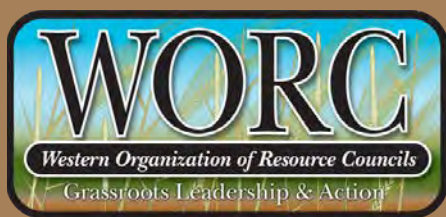


BLM OIL AND GAS BONDING RULES LEAVE LANDS A MESS AND TAXPAYERS RESPONSIBLE

Federal rules are weaker than even the most lenient state rules



ADEQUATE BONDS ARE AN AFFORDABLE COST OF DOING BUSINESS AND PROVIDE PROTECTION AGAINST DAMAGES TO PRIVATE, TRIBAL, AND PUBLIC LAND, AIR, WATER, AND HEALTH. OIL AND GAS REGULATORS CAN AND SHOULD REQUIRE ADEQUATE BONDS TO SHIELD TAXPAYERS FROM BEING STUCK WITH THE COST OF FIXING THESE PROBLEMS. ESTABLISHING A BOND SCHEDULE THAT MATCHES THE COST OF RECLAIMING EACH SPECIFIC WELL WILL ASSURE SUFFICIENT FUNDS FOR RECLAMATION.



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WHAT'S LEFT BEHIND WHEN OIL & GAS LEAVES?

- Rusting equipment littering working ranches and farms
- Unplugged wells slowly leaking gasses with no plan to monitor or repair them
- Failing well casings with the potential to leak and contaminate drinking water supplies
- Potentially billions in taxpayer-funded cleanup required, growing by the day
- Noxious weeds, contaminated soil, and soil erosion spreading

This is the future facing oil and gas producing regions if agencies do not address the growing crisis of orphaned oil and gas wells. Oil and gas producing regions across the country are facing reclamation crises. Expanded oil and gas development the past 25 years and the boom-and-bust nature of the industry have combined with outdated reclamation bonding policies to prime the keg for an explosion of bankrupt companies shifting their cleanup liabilities to the public.

Reclamation bonds are meant to provide financial assurance that cleanup will occur. Adequate bonds are an affordable cost of doing business and provide protection against damages to private, tribal, and public land, air, water, and health. Oil and gas regulators can and should require adequate bonds to shield taxpayers from being stuck with the cost of fixing these problems. Establishing a bond schedule that matches the cost of reclaiming each specific well will assure sufficient funds for reclamation.



An examination of the bonding rules in eleven Western states finds that rules vary from state to state and no state's rules fully protect against orphaned wells. The federal Bureau of Land Management's (BLM) rules are weaker than any state's. Reclamation bonds are intended to ensure that oil and gas companies reclaim wells completely and in a timely manner and taxpayers are not left picking up the cost of reclamation. But today's state and federal bonding requirements are dangerously below the full cost of repairing the damages caused by oil and gas drilling.

While both state and BLM bonding amounts need to be increased to reflect current reclamation costs, the federal government has further to go to protect our land and ensure that taxpayers are not liable. Antiquated bonding rules, disregard of high-risk idle wells, and lack of dedicated reclamation funding have created a perfect storm of growing liability. The number of orphaned wells will only continue to grow in the poor economic climate for shale oil and gas operations. Worst of all, orphaned wells pose a real danger to land, air, water, and public health.

HOW DOES OIL AND GAS BONDING WORK?

An operator applying for a permit to drill (APD) is required to submit proof of financial assurance for reclamation before the permit is approved. Typically this is a surety bond, for which an operator annually pays a third party guarantor between one and five percent of the total bond amount. Oil and gas regulators can collect on this financial assurance from the third party in the event the operator fails to complete reclamation. Theoretically, if the operator fails to reclaim the permitted well, the bond amount should completely cover the government's cost of reclamation.

However, unlike coal mining and many other industries also required to post reclamation bonds, oil and gas operators are allowed to post just "blanket bonds." A blanket bond covers multiple well sites and does not guarantee to pay the full cost of reclamation.¹

HOW MUCH ARE FEDERAL BONDS?

