Volatile commodity prices in 2020 led to the bankruptcy of many oil and gas producers. While some analysts expect oil and gas prices to rise during 2021, the US Energy Information Administration’s 2021 annual outlook advises that a return to 2019 levels of US energy consumption will take years.[2]

The low price environment of 2020 was especially troubling for shale drillers, many of whom require more than $45 per barrel to break even.[3] Even with higher forecasted oil prices in 2021, these prices may not increase enough to allow shale producers to repay creditors based on losses incurred during 2020.[4] Moreover, natural gas prices during the past months became depressed too.[5]

With this price uncertainty, operators will look to avoid significant costs, and plugging and abandoning wells can be a way to avoid such costs.

Although plugging and abandoning requirements apply in any cost environments, a discussion of these rules may be helpful for current operators and those who may soon become operators through distressed sales or foreclosures.
Non-compliance with these rules can subject operators to fines, seizures, and limitations on their operations.[6]

To be sure, plugging and abandoning rules are distinct from provisions in oil and gas leases that govern shut-in and temporarily abandoned wells, although all may involve non-production. But while restrictions on shut-in wells and ceased production are generally lease-specific, plugging and abandoning rules apply regardless.[7] Those considering shutting in their wells or ceasing production are encouraged to become familiar with plugging and abandoning rules, as this may allow them to avoid becoming inadvertently subject to plugging and abandoning penalties despite continued compliance with the terms of the lease.

In previous articles, we outlined the plugging and abandoning requirements of Texas, California, and North Dakota. This article follows the same outline as those to discuss plugging and reclaiming requirements of non-injection oil and gas wells and well sites in Colorado. As with the previous articles, this article also examines ties between plugging and reclamation rules and the bankruptcy process. In addition, we address methods for buyers to account for these rules in their asset sale agreements.

Governing body and overview

The Colorado Oil & Gas Conservation Commission oversees plugging, abandoning, and reclamation operations.[8] In addition to Title 34, Article 60 of the Colorado Revised Statutes, the Commission’s Series 100-1200 Rules (collectively, Commission rules) are the primary sources for plugging and abandonment requirements.[9] However, local government regulations may be more protective or stricter than state requirements, and the Commission rules do not supersede local government regulations.[10]

Plugging and abandoning a well broadly means to cement the well, remove its associated production facilities, abandon its flowlines, and remediate and reclaim the wells site.[11]

Generally, an operator of a well will be required to plug and abandon a well if the Commission, after a hearing, determines that the well is no longer used or useful or that plugging and abandoning is reasonable and necessary to protect or minimize adverse impacts to public health, safety, welfare, the environment, or wildlife resources.[12] Otherwise, statutory timing for plugging and abandoning a well largely depends on how the well is classified.[13]

Wells that must be plugged and abandoned and who does this

Which wells are subject to mandatory plug and abandonment requirements? All wells are subject to plugging and abandoning requirements, but, based on the well’s classification, operators may have no choice on when to perform these operations.[14] Although this article focuses on requirements for shut-in and temporarily abandoned wells, wells may also be classified in other ways such as active, inactive, orphaned, suspended operation, or waiting on completion.[15]

The difference between a temporarily abandoned well and shut-in well is whether the well is capable of production by opening valves, activating existing equipment or supplying a power source.[16] A shut-in well satisfies these characteristics, while a temporarily abandoned well does not.[17] The distinction affects the timing for when a mechanical integrity test must be performed, and accordingly can affect when the well may be required to be plugged, abandoned and reclamation completed.[18]

