

Section 9

Well and Pipeline Abandonment and Reclamation



9. Well and Pipeline Abandonment and Reclamation

After a project is completed and production has ceased, a company is required to abandon and reclaim the well, pipeline, and all associated lands and facilities. This section explains the requirements and obligations a company has to abandon and cap a well, and reclaim all specified land associated with the well or pipeline. It also lays out important questions for you to consider if the company is planning on reclaiming the well site on your land. Lastly, this section introduces the Orphan Fund, and the process for wells that are ‘orphaned’ when a project fails to be properly abandoned and reclaimed because a company has declared bankruptcy.

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9.1 Well abandonment

The process for shutting down dry wells and wells no longer in use is referred to as “well *abandonment*.” The well abandonment process includes *down-hole abandonment*, where cement plugs are set into the hole to prevent fluids from travelling through the geologic formations; remedial cementing to secure the sheath of the well, if needed, and finally *surface abandonment*, where the well is closed at the surface. The Alberta Energy Regulator (AER) does not give a well the status of “abandoned” until surface abandonment is complete.¹ AER Directive 020: Well Abandonment sets out the requirements.²

Abandonment is the permanent dismantling of a well or facility. Abandoned wells are different from *suspended*, *shut-in*, and *orphaned wells*. See Appendix E Glossary for definitions.

There are two main types of abandonment:

- **Open-hole abandonment** refers to the down-hole and surface abandonment of a dry hole (one that was not brought into production). It is carried out after *drilling* is complete but before the rig is released from the site.
- **Cased-hole abandonment** refers to the down-hole and surface abandonment of a completed or cased well, which occurs when all oil or gas extraction has ceased.

Surface abandonment includes removal of all the wellhead equipment, but not the *reclamation* of the lease site, which takes place sometime after abandonment is complete. Reclamation is regulated by the AER, which issues *reclamation certificates* once certain criteria are met.

A company is required to notify all affected *landowners/occupants* in the area of any planned surface abandonment; however, the AER does not specify how much notice the *operator* must give.³ Non-routine abandonment — which includes abandonment of wells associated with a salt cavern, re-abandonment of a well, and other criteria as listed in

¹ Effective April 1, 2014 the Upstream Oil and Gas Reclamation Certificate Program is under the jurisdiction of the AER.

² AER, Directive 020: Well Abandonment (2016). AER Directives are available at AER, “Directives.” <http://www.aer.ca/rules-and-regulations/directives/>

³ AER, Directive 020, section 8.

Directive 020⁴ — requires the company to get approval from the AER before starting work.

In all cases, before abandoning a well, the company must ensure that no oil or gas is flowing through the well *casing* that could contaminate *groundwater* or rise to the surface. A company has to set cement plugs — of sufficient length and number — to cover all *non-saline groundwater* zones, to prevent substances from flowing into groundwater in porous zones. After plugging, the wellbore must be filled with non-saline water.

At the surface, the well casing must be cut off at least one metre below the final surface of the land (or at least two metres if the well is within 15 km of urban development or where there is a special farming practice, such as deep tillage, drainage works, or peat lands). It is then capped with a steel plate that is designed to prevent build-up of pressure, while still blocking access to the casing at the surface. This surface abandonment must be completed within a year of the down-hole abandonment operations.⁵ Directive 020 also sets out specific requirements for different types of well and different regions of the province.

Oilsands evaluation wells and test hole wells are drilled only for core samples and are not intended to be *completed*. For these wells, downhole abandonment must be completed within 30 days after drilling has finished or prior to rig release. Surface abandonment must be completed immediately after downhole operations.

The AER's Directive 079 requires a permanent 5 m *setback* on abandoned wells, to prevent anyone building on or near an abandoned well.⁶ This is aligned with the Municipal Government Act Subdivision and Development Regulation, which stipulates that developers and property *owners* who apply for a subdivision or development permit must identify the location of abandoned wells when applying for subdivision. Directive 079 exempts shallow wells of less than 150 m, and in some circumstances exempts or reduces the setback for other wells such as *oilsands* evaluation wells. If the AER and the licensee determine that a setback isn't required, the applicant for subdivision can obtain a letter from the AER to support the decision by the municipal approving authority to grant an exemption.⁷

⁴ AER, Directive 020, section 1.4.

⁵ AER, Directive 020, section 8.

⁶ AER, Directive 079: Surface Development in Proximity to Abandoned Wells (2014).

⁷ AER, Directive 079, 5.

