The Application of Oil & Gas Implied Covenants
in Shale Plays: Old Meets New

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Oil and gas lessees generally are bound by several implied obligations that are called "implied covenants." This presentation will provide a basic background regarding the law of implied covenants, then discusses how implied covenants disputes might arise in new or unique ways in the development of shale plays, as well as how lessees might protect themselves from implied covenant disputes.

A. History of and justifications for implied covenants.

For more than 100 years, courts have held that a mineral lessee's duties include various implied covenants that are not expressly stated in a lease. Perhaps the earliest case to recognize the existence of implied covenants was Stoddard v. Emery,\(^1\) an 1889 case in which the Pennsylvania Supreme Court stated in dicta that oil and gas lessees are bound by an implied covenant to reasonably develop the leased premises. Three years later, the Pennsylvania Supreme Court again stated that lessees are bound by an implied covenant of reasonable development,\(^2\) and just a few years later, the same

\(^1\) 18 A. 339 (Pa. 1889). Some prominent commentators have described Stoddard's dicta as being the origin of implied covenants. See e.g., 5 Patrick H. Martin and Bruce A. Kramer, *Williams and Meyers: Oil & Gas Law* § 802 (1998).

\(^2\) See McKnight v. Manufacturers Natural Gas Co., 23 A. 164, 166 (Pa. 1892).
court held that lessees are bound by an implied covenant to protect against damage.\textsuperscript{3}

Other jurisdictions, including Ohio, soon followed suit in recognizing implied covenants.\textsuperscript{4}

Although public policy occasionally is cited as a justification for implied covenants,\textsuperscript{5} the two most commonly stated justifications are that implied covenants fill gaps in contracts and promote fairness.\textsuperscript{6} The need to fill gaps and ensure fairness is particularly important with respect to oil and gas leases. Because of the complexities and uncertainties involved in oil and gas exploration and development, leases seldom state how many wells the lessee will drill, when and where he will drill, or to what depth. Similarly, leases usually do not specify what a lessee will do to protect the leased premises against drainage or to market any product that is found. All these things are left to the discretion of the lessee,\textsuperscript{7} even though these aspects of the lessee's performance are

\textsuperscript{3} See Kempner v. Lemon, 35 A. 109 (Pa. 1896).

\textsuperscript{4} See, e.g., Harris v. Ohio Oil Co., 48 N.E. 502 (Ohio 1897) (recognizing implied covenants to reasonably develop the premises and to protect against drainage); see also Brewster v. Lanyon Zinc Co., 140 F. 801 (8th Cir. 1905).


\textsuperscript{7} See Keith B. Hall, *Implied Covenants Claims Under Article 122*, 57th Min. L. Inst. 172, 173-4 (2010); Patrick H. Martin, *A Modern Look at Implied Covenants to Explore*, (continued on next page)
critical to the lessor. Noting the lessor's dependence on the lessee's discretion, one early commentator stated, "It is doubtful if any other character of legal instrument can be found in which one of the parties has so much potentially at stake with so little express contractual protection."\(^8\)

This leads courts to impose implied covenants on lessees. Although various implied covenants are recognized, a common theme is the standard of conduct to which a lessee is held -- the reasonably prudent operator standard -- that requires the lessee to act as a reasonably prudent operator, taking into consideration both its interests and those of the lessor.\(^9\)

**B. The most commonly recognized implied covenants.**

Six of the most commonly recognized implied duties are the implied covenants to: (1) drill an initial test well; (2) reasonably develop the leased premises; (3) conduct further exploration of the leased premises; (4) protect the leased premises against drainage; (5) diligently market any oil or gas that is discovered in paying

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*Develop, and Market Under Mineral Leases,* 27 S.W. Legal Fdn. Oil and Gas Inst. 177, 194 (1976); *Brewster v. Lanyon Zinc Co.*, 140 F. 801, 810 (8th Cir. 1905) (noting difficulty in defining how lessee will develop the property).

