Rebellion

ENERGY SOLUTIONS

PLUGGING OIL & GAS WELLS

ABATING METHANE

01 | *Rebellion Energy Solutions*

02 | *Eligibility*

It takes discipline to create something great for ourselves and for the larger voluntary carbon market. This means we only support projects that meet ICVCM guidance.

03 | *Measurement*

There is critical information to be gathered about each well. Knowing what to measure and how to do it safely and accurately requires distinct expertise and experience.

04 | *Quantification*

A measurement is only as valuable as the context within which it is analyzed. Our team leans into oil & gas industry standards to build certainty of future emissions.

05 | *Execution*

We take an above-and-beyond approach to operations with the intent of raising the bar for permanence and land restoration industry-wide. And then we prove it.

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ENERGY FOR GOOD

Vision

We envision a world where legacy emissions are eliminated, and our neighbors' lands are restored through responsible, market-based solutions.

Mission

Our mission is to stop methane emissions from orphan oil and gas wells, returning healthy, revived land back to the communities who count on it.

Values

We reach genuine solutions by living our values of having a rebellious spirit, engaging in authentic communication, collaborating expansively and practicing creative thinking.

Qualifications

Because our background is in the oil and gas industry (complemented by an experienced carbon team), we operate in the carbon market with the full breadth of expertise needed for these projects. That includes, petroleum landmanagers, safety specialists, experienced field crews, production engineers and material scientists, reservoir engineers, geologists, and reserves analysts.

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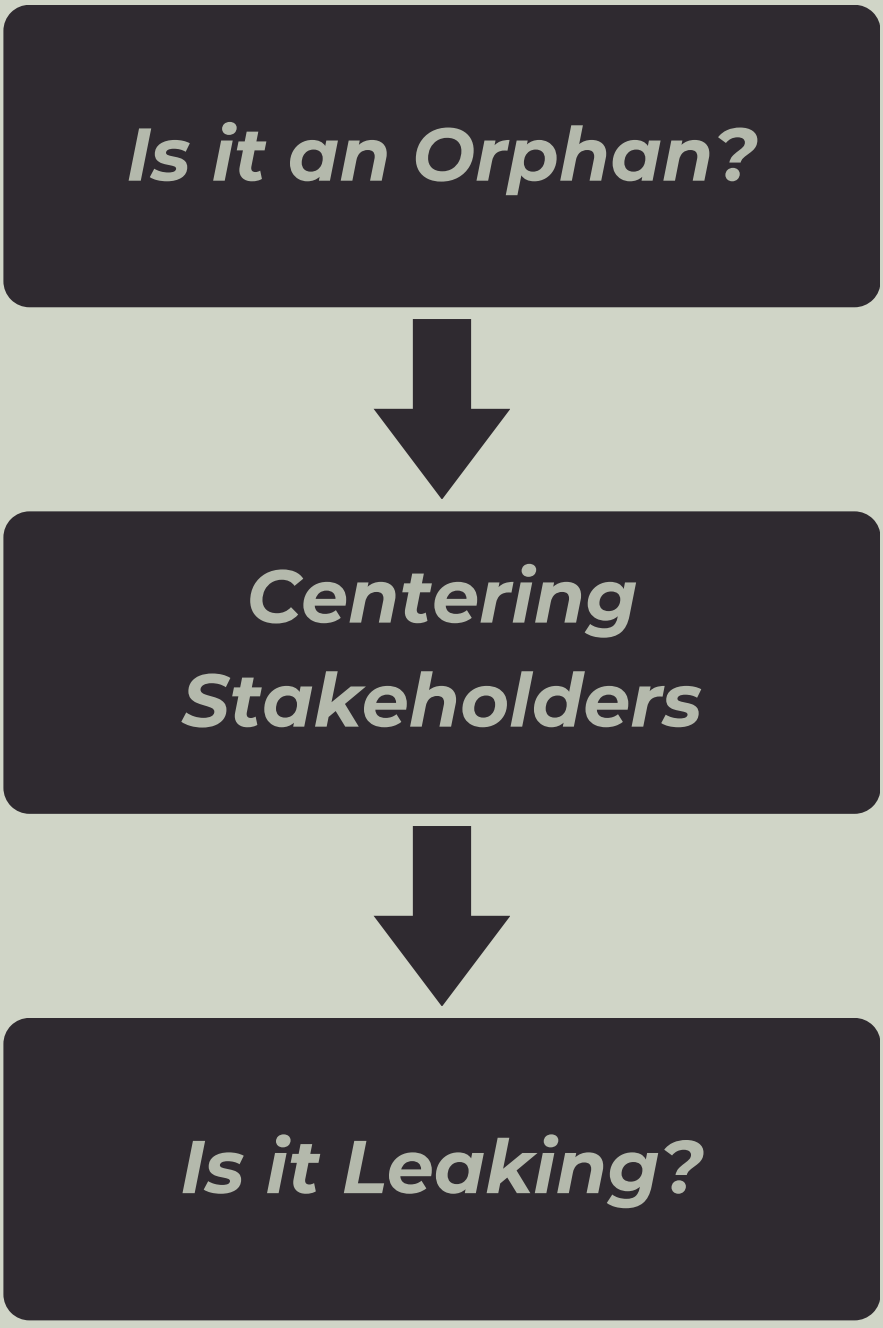
ELIGIBILITY