9.2 Reclamation of well sites

Alberta and Parks has an online, searchable Environmental Site Assessment Repository (ESAR) where you can find documentation on site assessments and reclamation certificates.⁸ Additionally, the Environmental Law Centre provides a search service for enforcement records under the Environmental Enhancement and Protection Act and the Water Act.⁹

9.2.1 The reclamation process

The purpose of the reclamation process is to return the land to *equivalent land capability*, i.e. “the ability of the land to support various land uses after conservation and reclamation is similar to the ability that existed prior to an activity being conducted on the land, but that the individual land uses will not necessarily be identical.”¹⁰ Once a well has been shut down and surface abandonment has been completed according to the AER requirements, the land can be reclaimed and a reclamation certificate issued.

It is estimated that there were over 50,000 abandoned but unreclaimed wells in Alberta at the end of 2011.¹¹ There is a growing backlog of sites awaiting a reclamation certificate. Previously, reclamation inquiries were conducted for a well, industrial pipeline or *battery*, but reclamation inquiries are no longer required.¹² AER staff conduct random field audits for reclamation and *remediation* on approximately 15% of all certified sites.¹³ A company has to demonstrate that it has met all reclamation criteria

⁸ Alberta Environment and Parks, “Environmental Site Assessment Repository.”

www.esar.alberta.ca

⁹ Environmental Law Centre, “Search Services.” <http://elc.ab.ca/what-we-do/search-services/>

¹⁰ Alberta, Conservation and Reclamation Regulation, 115/1993. Alberta government acts and regulations are available at Alberta Queen’s Printer, “Laws Online/Catalogue.”

http://www.qp.alberta.ca/Laws_Online.cfm

¹¹ Jason Unger, *Reclaiming Tomorrow Today: Regulatory timing for abandonment and reclamation of well sites in Alberta* (Environmental Law Centre, 2013), 11.

elc.ab.ca/media/8918/Reclaiming_Tomorrow_Today.pdf

¹² Conservation and Reclamation Regulation, s 6(2)(a).

¹³ Government of Alberta, *Update Report on Alberta Environment and Sustainable Resource Development’s Upstream Oil and Gas Reclamation Certificate Program* (2014).

<http://aep.alberta.ca/lands-forests/land-industrial/programs-and-services/reclamation-and->

and show that the site was assessed to determine if contamination is present. If so, the company must also show the site was remediated to meet remediation requirements.

The Environmental Protection and Enhancement Act, Part 5, and the Conservation and Reclamation Regulation set the standards for conservation and reclamation. The regulations apply to *specified land*, which includes land that has been used for a well site, pipeline or battery. The AER's *Application Submission Requirements and Guidance for Reclamation Certificates for Well Sites and Associated Facilities*¹⁴ sets out the actual reclamation requirements that operators must meet to obtain a reclamation certificate on cultivated lands, forested lands, and native grasslands. The AER has released the Reclamation and Remediation (R&R) Fact Sheet¹⁵ to provide information and updates on the reclamation and remediation processes.

Before abandoning a well, the company is required to send a letter to you as the landowner/occupant, inviting your input and comments on the reclamation process.¹⁶ It is very important for you to be involved and inform the company of any issues relating to the reclamation, especially in light of any responsibilities you have as a landowner with regards to abandoned wells under the Municipal Government Act Subdivision and Development Regulation. You should point out any locations where you think the ground may be contaminated and ensure that any drilling waste disposal areas are properly reclaimed. The company is required to have documentation showing that it complied with the AER's Directive 050: Drilling Waste Management, which includes a written agreement with the owner (Section 1.5). The company can do this by submitting

remediation/upstream-oil-and-gas-reclamation-and-remediation-program/documents/UpstreamOilGasReclamationReport-Mar2014.pdf

¹⁴ AER, Specified Enactment Direction 002: Application Submission Requirements and Guidance for Reclamation Certificates for Well Sites and Associated Facilities (2016).

<https://www.aer.ca/rules-and-regulations/specified-enactment-direction>; Additionally, see Alberta Environment and Parks, "Wellsite Reclamation Certificate Application Process: 2010 Reclamation Criteria." <http://aep.alberta.ca/lands-forests/land-industrial/programs-and-services/reclamation-and-remediation/upstream-oil-and-gas-reclamation-and-remediation-program/wellsite-reclamation-certificate-application-process.aspx>

¹⁵ AER, *Reclamation and Remediation Fact sheet* (2014). EnerFAQs and Fact Sheets are available at AER, "EnerFAQs (Q&As)" <http://www.aer.ca/about-aer/enerfaqs>

¹⁶ Alberta Environment and Parks, *Sample Abandonment Letter for Wellsites*, C&R IL/00-1. Conservation and Reclamation Information Letters are available at Alberta Environment and Parks, "Information Centre."