Who is responsible? The operator is responsible for plugging, abandoning, and reclaiming wells, but a “responsible party” may also be required by the Commission to perform mitigation or be sued for damages.[19] An operator is any person who exercises the right to control the conduct of oil and gas operations.[20] A responsible party means any person who conducts oil and gas operations in a manner that contravenes applicable provisions of Title 34 of the Colorado Revised Statutes, or any rule, regulation, or order of the Commission, or permit that threatens to cause, or actually causes, a significant adverse environmental impact to any air, water, soil, or biological resource.[21] Accordingly, even though operatorship may be transferred, this does not mean that a successor operator becomes solely responsible for any possible mitigation related to the previous operator’s non-compliance with Commission rules. Instead, each responsible party is liable for a proportionate share of any costs but will not be held jointly and severally liable for such costs.[22]

The new operator must also submit proper financial assurances and operator registration forms.[23] Still, even if the operator begins operations without meeting these requirements, it may not escape liability, as this successor operator...
Operator’s responsibilities

Commission rules on plugging and abandoning wells and reclaiming drill sites generally break into four categories: (1) duties of operators with shut-in or temporarily abandoned wells; (2) methods for plugging; (3) methods for reclaiming; and (4) timing and form requirements. Even if the Director grants a variance from certain Commission rules, these categories remain relevant.

**Operator’s duties.** Apart from the sweeping requirement to plug, abandon and reclaim when required, operators of shut-in and temporarily abandoned wells must observe other duties, such as (a) maintaining well integrity and running mechanical integrity tests;[25] (b) maintaining financial assurances for their wells;[26] (c) closing temporarily abandoned wells to the atmosphere and updating the Director on how they were closed;[27] (d) updating the Director on the operator’s plans for future operations;[28] (e) preserving records;[29] (f) maintaining monthly production reports;[30] (g) managing waste;[31] (h) completing interim reclamation responsibilities;[32] and (i) reporting any discovered releases or spills.[33] These obligations are separate from contractual covenants and common law duties.

**Methods for plugging.** The process for plugging and abandoning may be split into two phases: planning and execution.

**Planning.** Planning to commence plugging operations involves identifying the (1) proposed depths of mechanical plugs and casing cuts; (2) proposed depth and volumes of cement plugs; (3) the amount, size, and depth of casing and junk to be left in the well; (4) the volume, weight, and type of fluid to be left in the wellbore between the cement or mechanical plugs; and (5) the nature and qualities of any other materials to be used.[34]

Before abandoning the well, the operator must file, and the Director must approve, a Form 6 – Notice of Intent to Abandon, which among other information, includes the information described in (1)-(5) from the paragraph above.[35] If this Form 6 is approved, the approval lasts for six months.[36] Additionally, the Director may require the operator to perform other acts that the Director determines to be necessary and reasonable for ensuring compliance with the Commission’s rules or that will minimize adverse impacts to public health, safety, welfare, the environment, and wildlife resources.[37]

**Execution.** A well must be plugged so that oil, gas, water, or other substances are confined to the formation in which they originally occurred.[38] Broadly, this involves (1) ensuring that any cement plug, placed by an approved method, is a minimum of 100 feet long and extends at least 100 feet above each zone to be isolated;[39] (2) using water spacers ahead of and behind balanced plug cement slurry;[40] (3) filling intervals between plugs with fluids of sufficient density;[41] (4) not placing substances other than those normally used in plugging operations in the well;[42] and (5) plugging or sealing the casing and all open annuli from a depth of 50 feet to the surface of the ground or bottom of the cellar in such a way that this will not interfere with soil cultivation or other surface use.[43]

Additionally, (1) whether or not a below-grade or an above-grade marker is used, the marker must note the well’s legal location, name, and API Number;[44] (2) during plugging operations, no surface casing may be pulled from the well unless the Director approves it;[45] (3) waste must be managed according to Commission rules;[46] (4) pits must be properly closed;[47] and (5) flowlines, crude oil transfer lines, and other facilities must be addressed according to Commission rules.[48] Within 30 days after abandonment, the operator must submit to the Director a Form 6, Well Abandonment Report – Subsequent Report of Abandonment, accompanied by a plugging verification report submitted from each person or contractor who actually set the plugs.[49] The Director will approve the form or identify deficiencies for the operator to correct and may require, among other additional requirements, surface or subsurface monitoring programs if a subsurface or surface release occurred or may occur.[50]