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IS IT AN ORPHAN?

Why it matters:

01 We exclusively work with documented orphan wells in our projects. If a well has an operator, it is that operator's responsibility to plug the well at the end of its productive life. Shortcomings in that system are a job for policy reform, not carbon finance. There are many undocumented orphans and as those project candidates are identified we believe it is important to go through the process of documentation as a first order of business.

02 Other projects aim to plug operated wells earlier than the status quo (i.e. plugging a marginally economic producer), this approach does not satisfy the core carbon principles established by the ICVCM. In some instances this is avoided conversion of reserves rather than methane abatement. In others, it depends on unmeasured and unverified downstream emissions . In all cases, it violates a contractual obligation to prudently produce hydrocarbons on behalf of mineral interest owners and unlawfully restricts their vested rights to access minerals in the future.

Prioritization

While there is some funding at the state and federal level to plug orphan wells, it is wildly insufficient. Further, none of those dollars require the identification or measurement of leaks. Rebellion will not address a well prioritized for plugging however, this is infrequently the case as our methane emissions criteria is not shared across jurisdictional boundaries.

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CENTERING STAKEHOLDERS

Landowners

Access must be granted by the landowner before any site may be visited for the first time and anytime thereafter to avoid trespass. While this consent may be given verbally, it is critical to be transparent with landowners regarding the nature of each visit. By prioritizing the distinct character of each property and the personal legacy of its owner, Rebellion demonstrates a profound respect for landowners through a tailored approach that honors their individual stories and specific needs.

A continued relationship should be nurtured with the landowners throughout project development, operations, and through the post project monitoring period. It is critical to respect land use today and understand the desires to steward that land into the future. Genuine care and clear communication are fundamental to developing a partnership with every owner of lands on which we are granted the privilege to work.

* ***Commitment to Landowners***

Landowner Testimonial

* ***Indigenous Peoples Policy***

Regardless of jurisdiction, Rebellion initiates outreach before working within historic and present-day tribal boundaries as a sign of recognition and respect, acknowledging their sovereignty and honoring their ancestral lands.

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*DOCUMENTS CAN BE MADE AVAILABLE UPON COMPLETION OF NDA.

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IS IT LEAKING?

An orphan well must be leaking (emitting) in its unaltered state to substantiate a baseline for any future emissions.

Remote Methane Leak Detection

Rebellion field crews entering a location for the first time use an RMLD tool to establish emissions (Y/N) from a safe distance. This binary data is collected in the field and stored in our master geospatial database (MGD) for future visits.