<https://extranet.gov.ab.ca/env/infocentre/info/listing.asp?page=4&subcategoryId=50>

the Drilling Waste Notification Form required under Directive 050 (Section 21.3) or by meeting other criteria set out by AER.¹⁷ If a company is unable to show that drilling waste was handled in the approved manner, it must carry out a Phase 2 Environmental Site Assessment (see below).

To find more information on an application in your area, you can search the Public Notice of Application database on the AER website.¹⁸ To access the documents related to an application you can search the Integrated Application Registry on the AER website.¹⁹ Information on abandonments and reclamations is only accessible to companies.

In addition, you should tell the company if you wish to keep the access road, so that it is not reclaimed, but this detail may have to be worked out as a condition of the surface agreement (Section 2.3). In order for a road to remain after reclamation it must be built to grade, which may not be the case if it was built as a temporary access road.²⁰ If a site had natural vegetation before the well was drilled, you can request that reseeding or replanting be done with native plants, rather than with cultivated varieties such as crested wheat grass and timothy. Section B.3.3 provides contacts for more information.

Before a company applies for a reclamation certificate, it must carry out a Phase 1 Environmental Site Assessment (ESA).²¹ The Phase 1 ESA is meant to gather enough information to determine the likelihood and probable locations for contamination and to decide whether further assessment is needed. This includes a review of the company's file, the AER spills database and historical aerial photographs. A company representative must visit the site, take photographs and write a report that describes the site, including any pits or facilities that remain, evidence of surface spills, vegetation

¹⁷ AER, *Assessing Drilling Waste Disposal Areas: Compliance Options for Reclamation Certification* (2014), Compliance Option 2.

<https://www.aer.ca/documents/liability/AssessingDrillingDisposaAreas.pdf>

¹⁸ AER, "Public Notice of Application." [http://search.aer.ca/pnoa-en/search/theme/pnoa?fq\[\]=feed_str:all&sort=recent](http://search.aer.ca/pnoa-en/search/theme/pnoa?fq[]=feed_str:all&sort=recent)

¹⁹ AER, "Integrated Application Registry." https://dds.aer.ca/iar_query/FindApplications.aspx

²⁰ Alberta Transportation is responsible for approving permanent access roads.

²¹ Alberta Environment and Sustainable Resource Development, *A Guide to Remediation Certificates for Upstream Oil & Gas Sites* (2012).

<https://extranet.gov.ab.ca/env/infocentre/info/library/8719.pdf>

and land use. They must also conduct and report on an interview with a past or present operator and/or you as the landowner.²²

If the Phase 1 assessment finds that there may be contamination on the site, or that there is insufficient information to determine the likelihood of contamination at a site, the operator must carry out a Phase 2 environmental site assessment.²³ Also, if they do not have information on the contents of the drilling waste or location of the drilling waste disposal area, they must conduct a Phase 2 environmental site assessment (unless the drilling waste qualifies for an exemption).²⁴ A Phase 2 ESA means taking samples of soil and groundwater and identifying any areas of the site that do not meet AER's remediation guidelines. Since January 2008, professional sign off is required for Phase 1 and Phase 2 ESAs and all land remediation and reclamation work. The company is required to carry out remediation and take more samples to show that the remediation objectives have been achieved.

The land has to be returned to equivalent land capability. Since relatively few sites will be audited by the AER, it is important for the landowner to check the site for

- the condition of the landscape (drainage problems, evidence of erosion or unstable slopes, gravel, rocks or debris that needs removing, problems with vegetation or bare areas)
- the condition of the soil (soil depth and quality, any soil compaction)
- the vegetation (species composition and growth performance)
- weeds, invasive species, or diseases (such as clubroot).

Reclamation requirements are based on when the site was constructed. Sites are required to have at least 80% replacement of *topsoil*, contouring, and seeding or replanting of the surface. Every attempt must be made to use available surface soil in reclaiming a site. When complete, the land's productive capacity should be equivalent to what it was before the well site disturbance. For sites built prior to April 30, 1994, applications can be submitted as a *non-routine application* without meeting the soil depth requirement, but a management plan must be in place.²⁵

²² Alberta Environment, *Phase 1 Environmental Site Assessment Guideline for Upstream Oil and Gas Sites* (2001).