8 Walker, *The Nature of Property Interests Created by an Oil and Gas Lease in Texas*, 11 Tex. L. Rev. 399 (1933).

quantities; and (6) reasonably restore the surface of the leased premises after the lease is over.¹⁰

1. To test

Early in the history of the oil and gas industry, courts recognized that a lessee has an implied duty to promptly drill at least one test well on the leased premises.¹¹ Because lessees often were not prepared to promptly drill, they began drafting their leases to include delay rental clauses.¹² These clauses provided that, if the lessee had not begun drilling by the first anniversary of the granting of the lease, the lessee could pay "delay rentals" to defer or delay its obligation to drill a test well.¹³ Today, almost every lease either contains a delay rental clause unless the lease is a paid-up lease. Accordingly, the implied covenant to test is rarely litigated.

¹⁰ See, e.g., John S. Lowe, Oil and Gas Law in a Nutshell (4th ed. 2003). Lowe states that common implied covenants include the duties to test, develop, explore, protect, and market. See id. at 313. He also mentions an implied covenant of diligent and prudent operation, though he notes that it largely overlaps other implied covenants. See id. at 348.


¹¹ See Lowe, supra note 10 at 202-3.


¹³ See, e.g., Kachelmacher v. Laird, 110 N.E. 933, 935 (Ohio 1915).
2. **Reasonably develop**

This implied covenant only applies *after* oil or gas is found in paying quantities.\(^{14}\) This covenant requires the lessee to drill as many wells as are reasonably necessary to develop the *proven* reservoir.\(^{15}\) Because a reasonably prudent operator would not drill an unprofitable well merely to drain a proven reservoir more quickly, this implied covenant does not require a lessee to drill wells that likely would be unprofitable. Further, it does not require the lessee to drill exploratory wells in unproven areas. The implied covenant of reasonable development, which probably was the first implied covenant to be recognized by courts, appears to be universally recognized.

3. **Further explore**

Like the implied covenant of reasonable development, the implied covenant of further exploration only applies *after* oil or gas is discovered in paying quantities.\(^{16}\) But unlike the covenant of reasonable development, which addresses a lessee's obligation to develop a *proven* formation, the implied covenant of further exploration applies to *unproven* areas. This implied covenant requires a lessee to conduct further exploration of unproven areas to the extent that a reasonably prudent operator would do so.\(^{17}\)

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\(^{14}\) *Caddo Oil & Mining Co. v. Producers Oil Co.*, 64 So. 684, 690 (La. 1914).

\(^{15}\) *McKnight v. Manufacturers Natural Gas Co.*, 23 A. 164, 166 (Pa. 1892); *Harris v. Ohio Oil Co.*, 48 N.E. 502, 505 (Ohio 1897); *Jennings v. Southern Carbon Co.*, 80 S.E. 368, 369 (W. Va. 1913).

\(^{16}\) See Martin & Kramer, *supra* note 1 at § 841.

\(^{17}\) See id.
Only a few courts have expressly recognized an implied covenant of further exploration by name,\textsuperscript{18} but that does mean this implied covenant is of little importance. In addition to the courts that have expressly recognized this covenant, a few other courts have reached similar results by stating that a lessee might be deemed to have abandoned its lease rights as to a portion of the leased premises that remains unexplored for an extended period.\textsuperscript{19} Further, several Louisiana decisions, in applying what they described as a duty to reasonably develop the leased premises, arguably have imposed a duty to explore unproven areas, though there remain some ambiguities in those cases.\textsuperscript{20} Moreover, the implied covenant of further exploration is widely discussed in commentary.\textsuperscript{21}

4. **Protect against drainage**

The implied covenant to protect against drainage requires the lessee to take reasonable action to protect the leased premises against drainage from wells on nearby

\textsuperscript{18} One of the decisions expressly recognizing such a duty is *Gillette v. Pepper Tank Co.*, 694 P. 2d 369 (Colo. App. 1984).


\textsuperscript{20} *See Hall, supra*, note 7 at 183-6 (noting that some people assert that Louisiana courts recognize a duty of further exploration, and that several decisions can be interpreted that way, but that there are certain ambiguities in this purported "line" of cases: one of the cases involved a lease with a clause that expressly requiring further exploration; two others made their statements about a duty to test in dicta; and, in one of the cases, there was testimony from which the court could have concluded that the area where no drilling had occurred was within a proven formation).

