licensee would need to provide the developer of the subdivision or development with verification that the well was located and tested and the well integrity has been verified. It should be noted that locating of underground facilities is only valid for 14 days as per ground disturbance policies and procedures.

If there is a gas migration or some other problem with the well, the licensee is required to follow all applicable AER requirements and direction, including section 8.190 of the *Oil and Gas Conservation Rules* and *ID 2003-01* reporting requirements.

Q32. The location of my well is incorrect. How do I go about getting this changed?

A32. The process to correct the well location and GPS coordinates is to amend the licence by submitting an amendment application through the AER Digital Data Submission (DDS) System.

- Go into DDS > AER > Submissions.
- Select “Submit Applications”.
- Select “Directive 056”.
- Most of the form should auto-populate. Update the surface coordinates. Ensure that the revised GPS coordinates are in NAD 83/UTM Zone 12N to six decimal places. If a handheld GPS unit is used, it must be capable of differential correction to the decimeter accuracy.
- Please ensure that you have a cover letter ready to attach to the system that explains the reason for the record correction (i.e., incorrect surface coordinates submitted when well licence was filed).

Any questions about this submission process can be directed to 403-297-8311.

Q33. Can the testing be done with frozen ground?

A33. Testing has to be conducted when the ground is not frozen (during frost-free months) since testing when the ground is frozen can lead to erroneous results.

Q34. Why can infrared cameras not be used for gas detection under *Directive 079* when they are acceptable for testing of wells without surface casing vent assembly as per *Bulletin 2011-35*?

A34. While infrared cameras are a useful tool to determine the presence of hydrocarbons, they do not provide sufficient information, as required in *Directive 079*, to be a standalone instrument.

Q35. Test results must be reported to the AER within 30 days of completing testing. Does the 30 days start from the date the tests are done in the field, or when the laboratory results are obtained?

A35. The test results must be reported to the AER within 30 days from the time you were on site conducting the testing. The 30 days allows for the time it would take to have any lab work completed and documentation to be finalized.

Q36. If a wellbore has been exposed during a construction operation, do we have to submit a nonroutine abandonment in DDS if we are lowering the casing or the capping system changes?

A36. Yes. Please refer to section 3.3, “Leaking Wells/Lowering Casing Stubs,” of *Directive 020: Well Abandonment*.

Q37. If a wellbore has been exposed during construction operations, do the findings on the well such as gas migration testing details need to be submitted?

A37. The information must be submitted on DDS in accordance with *ID 2003-01*.

Municipalities

Q38. Where a surface structure was constructed before *Directive 079* came into force in September 2012, do the requirements for locating the abandoned well and completing a gas detection survey set out in *Directive 079* still apply?

A38. With the release of *Directive 079*, the AER is contacting licensees through a phased approach to locate and test wells that may be in conflict with an existing surface development. However, if there are any pre-existing surface structures on the property, the owners can contact the licensee to locate and test the well to ensure that the wellbore was not struck during excavation or construction of the surface structure.

Q39. We understand that there is a 5 metre setback from all abandoned wells; however, do we need to plan an access right-of-way to any abandoned wells within the development?

A39. There is no requirement to provide for a right-of-way to an abandoned well. When developing a new property, the AER recommends the developer consider incorporating access to abandoned wells without the need for intrusion on private lands into its development plan. In the event this is not possible, the AER has full legislated authority to obtain access to any well in the province, and landowners are obligated to provide that access.

Q40. Do the setback requirements in *Directive 079* apply to federal lands?

A40. The *Subdivision and Development Regulation* is a provincial regulation and does not apply to federal lands. Since *Directive 079* derives authority to impose setback requirements from the *Subdivision and Development Regulation*, those requirements cannot be enforced on federal lands. However, the AER strongly encourages that the setback be applied even on federal lands because licensees of wells are required to locate and test wells as per section 3.013(2) of the *Oil and Gas Conservation Rules*. Developers on federal lands should consult with the appropriate federal regulatory body to determine an appropriate setback and may also contact the AER with any questions about the setback requirements of *Directive 079*.

Q41. Do locating and testing requirements of *Directive 079* apply to federal lands?

A41. The testing and locating requirements in *Directive 079* apply to all AER-licensed abandoned wells situated within the Province of Alberta. Licensees or developers who encounter issues accessing wells on federal lands should contact the nearest AER field centre office for assistance.