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MEASUREMENT

Safety First and Always

The Well Dictates...

It is the well that determines the rate of emissions, NOT the measurement technique. It is incumbent upon the project developer to apply the appropriate methods.

...EVERY THING

CURRENT LEAK

OR

STABLE EMISSIONS

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SAFETY 1ST AND ALWAYS

Josh Rinehart
Safety Manager, Rebellion Energy Solutions

Josh has a BS in Environmental Science and has worked in Oil & Gas for 14 years. He has worked in various HSE roles throughout that time, in multiple basins and in multiple states. Josh is responsible for building and maintaining a fit-for-purpose program of health, safety & environmental standards and best practices to protect workers and the public, to improve the environment in which we work, and to reduce risk to the company.

OSHA General Duty Clause:

Four Conditions for Enforcement:

1. Employer failed to keep the workplace free of a hazard to which its employees were exposed
2. Cited hazard was recognized
3. Hazard was causing or likely to cause death or serious physical harm (this does not reference high likelihood of occurrence, but high severity in the event of occurrence)
4. A feasible and practical method to correct the risk was available

RES is legally required to secure the project wells that meet OSHA general duty clause conditions - testing leak rates on unsecured wells is not a responsible or legal act.

* ***Safety Handbook***
* ***Monthly Safety Report***
* ***Trainings & Certifications***

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THE WELL DICTATES...

Phil Kelso
Field Superintendent, Rebellion Energy Solutions

Phil got his start in the oil and gas industry in 1974 working for his dad at Sterling Drilling Co. in Sterling, Kansas. During his career, he's worked across production, completion, facilities, and plug and abandonment for some of the most respected names in the industry including Tenneco Oil, Mesa Petroleum, and Samson Resources. He has spent the last decade with Rebellion, developing our operations and leading our team in the field.

Critical Drivers of Measurement Technique

01 Pressure is the dominant indicator of the need to secure a well and therefore use the direct-connect method to measure stable emissions, particularly in a scenario of derated surface equipment or lack of pressure gauge(s) altogether. For context, 100 psi of pressure results in a 95% likelihood of fatality upon impact (not including debris); it is not uncommon for orphan wells to have multiples of this behind visibly degraded wellhead equipment.

02 Surface equipment that is leaking from multiple points requires the direct-connect method to measure stable emissions after the well has been secured. While this can be an indicator of pressure, it is most obviously a consolidation of those leak points for greater accuracy.

03 Produced fluid at the surface (i.e. an observable fluid level) is another indicator of pressure. Additionally, fluids (as opposed to gases) must be separated from the stream before measurement in order to ensure equipment is functioning properly. This separation equipment requires the direct-connect method of measurement. The nature of those fluids and/or the formation from which they are produced may be an indicator of other hazards that could require a direct connection.

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...EVERYTHING

* **Leak Rate Measurement**

* **Stable Rate Measurement**

Direct Connect

Stability vs Time Matrix

The stability criteria must be met for rate AND flowing pressure for the full timeframe over two distinct measurements ~30 days apart to ensure the measurement is a quality predictive tool.

Emission Bucket	Emission Rate	Minimum Stable Test Time (Total)
Low Emitter	<417 scf/hr	4 Hours
Mid Emitter	>417 scf/hr - <1,255 scf/hr	6 Hours
High Emitter	>1,250 scf/hr - <3,750 scf/hr	8 Hours
Super Emitter	>3,750 scf/hr	TBD