**Methods for reclaiming.** Final reclamation operations require operators to restore the land as nearly as practicable to pre-drilling condition.[51] These efforts involve removing electric equipment; grading the land; removing pipeline risers and meter sheds; restoring access roads; replacing soil; backfilling pits, mouse and rat holes; managing waste, including E&P waste; and mitigating, removing, or reducing contamination to the soil and groundwater, among other requirements.[52] These operations are in addition to interim reclamation operations.[53]

Operators must notify the Surface Owner at least 30 days before final reclamation operations are planned to commence.[54] The surface owner and operator may enter a Surface Owner Variance Request (SOVR) for topsoil protection and reclamation, and the Director’s acceptance of the SOVR may exempt the operator from certain reclamation
requirements. Whether or not an SOVR exists, operators still must submit a Sundry Notice Form 4 on which the operator describes (1) its final reclamation procedures; (2) any changes in the landowner’s designated final land use; and (3) any mitigation measures associated with the final reclamation to be performed by the operator. Lacking an SOVR, an operator’s final reclamation efforts and timing are affected by whether the land is crop or non-crop land. In either case, all debris, non-essential equipment, abandoned gathering line risers, flowline risers, and surface equipment must be removed within three months of plugging.

The Director will conduct a final reclamation inspection even if the surface owner and operator have an SOVR. Reclamation on crop land for well sites and access roads is complete when the operator has followed Commission rules for reclamation as observed over two growing seasons and there is no significant unrestored subsidence. Reclamation on non-crop land for well sites and access roads is complete when the operator has followed Commission rules for reclamation, and disturbed areas have been either either built upon, compacted, covered, paved, or otherwise stabilized in a way that minimizes erosion or vegetation is established to reflect at least 80% of pre-disturbance coverage. Reclamation includes remediating the soil and groundwater to concentrations established by the Commission or completing an approved workplan.

Final reclamation of all disturbed land, as opposed to that of only the well site and access roads, is complete when all activities on the ground have been completed and all disturbed areas are either built upon, compacted, covered, paved, or otherwise stabilized in a way that minimizes erosion, or a uniform vegetative cover is established.

Reclamation work on crop land must be completed within 3 months on crop land and 12 months on non-crop land after plugging a well, although an extension may be granted. After satisfying plugging, abandoning, and reclamation requirements, the operator’s financial assurances may be released.

**Timing.** When temporarily abandoned and shut-in wells must be plugged and abandoned can depend on whether and when they pass a mechanical integrity test, although ultimately wells must also be plugged and abandoned when they are no longer used or useful or otherwise subject to a Commission order to be plugged and abandoned.

A well that may be deemed “temporarily abandoned” if it (1) has all its downhole completed intervals plugged above the highest perforation in a way that prevents the well from producing without removing a plug or (2) is unable to produce without additional equipment. Within 30 days of when a well becomes temporarily abandoned, a mechanical integrity test must be performed on the well. If a well passes this test, the well may be temporarily abandoned for not more than six months, provided the hole is cased or left in a manner that prevents the migration of oil, gas, water, or other substance from the formation or horizon in which it originally occurred. If a well fails this test, however, the operator must repair or plug and abandon the well within six months of the date of the test. Still, an operator may request temporary abandonment status for longer than six months by explaining the reason for such extension and providing plans for future operations.

Shut-in wells are those that are capable of producing by opening valves, activating existing equipment or supplying a power source. Mechanical integrity tests on these wells must be performed within two years of the date they become shut-in. If a well passes this test, mechanical integrity tests must be performed on the well on a five year interval, but if a well fails this test, the operator must repair or plug and abandon the well within six months of the date of the test, assuming the test is run within two years.