\textsuperscript{21} *See, e.g., Martin & Kramer, supra* note 1 at § 841; *see also supra* note 10.
properties.\textsuperscript{22} The traditional way to protect the leased premises against drainage is to drill offset wells, though some cases have recognized that a lessee may be able to protect against drainage by seeking pooling or unitization.\textsuperscript{23} Because a lessee only is required to take reasonable steps to protect against drainage, and it would not be reasonable to drill a well that likely will lose money, a lessee does not have a duty to drill an offset well if the well probably would be unprofitable.\textsuperscript{24} The implied covenant to protect against drainage is widely recognized.

5. \textbf{Diligently market}

The implied covenant to market requires a lessee to diligently seek purchasers at a reasonable price for any oil or gas that is found in paying quantities.\textsuperscript{25} Disputes regarding this implied covenant most often involve natural gas, rather than oil.\textsuperscript{26} Sometimes the disputes concern whether the lessee has been diligent in finding a buyer or in making connections to a pipeline so that the gas can be transported to market. Other


\textsuperscript{24} See Garza Energy, 268 S.W.3d at 17 n.42.

\textsuperscript{25} See Lowe, \textit{supra} note 10, at 338-9.

\textsuperscript{26} See Martin \& Kramer, \textit{supra} note 1, § 853.
times, implied covenant to market disputes concern whether the covenant requires the lessee to absorb all post-production treatment and compression costs when the lease is allegedly ambiguous about allocation of these expenses.\textsuperscript{27}

6. **Restore surface**

The implied covenant to restore the surface requires the lessee to restore the leased premises to a condition reasonably approaching its original condition after the lease terminates, or perhaps after operations terminate in the area at issue.\textsuperscript{28} The implied duty of surface restoration is not widely recognized in jurisprudence, but some courts have recognized it\textsuperscript{29} and it frequently is discussed in commentary.\textsuperscript{30}

C. **Remedies and defense that exist outside the lease**

1. **Precluding implied covenants by expressly addressing subject**

 Courts will not impose an implied duties that are expressly negated by the lease itself.\textsuperscript{31} Further, if a lease expressly imposes a particular type of duty, courts generally will not allow an implied covenant to supplement that express duty, so as to

\textsuperscript{27} See Kilmer v. Elexco Land Services, Inc., 990 A.2d 1147, 1152 (Pa. 2010) (lessor's argument fails); Rogers v. Westerman Farm Co., 29 P.3d 887, 897 (Colo. 2001) (lessor's argument prevails).

\textsuperscript{28} See Patrick H. Martin, Implied Covenants in Oil and Gas Leases - Past, Present & Future, 33 Washburn L.J. 640, 658 (1994).


\textsuperscript{30} See supra note 10.

\textsuperscript{31} Kachelmacher v. Laird, 110 N.E. 933, 935 (Ohio 1915).
require the lessee to do even more, even if the lease does not state expressly that the lessee need not do more.\footnote[32]{See Aye v. Philadelphia Co., 44 A. 555, 556 (Pa. 1888) ("where the parties have expressly agreed on what shall be done, there is no room for the implication of anything not so stipulated for"); Harris v. Ohio Oil Co., 48 N.E. 502, 505 (Ohio 1897) ("The implied covenant arises only when the lease is silent on the subject."); Landin/Weber Company LLC v. Brea Oil Company, Inc., 11 Cal Rptr. 3d 768 (Cal. App. 2004); Schroeder v. Terra Energy, Ltd., 565 N.W. 2d 887 (Mich. Ct. App. 1997).}

2. Demand and opportunity to cure

Some jurisdictions require a lessor to give the lessee notice of an alleged breach of an implied covenant, and a reasonable opportunity to cure, before bringing suit for such a breach.\footnote[33]{See, e.g., La. Min. Code arts. 135, 136 (La. Rev. Stats. 31:135, :136).} An even larger number of jurisdictions require the lessor to give the lessee notice and a reasonable opportunity to cure before the remedy of lease cancellation is available.\footnote[34]{See Hayes v. Equitable Energy Resources Co., 226 F.3d 560, 569 (6th Cir. 2001) (attacking Kentucky law); La. Rev. Stat. 31:136. In contrast to courts in several other states, Arkansas courts do not make notice and an opportunity to cure a prerequisite to a suit for lease cancellation, see Davis v. Ross production Co., 910 S.W. 2d 209 (Ark. 1995), the Arkansas Supreme Court has stated that a conditional order of cancellation, giving the lessee an opportunity to cure and thereby avoid cancellation is preferred whenever the lessor has not given the lessee pre-suit notice and an opportunity to cure. See Roberson Enterprises, Inc. v. Miller Land and Lumber Co., 700 S.W. 2d 57, 58 (Ark. 1985).} It is noteworthy that a letter to the lessee giving notice that the lease allegedly has terminated, or demanding release of a lease, based on the breach of an implied covenant does not satisfy the requirement that a lessor give notice \textit{and} a reasonable opportunity to cure.\footnote[35]{See Ridl v. EP Operating Ltd., 553 N.W. 2d 784, 788 (N.D. 1996).} Indeed, some courts have held that a lessee's duty to
perform is suspended pending resolution of the lessor's allegation that the lease has terminated.\textsuperscript{36}