²³ Alberta Environment and Sustainable Resource Development, *Phase 2 Environmental Site Assessment Checklist*, (2013). <http://aep.alberta.ca/lands-forests/land-industrial/programs-and-services/documents/Phase2EnvironmentalSiteAssessChecklist.pdf>

²⁴ *Assessing Drilling Waste Disposal Areas*.

²⁵ "Wellsite Reclamation Certificate Application Process: 2010 Reclamation Criteria."

When the remediation and reclamation work is complete, the company can apply to the Alberta Energy Regulator for a reclamation certificate. The company must supply the landowner with a copy of all the documents they submit as part of their application for a reclamation certificate. In addition to the application, the documentation will include the Phase 1 Environmental Site Assessment and also the Phase 2 Environmental Site Assessment, where this was necessary. You should check that the assessment shows:

- when the well was drilled
- what happened to any *hydraulic fracturing* fluids and drilling waste
- whether there was a water well and where it was located
- the location of any sumps
- whether there was ever a spill of any kind on the surface
- if the land was sprayed to control weeds, and if so, when and with what.

The company should have information dating back to the beginning, even if the well changed hands several times. If these records for a Phase 1 assessment are incomplete or do not correspond with your recollection of events, you should ask the company to conduct a Phase 2 assessment before they apply for a certificate. A Phase 2 assessment should also be requested if there were any problems or leaks and the full remediation has not already been confirmed.

It is very important to visit the site. As the landowner, your personal inspection is most important, since formal reclamation inquiries (a mandatory inspection of a site before granting a reclamation certificate) are no longer held. If you are not completely satisfied with the reclamation work conducted by the company, you should contact the company and have them revisit the site with you. The company is expected to make every effort to engage with the landowner, to work to resolve any outstanding issues that they may have. However, if you still believe the work is unsatisfactory after the company has submitted their application for reclamation approval, immediately submit your *statement of concern* (see Section 11.1.3) before the deadline set out in the notice.

If a reclamation certificate was issued by the AER and you are still not satisfied with the way in which AER or the company handled your complaint and feel that the reclamation certificate should be cancelled, you can submit a complaint via the complaint form that the company should have supplied to you.²⁶ You can also contact AER,²⁷ where your complaint will be forwarded to the appropriate field centre. All complaints are

²⁶ Also available at AER, *Upstream Oil and Gas Facility Complaint Form*.

https://www.aer.ca/documents/liability/Complaint_form.pdf

²⁷ You can contact the AER on their 24-hour response line at 1-800-222-6514

investigated, and substantiated complaints may lead to the cancellation of the reclamation certificate. It may be prudent to submit a regulatory appeal (Section 11.2) at the same time as your complaint if you are uncertain that the issues will be resolved. You can always withdraw the appeal if all your concerns about the reclamation are dealt with before the appeal date.

Until the reclamation certificate is issued, the company must continue paying any annual fees to the landowner or occupant. If the company fails to pay, the Surface Rights Board can be asked to pay the compensation. A company may apply to pay less rent once the above-ground structures have been removed (Section 10.1).

All materials from the reclamation process should be cleared away before a certificate is granted. If a company wants to leave any materials or debris for collection after the reclamation certificate is given, you should *negotiate* another temporary lease agreement.

The AER will conduct audits for only a small sample of the surface reclamation and/or remediation on sites issued a reclamation or *remediation certificate*. These are conducted randomly, or targeted based on risk. An audit of a reclaimed site will include a site visit to conduct a visual inspection to determine if reclamation criteria have been met. If the site is audited for remediation, the inspector may conduct intrusive soil sampling and lab analysis on top of the visual inspection. If the audit results indicate that the site does not meet AER's reclamation criteria or remediation requirements, the certificate may be cancelled. Additionally, you can contact the AER if you believe a company's reclamation activities aren't sufficient. You can find more information about a specific audit on the AER's Reclamation Certificate Application Tool.²⁸

Even when a reclamation certificate has been issued, the company remains responsible for some time. At the time of writing, a company is responsible for 25 years for surface reclamation issues such as vegetation, soil texture, drainage etc; and it has a lifetime liability for contamination.²⁹ If there is a problem with the regrowth of vegetation or the site of the sump sinks, you should notify the company and ask them to rectify it. The AER (Section A.2) should also be notified at this time. Section A.2.6 gives more information on AER publications relating to land reclamation.