Under BLM's rules, operators have three options: they can post financial assurance for all federally managed wells in a particular lease, an entire state, or even the entire country. These blanket bonds typically cover all wells and associated infrastructure in the chosen area. The BLM's minimum amounts have not changed in the last 60 years.¹ BLM allows a \$10,000 blanket bond to cover all wells on an individual lease. An operator's \$25,000 bond will cover all leases, all wells and all operations in an entire state, or the operator can cover all leases, wells, and operations nationwide with a mere \$150,000 bond. Depending on the operator, these blanket bonds can cover multiple thousands of wells.

In 2018 the total value of bonds held by BLM for oil and gas operations was \$204 million, while the potential clean up liability for wells covered was thirty times that much -- about \$6.1 billion.^{2,3} While BLM regional offices are authorized to require bonds above these minimum amounts during adequacy reviews every five years, the agency failed to secure 84% of proposed bond increases in the fiscal years of 2016 and 2017. BLM data lists 93,363 active wells on federal lands in the West in FY 2018, so their potential liabilities are truly massive.

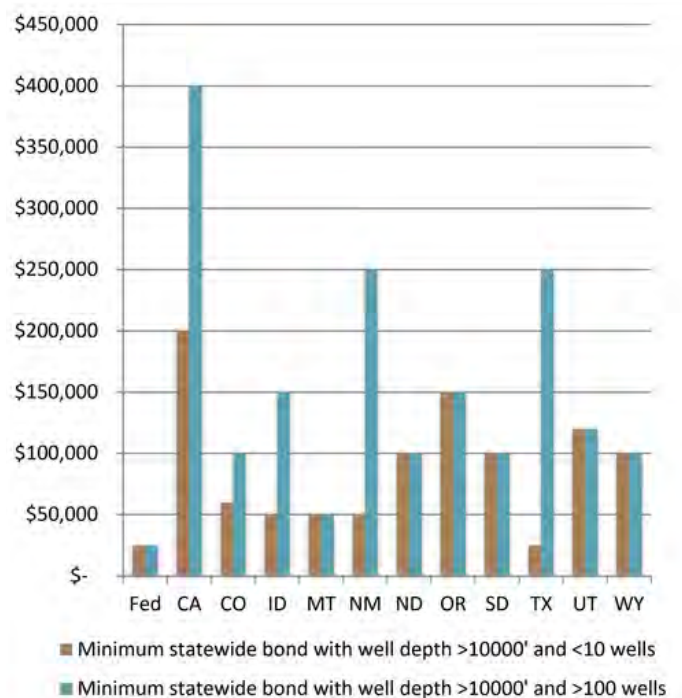
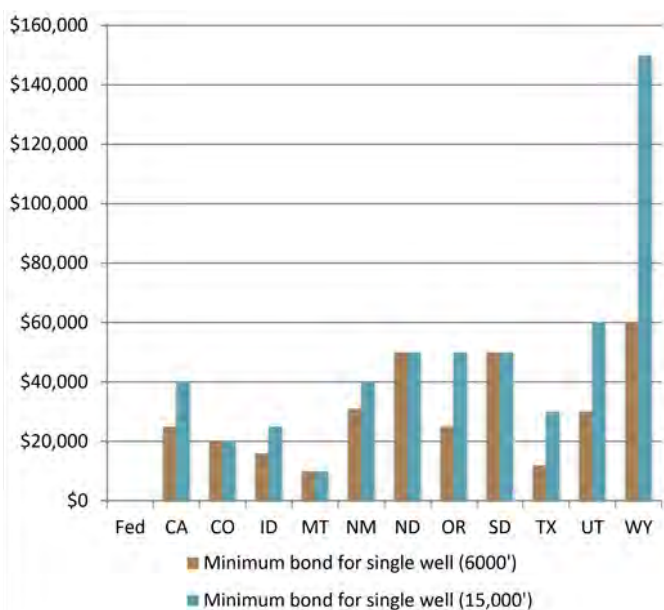
HOW DO FEDERAL BONDS DIFFER FROM STATE BONDS?