3. Remedies available

The potential remedies available for breach of an implied covenant include:

(1) monetary damages;\textsuperscript{37} (2) conditional cancellation;\textsuperscript{38} (3) partial cancellation;\textsuperscript{39} (4) complete cancellation;\textsuperscript{40} and (5) specific performance.\textsuperscript{41}


\textsuperscript{37} Harris v. Ohio Oil Co., 48 N.E. 502, 506 (Ohio, 1897). Damages awards are not common in implied covenants cases because it often is difficult to prove the amount of damages. See Jennings v. Southern Carbon Co., 80 S.E. 368, 372 (W. Va. 1913).

\textsuperscript{38} When a court awards conditional cancellation, it orders that the lease will be cancelled (in whole or part) unless the lessee renders a particular performance within a stated time. The Arkansas Supreme Court has stated that, at least in cases in which the lessor did not provide the lessee with pre-suit notice and an opportunity to cure, that conditional cancellation generally is preferable to outright cancellation. See Roberson Enters. v. Miller Land & Lumber Co., 700 S.W. 2d 57, 58 (Ark. 1985).

\textsuperscript{39} Often, if a lessee has one or more productive wells, but it has not reasonably developed or adequately explored the remainder of the leased premises, a court may allow the lessee to retain the lease as to some modest acreage around each productive well, while ordering lease cancellation as to the remainder of the leased premises.

\textsuperscript{40} See Jennings v. Southern Carbon Co., 80 S.E. 368, 372 (W. Va. 1913). Complete cancellation is considered a harsh remedy, but it sometimes is granted. For a case noting that cancellation is a harsh remedy, see St. Luke's United Methodist Church v. CNG Development Co., 663 S.E. 639, 644 (W. Va. 2008).

\textsuperscript{41} Courts generally are unwilling to order specific performance unless the performance required is can be commanded in a straightforward order, such as an order to deliver property. Given that a lessee's duties under implied covenants involve more complex obligations, such as an obligation to drill a well, an order of specific performance rarely will be appropriate as a form of remedy for breach of an implied covenant. See La. Rev. Stat. 31:134 cmt.
D. How implied covenant disputes might arise in unique ways in shale plays

1. Failure to use hydraulic fracturing or horizontal drilling

Shale plays did not become economically feasible until relatively recently, with advances in two technologies—hydraulic fracturing and horizontal drilling—and those technologies continue to evolve. If an operator fails to use these technologies to develop a shale formation found within the leased premises the lessor could argue that the operator has breached an implied covenant of reasonable development or further exploration. There is some case law in which courts have held that an operator's failure to use appropriate production techniques constituted a breach of the duty of reasonable development.

In *Waseco Chemical and Supply Co. v. Bayou State Oil Corp.*, the lessee was operating a well in an aging field, where production rates were declining. But other operators in the area had substantially increased rates of production by engaging in fireflood operations. The appellate court held that the lessee's failure to conduct a fireflooding operation constituted a breach of the implied covenant of reasonable development.

"Fireflood" has been defined as "an enhanced oil recovery process in which the subsurface oil is set afire. The heat makes the oil more fluid and the gases generated by the fire drives the oil to producing wells as air is pumped down injection wells." See Norman J. Hyne, Nontechnical Guide to Petroleum Geology, Exploration, Drilling, and Production at p. 479 (2nd ed. 2001). The technique also sometimes is called "in-situ (continued on next page)
In *Wadkins v. Wilson Oil Co.*, a lease covered 40 acres. The lessee was operating five wells that each were producing oil from the same chalk formation. But other operators in the area were obtaining much higher rates of production by drilling new wells into the chalk formation and acidizing the wells. The lessor demanded that the lessee drill and acidize new wells, but the lessee refused. The Louisiana Supreme Court affirmed the lower court's order terminating the lease, stating that the lessee had breached the implied covenant of reasonable development by failing to utilize a "modern process which had proved so successful on other leased properties adjoining and in the vicinity of the property in question."  