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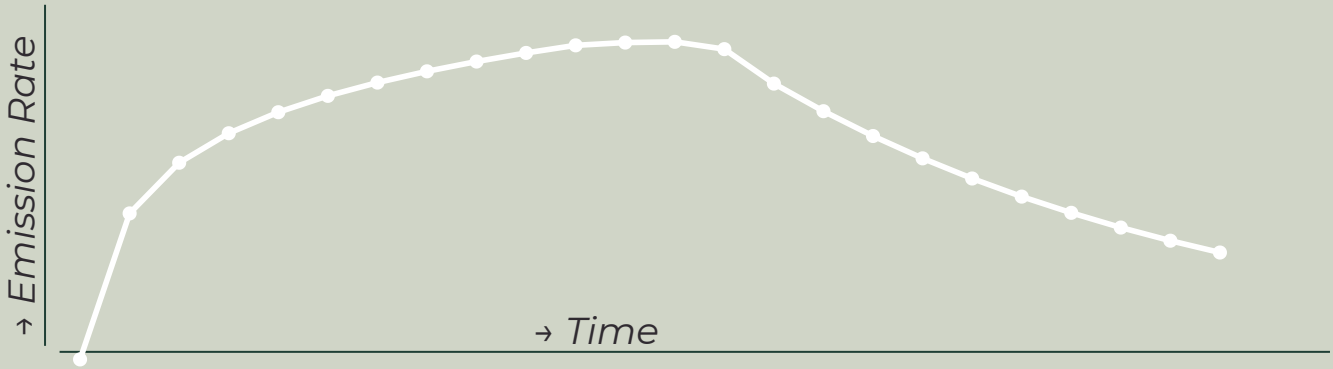
QUANTIFICATION

A Leak in Time

Because a leak starts small and grows as the breach continues to corrode, the measured rate must be anchored in time.

Emissions Decline

As the reservoir "spends" energy bringing methane to surface, that energy depletes over time and the the leak rate declines.



Adoption Day

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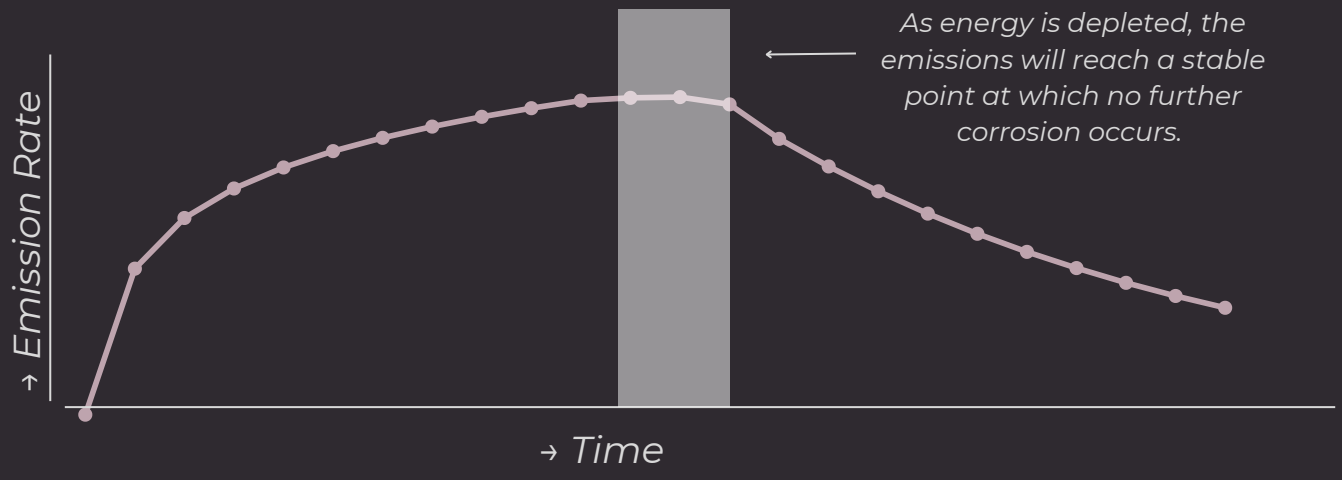
A LEAK IN TIME

The Natural Path of a Leak Through Time



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Once a breach occurs, the leak will continue to grow as the reservoir's energy works to further corrode the surface equipment internally. The same equipment is also subject to external corrosion.