BLM is responsible for ensuring the reclamation of wells and operations on leased federal mineral estate, whether the surface is federal, reservation, or private land. States are responsible for the reclamation of operations dealing with state and private mineral estate.

Like BLM, no state requires bonding to accurately reflect the actual projected cost of reclamation. But every state in the West has higher minimum bond amounts than does the federal government. All of the states whose rules we examined contain the option to bond a single well at either a set amount or an amount tied to the well's depth, which is a primary determinant of final reclamation cost. Well depth encompasses both the vertical and horizontal components of the drilling profile. In addition, almost every state has a minimum statewide blanket bond amount twice as high as the BLM's \$25,000 statewide bond, and many are at least four times higher.

The charts below display several different scenarios for bond amounts in the states examined. In the first chart, the minimum possible single well bond amount is displayed at two different depths: 6,000 feet and 15,000 feet.

In the second chart, the minimum possible statewide blanket bond amount is displayed for two different numbers of wells on a single bond, assuming at least one well is deeper than 10,000 feet. The first set of data displays the minimum size of a bond covering fewer than 10 wells, while the second displays the minimum size for a bond covering more than 100 wells.



Several Western states take further steps to enforce industry's reclamation obligations and reduce state liability. These strategies include linking bond amounts to well depth and creating "tiers" of blanket bonds, with increased bond amounts for larger numbers of wells. New Mexico uses a tiered blanket bond ranging from a minimum of \$50,000 for fewer than 10 wells to \$250,000 for more than 100 wells.

Many states have further strengthened bond requirements in the last year. In August of 2019, North Dakota's chief regulator proposed rule changes which would scrutinize "Temporarily Abandoned" wells, a status which state regulators see as indicating lower profitability and higher risk of being orphaned. The new rules would also double bond amounts for commercial disposal wells (injection wells), a growing subset of wells. In response to 40 wells which were recently orphaned in South Dakota, state regulators proposed increasing bonds for shallow wells from \$10,000 to \$50,000 per well. Idle, or temporarily abandoned wells, are also being targeted by the proposed rule changes. Alaska has particularly expensive wells to reclaim due to their remoteness, prompting state regulators in 2019 to raise blanket bond amounts to between \$400,000 and \$30 million dollars.

WHY ARE IDLE WELLS A PROBLEM?

Many producing wells are periodically taken out of operation due to mechanical issues or market conditions. Regulators and legislators in many states have recognized that significant numbers of idle wells on a single lease for periods more than a year portend potential problems. Research has shown that wells classified "idle" are significantly more likely to later become orphaned.⁴ Wells that sit idle for several years may never see market conditions that justify renewed production. Almost all Western states require idle wells either to be tested for mechanical integrity, plugged, or bonded at a higher level after 1-2 years of non-production. Producers can 'game the system' by putting a well back into production for a short period and then idling it again. Despite these troubling facts, BLM does not consider wells to be idle until seven consecutive years of non-production, and does not require increased bonds, plugging, or testing for these high-risk wells.



WHAT IS THE ACTUAL COST OF RECLAMATION? WHAT FACTORS DO REGULATORS USE TO ESTIMATE RECLAMATION COSTS?

The cost to fully plug and reclaim a well site varies widely, with estimates from state regulators ranging between \$82,500 per well in Colorado to \$150,000 in North Dakota.^{5,6} While study of the factors influencing plugging cost is limited, Andersen and Coupal (2009) use data on the costs of plugging a sample of 225 wells in Wyoming to estimate an average cost of \$10.50 (\$12.80 USD in 2020) per foot of well depth.⁷ According to the federal Energy Information Administration, the average depth of a well in the United States has steadily been rising, from 4,166' in 1980 to 5,923' in 2008.⁸ As wells continue to get deeper, the cost of reclamation increases.⁹ A 2019 GAO analysis of recent BLM expenditures found that the average reclamation expenditure is \$20,000 for a low-cost well and \$145,000 for a high-cost well.¹⁰