2. **Inability to keep up with drilling obligations after land rush**

   In some of the shale plays, companies have raced to get as much land under lease as possible. Although this also happens with newly-discovered conventional fields, some of the lease rushes have been particularly intense in some of the shale plays. Further, many of the leases have relatively short primary terms, perhaps three years.


44 6 So. 2d 720 (La. 1942).

45 "Acidizing" has been defined as "a well stimulation technique used primarily on limestone reservoirs. Acid is poured or pumped down the well to dissolve the limestone and increase fluid flow." *See supra* note 42 at 452. "Well stimulation" is "an engineering method used to increase the permeability of a reservoir around the wellbore to increase production. It includes acidizing and hydraulic fracturing." *See id.* at 546.

46 *See* 6 So. 2d at 668-9.
Thus, lessees must keep a busy pace of drilling just to maintain their leases by drilling a well before the end of the primary term. And every time one of those initial wells establishes production in paying quantities, that triggers application of the implied covenant of reasonable development. Thus, a lessee may have the implied obligation under some leases (where a first well already has been drilled) to drill development wells at the same time the lessee may be busy drilling wells to maintain other leases beyond the primary term. This could lead to situations in which a lessee allegedly has not kept pace with its obligation to drill sufficient wells to reasonably develop a proven formation.

3. **Failure to be ready to market**

Operators are drilling a large number of wells in a relatively short time, and in some shale plays, drillers are almost never drilling a dry hole. And, in some cases, operators are drilling in areas that have not had much drilling in recent years. For these reasons, some operators may find that they have drilled a well capable of producing natural gas in paying quantities, but there is not a pipeline, or there is not sufficient pipeline capacity to transport all the gas that can be produced. If lessees cannot get the gas to market, a lessor might allege a breach of the implied covenant to market.

Further, given that operators in some shale plays are virtually never drilling a dry hole, some lessors might attempt to argue that a lessee should have begun working to find a market, build gathering systems, construct treatment facilities and ensure pipeline connections even before the first well is drilled on the leased premises.
4. Failure to promptly protect against drainage from cross-property fracturing

Because shale formations are not very permeable, a well on neighboring property is not likely to drain much oil or gas from the leased premises, assuming fractures do not cross property boundaries. But if fractures do cross property lines, substantial drainage could occur. Further, because production-decline curves for fractured wells in a shale formation are steeper than for a conventional well, the importance of protecting against drainage might be particularly acute. And, if the lessor sues the lessee for breach of an implied covenant to protect against drainage a flamboyant lawyer for the lessor likely could use to his advantage the fact that fractures, fracking water, and proppants are "invading" the lessor's property to facilitate the drainage.

5. Alleged abuse of surface rights

A fifth way that implied covenants disputes could arise in unique ways is with regard to surface restoration issues. In some ways, surface restoration issues in shale plays probably are not much different from shale plays than for conventional operations.

But the area occupied by a well pad for a shale gas well often will be larger than for a conventional well. Also, some shale plays are being developed in areas where that has not been significant oil and gas activity for several generations. In such areas,

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47 The Texas Supreme Court has held that a lessee does not commit a subterranean trespass when it causes fractures to cross property lines without permission. See *Coastal Oil & Gas Corp. v. Garza Energy Turst Corp.*, 268 S.W.3d 1 (Tex. 2008)
local citizens may be less accustomed to the trade-offs that come with the oil and gas industry, and more likely to seek relief in court, than are people in areas that have seen extensive oil and gas activity for several generations.

Also water usage for fracking can be significant. If an operator drains a pond's level for fracking fluid, a lessor might assert that the operator has a duty to restore the water level. Lessors might argue that the duty to restore the surface can be extended to subsurface issues. If the operator uses groundwater for fracking and the level of an aquifer is reduced, that could result in the aquifer's level dropping below the depth that a lessor's water well reaches. The lessor might argue that the lessee is obligated to drill a deeper water well for the lessor, or supply the lessor with water. A lessor might even argue that that the lessee must somehow restore the aquifer level, or that the lessee must avoid using the aquifer in the first place.