²⁸ AER, "Reclamation Certificate Application Tool."

https://www2.aer.ca/t/Production/views/022PublicRecCertsApplicationStatistics/RecCertApplicationStatistics?%3Aembed=y&%3AshowShareOptions=true&%3Adisplay_count=no

²⁹ AER, *Closure – Abandonment, Reclamation, and Remediation Fact sheet* (2014).

Suspension of wells: When a company has suspended operations at a well site but has not yet abandoned it, its requirements are set by Directive 013: Suspension Requirements for Wells. The 2016 draft Directive 013 has some changes to the suspension deadlines as well as a few changes to the testing and plugging requirements.

9.2.2 Questions to ask regarding reclamation of wells and facilities

It is important to get answers to the following questions to ensure that there is no contamination left on your land. You could be held liable if you fail to tell a prospective purchaser of any known contamination.³⁰

Have you been notified by a company about its intent to abandon and reclaim a well?

They should contact you before they start any reclamation work.

Have you told the company of any areas that need special attention during the reclamation process?

You should check that they locate old sumps and other areas that might need special attention.

How much topsoil will be replaced?

The percentage required will depend on when the well was drilled.

How does the company propose to verify that the surface is fully restored to equivalent capability?

One growing season may not be enough to verify that the site is fully reclaimed.

Have you visually checked that the work has been conducted to your satisfaction?

You should ensure that reclamation is complete and there is no contamination on your land.

³⁰ Environmental Law Centre, *Get the Real Dirt: Contaminated Real Estate and Law in Alberta*, (2000). <http://elc.ab.ca/publications/>

After discussions, has the company failed to rectify any problems with the reclamation that you identify?

If so, notify the AER, using the Upstream Oil and Gas Facility Complaint Form that the company is required to give you.

Has the company conducted gas migration testing?

AER requires gas migration testing to be conducted on all wells that do not have a surface casing vent assembly. The AER recommends that all wells be tested for gas migration prior to abandonment.³¹

Has the company given you a copy of the documents that they submit to the government when applying for a reclamation certificate?

You should check that you agree with the information on the reclamation application and ask for a Phase 2 assessment if there are gaps in the company's documentation or if it does not agree with your recollection of events.

9.3 Reclamation of other sites

While the above section has focused on oil and gas well sites, similar provisions apply to all oil production sites, batteries and other facilities and pipelines. All these activities take place on specified land, which is covered by the Conservation and Reclamation Regulations. More information is provided in Reclamation Criteria for Wellsites and Associated Facilities.³²

Other specific requirements for the conservation and reclamation of oil production sites are set out in the Oil and Gas Conservation Rules.³³

9.3.1 Pipeline abandonment

When a pipeline is no longer used it must be abandoned according to the regulations and left in a safe condition³⁴ and it may be abandoned in place or completely removed. The Pipeline Act and Pipeline Regulation (Section C.2.3) outlines the requirement for

³¹ AER, Directive 020, Section 7.

³² "Wellsite Reclamation Certificate Application Process: 2010 Reclamation Criteria."

³³ Alberta, Oil and Gas Conservation Rules, 151/1971.

³⁴ Alberta, Pipeline Regulations, 91/2005. s 82 (1).

the abandonment of the physical pipelines used for gathering and transmission,³⁵ and the pipeline *right-of-way* must be reclaimed to AER's standards. Land use is the most important factor to consider in determining whether a pipeline section should be abandoned in place or removed. The possibility that the long-term structural deterioration of a pipeline abandoned in place may cause some ground subsidence should also be considered. These and many other factors are evaluated in the Pipeline Abandonment Scoping Study commissioned by the National Energy Board.³⁶

Section 60 of the Pipeline Regulation and Directive 056 requires a company to notify the AER when it has abandoned a pipeline. The company must first notify the landowners/occupants affected by the proposed removal or abandonment. If you object to removal or abandonment or are concerned about ownership or liability for the pipeline after it has been abandoned in place, you should tell the AER. The company may prefer to abandon the pipeline in place, which may reduce additional disturbance to the land and reduce more extensive reclamation work.

The Pipeline Act states that, even though a company is permitted to abandon a pipeline, it remains liable for other operations that may need to be carried out.³⁷ However, you should ensure that the right-of-way will be properly monitored and any problems associated with the abandonment remediated. When carrying out the abandonment activities, the company should give prior written notice to the landowner and must compensate the landowner for direct expenses and any resulting damage to land, crop or livestock.