RECLAMATION FUNDS

Reclamation funds are monies set aside specifically for the reclamation of oil and gas drilling operations when the bonds fall short. The money from reclamation funds can be used to plug wells, restore the surface and land surrounding wellpads, and fix roads and other infrastructure damaged in the operating process. These funds will become ever more important as the bonding crisis unfolds, because they will serve as an additional safety net when reclamation costs exceed the bonds that have been collected from oil and gas operators. Without site-specific bond amounts at the full cost of reclamation, there will continue to be costs to land managers beyond the available bonds. States have used several mechanisms to create or collect funds for reclamation but the most common is a marginal tax on oil and gas production. In recent reports, the federal Governmental Accountability Office (GAO) has repeatedly recommended the creation, or authority to create, such a fund for the BLM.

New Mexico, Wyoming, North Dakota, and Colorado all have a production fee or excise tax with rates below a fraction of a percent, amounting to pennies on the barrel. While their funds alone are proving to be inadequate to keep pace with the growing numbers of idle wells, the mechanism is a tested method of protecting taxpayers from bearing the cost of reclamation for sites which have inadequate bonds attached or pre-date bonding entirely.



RECOMMENDATIONS

The federal government should follow the lead of state regulators across the West and modernize their regulations to reduce the significant liability inadequate bonds pose to public lands, private landowners, taxpayers and the environment.

Adequate reclamation bonds are an affordable cost of doing business that should be required by the BLM. They would provide important protection against damages to private, tribal, and public land, air, water, and health, and ensure taxpayers will not be stuck with paying for reclamation of industry damages.

BLM can and should revise its reclamation bonding rules and practices to eliminate the growing liabilities posed by abandoned and orphan federal wells. If BLM fails to act, Congress should pass legislation that updates bonding requirements.

- BLM should end blanket bonding and require bonds based on the actual cost of reclamation of each well, similar to federal and state requirements for coal mines.
- Barring this, BLM should create a tiered bonding system which increases bond amounts as the number of wells increases, and as reclamation costs increase based on predictable factors, primarily well depth, location, and inflation.
- For wells that have not produced for 24 consecutive months, BLM should require repeated mechanical integrity testing and an increased bond, or require the well be plugged.
- Congress should establish an orphaned well fee and create a reclamation fund, either based on recent GAO suggestions or modeled on Wyoming's fee and fund.



¹ GAO. 2016. Financial Assurances for Reclamation: Federal Regulations and Policies for Selected Mining and Energy Development Activities. GAO-17-207R. Washington, D.C.

² GAO. 2019. Bureau of Land Management Should Address Risks from Insufficient Bonds to Reclaim Wells, GAO-19-615. Washington, DC. <https://www.gao.gov/assets/710/701450.pdf>.

³ ECONorthwest. 2018. Reclaiming Oil and Gas Wells on Federal Lands: Estimate of Costs. Eugene, OR. <http://westernpriorities.org/wp-content/uploads/2018/02/Bonding-Report.pdf>

⁴ Ho, J., et. al (2016) Plugging the Gaps in Inactive Well Policy. Retrieved from <https://media.rff.org/documents/RFF-Rpt-PluggingInactiveWells.pdf>

⁵ Quinton, S. (2018, July 9). Why 'Orphan' Oil and Gas Wells Are a Growing Problem for States. Retrieved from <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2018/07/09/why-orphan-oil-and-gas-wells-are-a-growing-problem-for-states>

⁶ Sisk, A. R. (2019, August 28). As abandoned oil wells climb, regulators consider ways to stop problem from worsening. Retrieved from <https://bismarcktribune.com/bakken/as-abandoned-oil-wells-climb-regulators-consider-ways-to-stop/>

⁷ Andersen, M.; Coupal, R. Economic issues and policies affecting reclamation in Wyoming's oil and gas industry. In National Meeting of the American Society of Mining and Reclamation, Billings, MT, May 30–June 5, 2009; DOI 10.21000/JASMR09010001.