A lessor who is concerned about contamination might argue that the lessee has a duty to remove all fracking water from the fractured formation, or that the lessee must avoid using certain types of fracturing additives. As public concern about fracturing grows, lessors are likely to become creative in the judicial attacks they make against the process.

E. **Protecting a lessee against implied covenant disputes.**

Many states require a lessor to give the lessee notice of its alleged breach of an implied covenant, as well as a reasonable opportunity to cure the breach, before the lessor can bring suit for an alleged breach of an implied covenant. Although that jurisprudential requirement exists in many states, lessors should consider drafting their
leases to expressly state that the lessor cannot bring suit for an alleged breach of an implied covenant unless the lessee fails to initiate a cure of the alleged breach within some stated period (say 120 days) of written notice or fails to diligently proceed with the cure after starting it. Such a clause also should provide that a notice that anticipates a breach that has not yet occurred is not effective notice.

A contractually-mandated notice and cure period has obvious benefits for the lessee in a jurisdiction that does not impose a jurisprudential notice and cure requirement as a prerequisite to suit. Even in states that do have a jurisprudentially-imposed notice and cure requirement, including an express clause in the lease could be beneficial for the lessee. For example, the lessee may be able to negotiate for the lease to include a notice an cure provision that gives the lessee more time to cure than the lessee would have under a jurisprudentially-required "reasonable" time to cure.

The second, and probably most important way that lessees can protect themselves from implied covenant claims is to take advantage of the fact that courts will not impose a particular type of implied duty if the lease expressly defines the scope of the lessee's duty. A prospective lessee could try to negotiate for a lease to state that there is no implied covenants, or that particular implied covenants will not apply, but some prospective lessors would balk at such a clause. Further, courts might think a complete elimination of implied covenants is overreaching, prompting the courts to look for a basis not to enforce the provision that purports to exclude implied covenants altogether. Short of attempting to exclude a duty of reasonable development altogether, there are a number of ways to draft leases to provide protection against each implied covenant by specifying
and limiting the scope of each implied covenant. Possible means to protect against implied covenants to test, develop, explore, protect, market, and restore are discussed below.

1. **Protecting against the implied covenant to test**

   Most lessees already protect themselves against the implied covenant to drill an initial test well. They do so by including delay rental clauses in their leases, or by including clauses expressly stating that the leases are paid-up leases.

   Indeed, the use of delay rental clauses and paid-up leases is so common that parties sometimes fall into a pattern that all leases are either delay-rental leases or paid-up leases. This sometimes leads to a potential mistake in drafting what parties intend will be a paid-up lease. Sometimes parties intending to enter a paid-up lease will not include a clause expressly stating that the lease is a paid-up lease, and instead will rely on the absence of a delay-rental clause to cause the lease to be a paid-up lease. This can work so long as everyone assumes that a lease must be a delay-rental lease or a paid-up lease, but this ignores the possibility that a court could conclude that delay-rental clauses and provisions making a lease a paid-up lease are each ways to defer the duty to drill a test well, and that if a lease contains neither a delay rental clause or a clause stating the lease is a paid-up lease, then an implied covenant to drill a test well applies.

   If a lessee intends a lease to be a paid-up lease, the safer course is to draft the lease to expressly state that the lease is a paid-up lease because all delay rental payments are included in the initial payment being made to the lessor, and therefore that
the lease will be maintained throughout the primary term even in the absence of drilling or payment of further delay rentals.

2. Protecting against the implied covenant to reasonably develop

One way is to state that the ongoing drilling of a well will satisfy the duty of reasonable development for the period when drilling operations are ongoing, and for a reasonable period, not to be less than perhaps 180 days, after completion of the well. And after 180 days, the operator's duty will be no more than that of a reasonably prudent operator. That is, there is no presumption or requirement that a lessee begin drilling a new well after 180 days passes. This should protect a lessee against an argument that it should be drilling multiple wells simultaneously, or that it should start one well quickly after finishing another.