As the reservoir continues to lose energy, the emission will decline (most often exponentially). This will mirror the profile of production decline because the drive mechanism is the same. For a well at the end of its life-cycle (within boundary dominated flow regime), this is often referred to as terminal decline.

It is unknown at what point a leak in its unaltered state may exist along the leak path. We must assume current leak rate to be in terminal decline however a stable point measurement may be placed along that path for a more accurate representation of future emissions.

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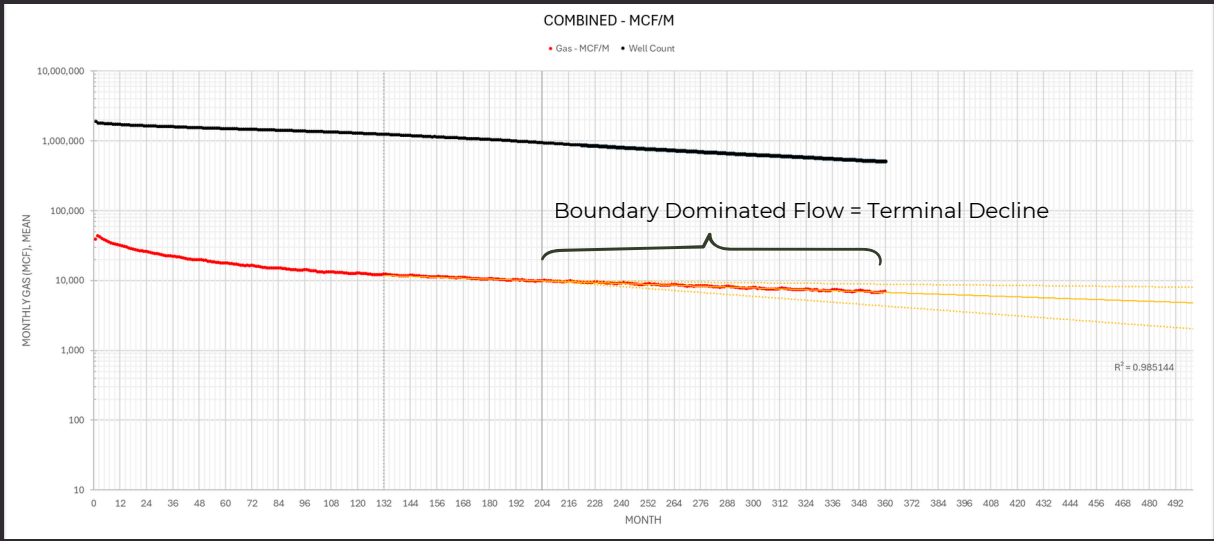
EMISSIONS DECLINE

Terminal Decline:

The final, long-term phase of a wells life that exists when the reservoir is in boundary dominated flow. Because the drive mechanism is the same for both production and emissions, the profile (not the rate) is transferrable.



In mid-2024, the Rebellion team of petroleum engineers compiled all of the publicly available gas production from vertical wells in the U.S. and bucketed it by 5 major regions. For each region, that data was normalized to time zero and best fit with an exponential terminal decline. Those decline rates were between just under 2% and 7% and have been applied to project wells going forward. In 2025, a Payne Institute for Public Policy paper was published, closely corroborating the Rebellion results.

* ***RES Terminal Decline Study***

Payne Institute for Public Policy

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ADOPTION DAY!

Kate Henderson
Landmanager & President, Bearcat Land

Kate started her career in the oil and gas industry in 2011 with Bearcat Land. She has unique, first-hand experience in many facets of land including: title, leasing, acquisitions, divestitures, due diligence, and, for the past decade, extensive regulatory matters, including compliance, offering OCC expert testimony, and litigation. She is one of few subject matter experts at the intersection of carbon market and mineral rights. Kate is also a member of AAPL, OCAPL and TAPL.