⁸ U.S. Average Depth of Crude Oil, Natural Gas, and Dry Developmental Wells Drilled (Feet per Well). (n.d.). Retrieved March 3, 2020, from https://www.eia.gov/dnav/ng/hist/e_ertw0_xwdd_nus_fwa.htm

⁹ Joyce, S., Wirfs-Brock, J. (2015, Oct. 5). The Rising Cost of Cleaning Up After Oil And Gas. Inside Energy. Retrieved from: <http://insideenergy.org>

¹⁰ GAO. 2019. Bureau of Land Management Should Address Risks from Insufficient Bonds to Reclaim Wells, GAO-19-615. Washington, DC. <https://www.gao.gov/assets/710/701450.pdf>.

The Western Organization of Resource Councils (WORC) is a network of grassroots organizations that span seven of the Western states with more than 15,000 members. Many WORC members live on lands overlying and neighboring federal, tribal, state and privately owned oil and gas deposits, and experience numerous impacts due to federal oil and gas production. Headquartered in Billings, Montana, WORC also has offices in Colorado and Washington, D.C.

State	Bond Types Allowed	Bonding - Single Well	Bonding - Blanket	Idle Well Definition, Fee	Reclamation Funding Mechanism
National	surety bond, personal bond backed by certificate of deposit, cashiers check, certified check, negotiable Treasury securities, letter of credit(1)	N/A	Lease: \$10,000**(2) Statewide: \$25,000(3) Nationwide: \$150,000(4)	7 years of no activity, No additional fee(5)	Congressional appropriation to BLM budget(6)
California	indemnity bond, certificate of deposit, savings account, investment certificate(7)(8)	\$25,000 (<10,000') \$40,000 (>10,000')(9)	Statewide: \$200,000 (20-50 wells) \$400,000 (50-500 wells) \$2,000,000 (500-10,000 wells) \$3,000,000 (>10,000 wells)(10)	No activity for 24 months (11) Additional fee per well, increasing with age (12)	Annual operator fee and idle well fee(13)
Colorado	surety bond, guarantee of performance, general liability insurance, escrow account or sinking fund, letter of credit, certificate of deposit, lien(14)(15)(16)	\$10,000 (<3,000') \$20,000 (>3,000')(17)	Statewide: \$60,000 (<100 wells) \$100,000 (>100 wells)(18)	No activity for 12 months, or temporarily abandoned for 12 months(18) "Excess inactive wells" require individual well bonding of \$10,000 (<3,000') or \$20,000 (>3,000')(19)	Levy on production and penalty revenues, requires legislative appropriation(20)
Idaho	surety bond, cash bond, certificate of deposit (21)	\$10,000 + \$1/ft(22)	Statewide: \$50,000 (up to 10 wells) \$100,000 (11 to 30 wells) \$150,000 (over 30 wells)(23)	No activity for 24 months, No blanket bonding, \$10,000 + \$8/ft(24)	No dedicated funding source.
Montana	surety bond, letter of credit, certificate of deposit(25)	\$1,500 (<2,001') \$5,000 (>2,000', <3501') \$10,000 (>3501')(26)	Statewide: \$50,000 (if well is covered by a previous bond amount of \$10,000, must increase the bond to \$25,000) (27)(28)	No activity for 6 consecutive months(29), No additional bonding	Up to \$650,000 transferred every two years, from trust fund interest, max \$1,000,000(30)