And if the lease has both a clause stating that the duty of reasonable development is satisfied for at least 180 days after completion of a well, and that the lessor must give the lessee at least 120 days after written demand in which to commence a cure, this should give the lessee a minimum of 300 days after completing one well before it must begin another well on the leased premises.

Third, the lessee should consider including in its lease a provision that a lease well will satisfy the duty of reasonable development for an area around the well of some stated, minimum size, which may vary depending upon whether the well is an oil well or gas well, and upon local geology. Such a provision would benefit the lessee by
defining a specific minimum acreage for which a well satisfies the duty of reasonable development.48

Fourth, a lessor could draft a lease to include a "deferred rental" clause that would be somewhat similar to a delay rental clause. The clause could first provide that a productive well will satisfy the duty of development for some stated amount of area. For area beyond that, the clause could give the operator the option to satisfy any implied duty of reasonable development either by drilling an additional well or by paying deferral rentals to defer that duty.

If a lessee included in its lease all these clauses discussed above, then after drilling the first productive well, a operator would have at least 300 days before it absolutely had to do something to satisfy the duty of reasonable development, and it would have more time than that unless the lessor gave written notice immediately after the passage of 180 days from completion of the prior well. And then, the lessee would have the option of satisfying a duty of reasonable development by either drilling or paying deferral rentals.

48 A lessee might worry that stating a specific number of days that is a minimum cure period, and stating a specific acreage that is a minimum area for which a productive well satisfies the duty to develop, might be used against the lessee. The lessee might fear that even if the lease is written to state clearly that these are minimums, a court might treat the stated numbers as a presumptive maximum amount of time allowed or acreage deemed to be reasonably developed. But the benefits of having guaranteed, minimum amounts of time allowed for a cure and acreage deemed reasonably developed should outweigh the risks, particularly if the lessee bargains for reasonably large minimums.
Another alternative is that a lease could provide that the operator will drill a particular number of wells within a given time, and that doing so will fully satisfy its duties of reasonable development and exploration. Most lessees probably will not want to make such a commitment, though leases occasionally contain such clauses.

3. **Protecting against the implied covenant of further exploration**

To protect against the implied covenant of further exploration, a lease should consider clauses that are similar to those which it would use to protect against the duty of reasonable development. For example, the lease should provide that the duty of further exploration is satisfied during the drilling of a well in an unproven area, and for at least some minimum period, say 180 days, after completion of such a well. Further, the lease should provide that the duty of further exploration is suspended during the drilling of a well in a *proven* formation, and for some period afterward. Although the duty of further exploration concerns drilling in unproven areas, an operator can make a good argument that, if it is in the process of drilling wells in proven areas, it should not simultaneously be required to drill wildcat or exploratory wells. And finally, just as a lessee could draft a deferral-rental clause for deferring the duty to drill development wells, an operator could draft a clause for deferring the duty to drill exploratory wells.

4. **Protecting against the implied covenant to protect**

To protect itself against the implied covenant to protect against drainage, the lessee should consider drafting the lease to state that the implied covenant to protect against drainage does not require to drill an offset well if the allegedly-draining well is more than some stated distance from the leased premises. The lessee should also
consider drafting the lease to expressly state that the implied duty to protect against drainage can be satisfied by unitization or diligent, good faith efforts to bring about unitization.

5. **Protecting against the implied covenant to diligently market**

The lessee should draft the lease to include a provision for shut-in royalties, and expressly providing that the lessee's payment of shut-in royalties will satisfy the duty to market as to the well for which shut-in payments are made.

In addition, if the lessee contemplates that the royalty on gas will be calculated after a deduction of post-production costs, the lease should expressly provide for that.

6. **Protecting against the implied covenant to restore the surface**

A lessee should attempt to expressly limit surface restoration duties to what it would do anyway. If there are certain things the lessee always does, such as removing storage tanks or pits, consider explicitly promising to do those things. The court might find that such a listing was meant to be a full statement of operator's restoration duties.

Also, in the granting clause, the lessee should be sure to specifically list thing the lessee might want to do, including hydraulic fracturing and using surface water or groundwater. Specifically providing for such use could give some protection. In Louisiana, one of the states with shale plays, the State Supreme Court has stated that,
when a operator is doing something that the lease expressly gives it the right to do, there is no duty to restore the surface in the absence of excessive or abusive use.⁴⁹

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