Despite a temporarily abandoned or shut-in well passing this mechanical integrity test, the Commission may still require an operator to plug and abandon the well if the Director determines the well is no longer used or useful or that plugging and abandoning is reasonable and necessary to protect or minimize adverse impacts to public health, safety, welfare, the environment, or wildlife resources.

**Forms.** Many forms are required during plugging, abandoning, and reclamation operations. Missing the deadlines to submit these forms may result in violations and fines. For example, a Form 42 Field Operations Notice – Plugging Operations must be filed at least 48 hours before mobilizing to plug a well, a Form 42, Field Operations Notice – Abandonment of Flowlines must be filed with the Commission before undertaking and after completing the abandonment of on-location Flowlines, a Form 42, Field Operations Notice – Notice of Mechanical Integrity Test must be filed 10 days in advance of conducting a mechanical integrity test, and a Sundry Notice, Form 4, must be filed with the Commission within 30 days of equipment being removed from a well so as to render it temporarily abandoned.
Given the Commission’s interest in monitoring plugging and abandoning operations to ensure adverse impacts are minimized, operators are encouraged to check with the Commission on whether a given activity requires written notice. Even if a specific form to disclose specific activities does not seem to exist, the Commission allows the operator to request approval from or provide notice to the Director on a Form 4, Sundry Notice.[78] Additionally, operators may request a variance to any of the Commission’s rules by making the appropriate showing, but this submission does not ensure the variance will be granted.[79]

Economic and environmental consequence of non-compliance

**Economic costs.** It is possible that a violation of the regulations surrounding plugging and abandoning or remediation operations might be resolved without a penalty, but identified deficiencies can still be costly in themselves.[80] Still, the Commission may also (1) bring suit to recover costs it spent in correcting the operator’s non-compliance [81]; (2) impose up to $15,000 a day in fines while the violation persists[82]; (3) confiscate and sell any abandoned equipment at the non-compliant well site[83]; (4) issue a cease-and-desist order halting the operator’s operations [84]; or (5) suspend granting the operator new permits until the Commission is satisfied that each of the violations are brought into compliance and fines paid.[85] Besides the Commission, any person who may be damaged by the operator’s failure to properly plug and abandon the well or reclaim the land may bring suit to recover damages.[86] The operator’s conduct outside the state can also lead the Director to increase the level of financial assurance it requires.[87]

**Environmental costs.** Unplugged or poorly plugged wells may affect groundwater, methane emissions, and the area around them.[88] Groundwater becomes contaminated because oil, gas, or salty water can leak into freshwater aquifers.[89] Unplugged wells may leak methane; methane is a gas that is linked to climate warming.[90] Further, unplugged wells affect the area around them when oil, gas, drilling mud, or salty water rises in the well and spills onto the ground.[91]

Bankruptcy/lender and potential buyer considerations

Private actions for damages caused by an operator's failure to follow the Commission rules are allowed.[92] Non-compliance may create additional unsecured creditors of the operator or lead to increased indemnities demanded by the buyer.

Lenders are not in the business of operating wells. Instead, lenders looking to foreclose on their debtor's well assets may consider finding a contract operator before foreclosing, if they seek to continue to operate the wells, or finding a buyer that the Commission will recognize as an operator.[93] Otherwise, the lender risks becoming a “responsible party” potentially liable for plugging and abandoning the debtor's well, reclaiming the land, or becoming subject to other responsibilities charged to operators, such as those listed above.[94] Any costs associated with these operations may need to be factored into decisions the lender makes with respect to its strategy to realize upon the debtor’s assets after a default.