New Mexico	irrevocable letter of credit, plugging insurance policy, cash bond, surety bond(31)	\$25,000 + \$1/ft(32)	Statewide: \$50,000 (<10 wells) \$75,000 (11-50 wells) \$125,000 (51-100 wells) \$250,000 (>100 wells)(33)	2 years in temporary abandonment status, \$25,000 + \$2/ft (1 well) \$150,000 (2-5 wells) \$300,000 (6-10 wells) \$500,000 (11-25 wells) \$1,000,000 (>25 wells)(34)	Severance tax on oil and gas production (.0019%)(35)
North Dakota	surety bond, cash, collateral bond, self-bond, cash, any alternative form of security approved by the commission(36)	\$50,000, wells <2,000' may be less if approved(37)	Statewide: \$100,000(38)	Non producing for 1 year, Blanket bonds must have less than 6 dry and unplugged, unreclaimed, or abandoned (idle) wells(39)	Fees, production tax, civil penalties(40)
Oregon	surety bond, other form of financial security(41)	\$25,000 (<10,000') \$50,000 (>10,000')(42)	Statewide: \$150,000 (possibly more, depending on wells)(43)	No activity for 30 consecutive days, No additional bonding required (44)	No dedicated funding source.
South Dakota	surety bond, financial instrument approved by the department(45)(46)	\$10,000 (<5,500') \$50,000 (>5,500')(47)(48)	Statewide: \$30,000 (<5,500') \$100,000 (>5,500')(49)(50)	Non-producing wells are placed in Temporary Abandonment, max 6 months(51). No additional bonding required.	No dedicated funding source, regular legislative appropriations(52)
Texas	individual performance bond, blanket performance bond, letter of credit, cash deposit(53)	\$2/ft depth(54)	Statewide: \$25,000 (<10 wells), \$50,000 (11-99 wells), \$250,000 (>100 wells)(55)	No activity for 12 months, After 6 add. months, operators must produce or plug. Extension is possible with either the lesser of the cost calculation for plugging all inactive wells or \$2,000,000(56)	Primarily operator fees(57), ~\$10 million per year
Utah	surety bond, collateral bond supported by: cash account, negotiable bonds, negotiable certificates of deposit, irrevocable letter of credit(58)	\$1,500 (<1,000') \$15,000 (1,000'-3,000') \$30,000 (3,000'-10,000') \$60,000 (>10,000')(59)	Statewide: \$15,000 (<1,000') \$120,000 (>1,000')(60)	Requires notice after 12 months shut-in, plugging after 5 years(61) No additional bonding required.	Tax on production and penalty revenues finance reclamation(62)
Wyoming	surety bond, cashier's check, certificate of deposit, letter of credit(63)	\$10/ft, chained to CPI(64)	Statewide: \$100,000(65)	Requires testing after 24 months non producing, extensions up to 2 years at a time(66) May require each idle well to be bonded as individual wells(67)	Statutory tax on production funds Commission and orphaned well program (.0008%)(68)