Clear Title

Driven by a "more is more" philosophy regarding due diligence, Rebellion prioritizes a comprehensive title examination. Because orphan wells lack a bonded, solvent operator, we examine the entire history of ownership and operatorship, identifying every party contractually tied to the well—inclusive of surface owners, mineral owners, and working interest owners at the time the now orphaned well was producing. Understanding the complete ownership and operatorship history is the only way to guarantee the highest integrity for our carbon credits, ensuring our work is rooted in total transparency and that Rebellion is vested with 100% ownership of all environmental attributes and carbon credits issued post-plugging.

Regulatory Requirements

To bridge the gap between regulatory oversight and physical property rights, it is essential to navigate the jurisdictional disconnect between state agencies (like the OCC) and county records; while the OCC manages operations, they lack the jurisdiction to review or verify legal title. Understanding the actual owner based on well classification is paramount, as a documented orphan wellbore legally affixes to the surface estate, with the governing regulatory body assuming the operating rights and liability for environmental hazards. To fully derisk the project, we meticulously secure an assignment of the physical wellbore and its environmental attributes as well as a Surface Use Agreement (SUA) from the surface owner, and official operating rights from the state, ensuring every contractual and legal thread is accounted for.

Transfer of Operating Rights

Our process begins by securing a wellbore assignment and Surface Use Agreement (SUA) directly from the surface owner. These documents are then attached to the official transfer form—such as Oklahoma's Form 1073—and submitted to the state regulatory body—such as the OCC— for approval. Once this transfer is authorized, Rebellion becomes the bonded operator in perpetuity, formally assuming all legal and environmental liability associated with the wellbore.

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EXECUTION

Plugging for Permanence

PLUS

Monitoring & Reporting

Land Restoration & Other Benefits

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PLUGGING FOR PERMANENCE

Modern plugging regulations were put in place in the late 1900's to protect groundwater. Additional measures to safeguard against a more versatile methane molecule are considered in the Rebellion Method of Plugging.

* *The Rebellion Method of Plugging*

01 *Complete Barriers*
Formation to formation barriers are beyond industry standard but critical to a permanent seal.

02 *Precise Placement*
Cement plugs should be placed on a verified physical base to ensure formation coverage.

03 *Engineered Plugs*
A certified Professional Engineer considers well conditions and designs for superior bond and seal.

04 *Oversight & Validation*
Onsite adherence to procedures as closely as possible and and post job validation of work is required. Safety on location is priority.

05 *Reporting*
Records are strictly kept in-line with company policy for review and verification at any point in time as well as clear post issuance monitoring procedures.