Buyers encounter similar risks. Even where a buyer will contract with an operator, buyers are encouraged to ensure their agreements clearly divide (if applicable) and define which party is responsible for which costs, and whether recognition by the Commission as an operator is a condition precedent or post-closing obligation of an asset sale. This is true even in a chapter 11 bankruptcy asset sale. Although such sales usually are “free and clear” of all liens, claims and encumbrances,[95] a buyer of the debtor-operator’s assets may not be able to avoid being saddled with certain environmental liabilities, notwithstanding the “free and clear” language of a bankruptcy court sale order. Therefore, the asset purchase agreement should specify which costs will be the responsibility of the buyer and which will be addressed by the debtor and/or its insurer. In addition, the bankruptcy sale order should include language specifying that the buyer is not the debtor’s successor, with factual findings supporting that conclusion.

Once a well is properly plugged and abandoned and the wellsite reclaimed, the operator ceases to be an “operator” for that well.[96] The Commission may then release the operator's financial assurances covering that well, if possible.[97] These assurances may range between $10,000 and $100,000 depending on the scale of the operator's operations and the financial assurance structure the operator chose.[98] The return of these assurances may give an operator additional assets, or, in the case of a buyer, may be desired to be factored into purchase price adjustments.

If the Commission plugs and abandons an operator's well or reclaims the land because the operator did not satisfactorily do so, the Commission may seek reimbursement by seizing and selling the operator's abandoned well-site equipment for scrap.[99] Even though the Commission is subordinate to prior liens, lenders are encouraged to consider this scenario.
and potential buyers are encouraged to cover such a possibility in their purchase agreements through indemnity provisions (in a non-bankruptcy sale) or purchase price adjustments.[100]

An operator repeatedly failing to comply with Commission rules may have its operations in Colorado severely limited because the Commission may deny granting the operator new drilling permits.[101] This could affect its ability to have a chapter 11 plan of reorganization approved. It might also lead the Commission to more closely monitor subsequent operators, which could affect an operator’s ability to market its assets.

Conclusion

Non-compliance with Colorado’s plugging and abandonment rules can subject the operator to significant fines, affect its bankruptcy proceedings, and impact the sale of its assets. Accordingly, it is critical to know when and how to comply with Commission rules. Plugging requirements begin to have increasing relevance when plugging operations are undertaken or when the well becomes shut-in or temporarily abandoned. Once operators have determined that these regulations apply, they can organize compliance efforts into a planning and execution phase. Within each of these phases, operators are urged to carefully observe notice, method, and form requirements. Careful compliance brings many benefits: it protects operators from financial liability; it benefits the public health; and it prevents any negative publicity that could arise in the wake of violations. Accordingly, operators are encouraged to become familiar with plugging and abandonment requirements that may be applicable now or in the future.


[28] Id.


[35] Id.

[36] Id.

[37] Id.


[39] Id. The operator has the option to place cement in the hole by (1) dump bailer; (2) pumping a balanced cement plug through tubing or drill pipe; (3) pumping and plugging; or (4) an equivalent method approved by the Director before plugging. Id.

[40] Id.

[41] Id.

[42] Id. Additional requirements may also be found in Commission Rule 434 including how Produced Fluids must be circulated, when wellbore fluids must be placed in a static condition, and mud and cement slurry requirements.

[43] Id.

[44] Id. For below-grade markers, the top of the casing must be fitted with a screw cap or steel plate welded in place with a weep hole. Id. For above-grade markets, the top of the casing must be fitted with a screw cap or a steel plate welded in place with a weep hole, and a permanent monument no less than four inches in diameter nor less than 10 feet long, of which four feet must be above the ground level and the remainder embedded in cement or welded to the surface casing. Id.


Whether an SVOR is accepted also depends on the Commission’s satisfaction that compliance with Commission Rules 1002, 1003, and 1004 is not necessary to protect public health, safety, and welfare.

Also noting that financial assurances are released when a successor-in-interest files sufficient financial assurances.


Colo. Stat. Rev. § 30-60-124 (2021) (noting that each “responsible party shall be liable only for a proportionate share of any costs imposed under this section and shall not be held jointly and severally liable for such costs.”)


[89] Id.


Allison and Mandler supra note 88.


See Colo. Code Regs. § 404-709, 1004 (2021),


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