National:	(1) Code of Federal Regulations § 3104.1 (2) Code of Federal Regulations § 3104.2 **Individual Lease, BLM (3) Code of Federal Regulations § 3104.3 (a) (4) Code of Federal Regulations § 3104.3 (b) (5) Energy Policy Act of 2005 (6) GAO-19-615	North Dakota:	(36) North Dakota Century Code 38-08-04.1.d (37) North Dakota Administrative Code 43-02- 03-15.2 (38) North Dakota Administrative Code 43-02- 03-15.2 (39) North Dakota Administrative Code 43-02- 03-55.1 (40) North Dakota Century Code 38-08-04.5
California:	(7) California Public Resources Code Division 3, Chapter 1, Article 4.4 § 3270.4 (f) (8) California Code of Civil Procedure, Title 14, Chapter 2, Article 7, § 995.710 (9) California Public Resources Code Division 3, Chapter 1, Article 4 § 3204. (a) (10) California Public Resources Code Division 3, Chapter 1, Article 4, § 3205 (11) California Public Resources Code Division 2, Chapter 4, Article 3, § 1760 (12) California Public Resources Code Division 2, Chapter 4, Article 3 § (13) California Public Resources Code Division 3, Chapter 1, Article 4.3	Oregon:	(41) Oregon Administrative Rules 632-010-0205 (1) (42) Oregon Administrative Rules 632-010-0205 (1)(a) (43) Oregon Administrative Rules 632-010-0205 (1)(a) (44) Oregon Administrative Rules 632-010-0008 (71)
Colorado:	(14) Colorado Oil and Gas Conservation Act § 34-60-106 (13) (15) Colorado Oil and Gas Conservation Commission, Rules and Regulations, March 16 2016, Rule 100, Financial Assurance (16) Colorado Oil and Gas Conservation Commission, Rules and Regulations, March 16 2016, Rule 702 (17) Colorado Oil and Gas Conservation Commission, Rules and Regulations, March 16 2016, Rule 706.a (18) Colorado Oil and Gas Conservation Commission, Rules and Regulations, March 16 2016, Rule 706.b (19) Colorado Oil and Gas Conservation Commission, Rules and Regulations, March 16 2016, Rule 707.a (20) Colorado Revised Statutes 34-60-124	South Dakota:	(45) South Dakota Legislature, Codified Laws, Title 45, Chapter 9-15 (46) South Dakota Oil and Gas Conservation Administrative Rules 74:12:02:01.(5) (47) South Dakota Legislature, Codified Laws, Title 45, Chapter 9-15.(1) (48) South Dakota Legislature, Codified Laws, Title 45, Chapter 9-15.(2) (49) South Dakota Legislature, Codified Laws, Title 45, Chapter 9-15.(1) (50) South Dakota Legislature, Codified Laws, Title 45, Chapter 9-15.(2) (51) South Dakota Oil and Gas Conservation Administrative Rules 74:12:03:03. (52) South Dakota Legislature, Codified Laws, Title 45, Chapter 6-C.(43)
Idaho:	(21) Idaho Administrative Procedures Act 20.07.02, Subchapter C, 220.05. (22) Idaho Administrative Procedures Act 20.07.02, Subchapter C, 220.01. (23) Idaho Administrative Procedures Act 20.07.02, Subchapter C, 220.02. (24) Idaho Administrative Procedures Act 20.07.02, Subchapter C, 220.03.	Texas:	(53) Texas Administrative Code, Title 16, Part 1, Chapter 3 §3.78(d) (54) Texas Administrative Code, Title 16, Part 1, Chapter 3 §3.78(g)(1)(A) (55) Texas Administrative Code, Title 16, Part 1, Chapter 3 §3.78(g)(1)(B) (56) Texas Administrative Code, Title 16, Part 1, Chapter 3 §3.15(d) (57) Texas Natural Resources Code § 81.067.
Montana:	(25) Administrative Rules of Montana 36.22.1308 (6) (26) Administrative Rules of Montana 36.22.1308 (1)(a) (27) Administrative Rules of Montana 36.22.1308 (1)(b) (28) Administrative Rules of Montana 36.22.1308 (1)(c) (29) Administrative Rules of Montana 36.22.1240 (1) (30) Montana Code Annotated 82-11-161	Utah:	(58) Utah Administrative Code R649-3-1.10 (59) Utah Administrative Code R649-3-1.5 (60) Utah Administrative Code R649-3-1.6 (61) Utah Administrative Code R649-3-36 (62) Utah Code Ann. § 40-6-14.5
New Mexico:	(31) New Mexico Administrative Code 19.15.8.9.A (32) New Mexico Administrative Code 19.15.8.9.C.(1) (33) New Mexico Administrative Code 19.15.8.9.C.(2) (34) New Mexico Administrative Code 19.15.8.9.D (35) New Mexico Statutes Annotated § 70-2-38	Wyoming:	(63) Wyoming Oil and Gas Conservation Commission Rules and Regulations, Chapter 3, Section 4, Subsection c (64) Wyoming Oil and Gas Conservation Commission Rules and Regulations, Chapter 3, Section 4, Subsection b (A) (65) Wyoming Oil and Gas Conservation Commission Rules and Regulations, Chapter 3, Section 4, Subsection b (B) (66) Wyoming Oil and Gas Conservation Commission Rules and Regulations, Chapter 3, Section 4, Subsection b (ii) (67) Wyoming Oil and Gas Conservation Commission Rules and Regulations, Chapter 3, Section 16 (68) Wyoming Statutes Title 30. Mines and Minerals § 30-5-116.

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