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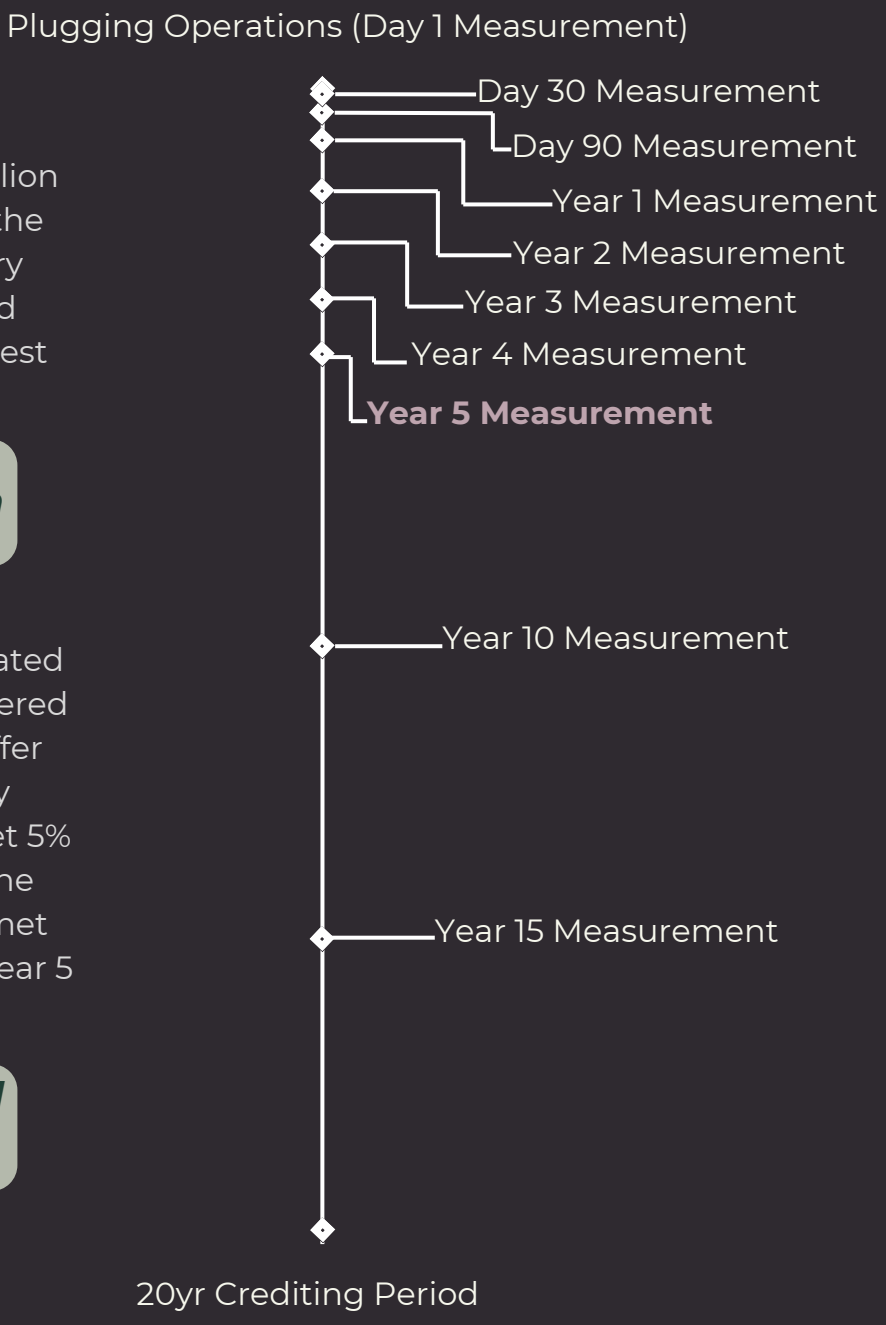
MONITORING & REPORTING

The purpose of the Rebellion M.R.V. plan is to ensure the work done to plug every project well is executed properly and to the highest standard.

* ***RES M.R.V. Plan***

Any execution risk associated with that operation is covered within the Rebellion buffer pool policy. This policy withholds from the market 5% of all credits sold until the associated well(s) have met the requirements of the Year 5 measurement.

* ***RES Buffer Pool Policy***



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LAND RESTORATION & OTHER BENEFITS

MINIMUM REMEDIATION REQUIREMENTS

- Remove surface equipment
- Cap the well
- Leave the land stabilized

**These are state-mandated minimum requirements*

VS

REBELLION DELIVERS REGENERATION

- Soil remediation & biological recovery
- Re-seeding with native forbs & grasses
- Biodiversity & pollinator habitat rebuilding
- Long-term ecological monitoring
- Land returned to productive use

REVIVING A VANISHED ECOSYSTEM

Tallgrass prairie once covered 170+ million acres across the U.S. and Canada
Today, less than 4% remains.

Orphaned oil & gas wells often sit on lands that were once native prairie. It is now fragmented, compacted, & unable to regenerate. Rebellion's work brings these ecosystems back to life benefitting soil, water, and biodiversity across the US's heartland.

Engagement in local institutions, such as public schools, to talk about land stewardship, methane, and what abatement & remediation looks like from start to finish.

* ***Land Restoration Policy***

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