Once the pipeline itself has been abandoned, the surface right-of-way may need reclamation. The AER is responsible for ensuring the proper reclamation of a right-of-way, including the specified land associated with the pipeline.

In the past there have been problems with the reclamation of pipelines operated by companies that are no longer in business, but pipelines are now covered by the Orphan Well Association (Section 9.4).

³⁵ AER, Directive 056: Energy Development Applications and Schedules (2014), sections 6.9.6 and 6.9.7.

³⁶ Det Norske Veritas, *Pipeline Abandonment Scoping Study*, prepared for the National Energy Board (2010). <https://www.neb-one.gc.ca/prtcptn/pplnbndnmnt/pplnbndnmntscpngstd.pdf>

³⁷ Alberta, Pipeline Act, RSA 2000, c P-15, s 25.

9.3.2 Questions to ask regarding pipeline reclamation

It is advisable to get answers to the following questions regarding any pipeline reclamation taking place on your land.

Have you been notified by a company about its intent to abandon or remove a pipeline?

They should contact you before they start any reclamation work.

Will the pipeline be left in the ground or removed?

Abandonment in place will result in less disturbance, but you should inform the company if you have good reasons to request the pipeline be removed. Operators are not typically required to remove the pipeline at reclamation.

Do you have any concerns about the pipeline abandonment?

If so, try to resolve them with the company and, if they cannot be resolved, inform the AER.

Have you any concerns about the reclamation of the pipeline right-of-way?

If so, inform AER.

9.4 Inactive wells, orphan wells and pipelines

Every year, some wells are cased-hole abandoned because a company may no longer find it economic to produce oil or gas, but may not wish to abandon and reclaim a well in case economic conditions change or technology improves to the point where productivity can increase.

As of July 2014, there were approximately 80,000 inactive wells in Alberta, of which 37,000 failed to meet the periodic inspection, pressure testing and maintenance standards outlined in the AER's Directive 013.³⁸

The AER introduced the inactive well compliance program (IWCP) in 2014 to address the growing number of inactive wells in Alberta. Starting April 1, 2015, companies are

³⁸ Barry Robinson, "The Inactive Well Compliance Program: Alberta's latest attempt to bring the inactive well program under control," *Ecojustice* (2014).

required to bring 20% of their inactive wells into compliance every year. This means the wells should either be reactivated or suspended as per Directive 013: Suspension Requirements for Wells or be abandoned as per Directive 020: Well Abandonment.

Between April 2014 and March 2015, the number of new orphan wells increased significantly — from 162 wells to 705. This was primarily due to an increase in corporate insolvencies combined with updates that the AER made to the liability management system in 2013 and 2014, and the procedural changes made by the AER in 2012 to speed up the designation of orphans.”³⁹

The Orphan Fund was created in the early 2000s to properly abandon and reclaim orphan wells, pipelines, and certain facilities (including flare pits and drilling sumps) and their associated sites, which do not have a legally liable party to deal with the abandonment and reclamation (such as when a company declares bankruptcy). The Orphan Fund is administered by the Orphan Well Association (Section B.2.9) and is a joint industry–government initiative financed by a levy on industry and other AER fees, so there is no cost to the landowner or occupant.

A company is required to pay you, as the landowner, annual compensation for the surface lease, even if a well is not operating. If you are no longer receiving annual compensation you should contact the Surface Rights Board (Section 10.3).

To avoid new orphan wells in the future, the AER has a Licensee Liability Rating Program,⁴⁰ which assesses a company’s assets and liabilities and requires a security deposit from those companies who might be at risk of having insufficient assets to pay for the correct abandonment and reclamation of their wells and facilities.

A company may try to sell off wells that are no longer very productive to smaller companies with lower operating costs, in a process known as “offloading”. In some cases the company goes out of business and its wells become “orphaned.” However, the AER will examine how the transfer of a well licence will affect both companies’ liability management rating. The AER can also designate companies to the Orphan Well program if in the AER’s opinion a company is insolvent or not financially viable but is still active on a corporate registry.

³⁹ Orphan Well Association, *2014/15 Annual Report* (2015), 25. <http://www.orphanwell.ca/OWA2014-15AnnRptFinal.pdf>

⁴⁰ Alberta, Directive 006: Licensee Liability Rating (LLR) Program and Licence Transfer Process, (2016)

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