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U.S. Early Plugging of Marginal Oil and Gas Wells Protocol V1.0

Workgroup Meeting #3

February 17, 2026

Housekeeping



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- Observers are in listen-only mode.



- Workgroup members should actively participate throughout the meeting



- We will follow up via email to answer any questions not addressed during the meeting.



- The slides and a recording of the presentation will be posted online on the protocol webpage.

Introduction

Reserve Staff

Rachel Mooney – Manager, Protocol Development (development lead)

Jon Remucal – Director, Protocol Development

Partial Technical Support

Partial technical support was provided by ClimateWells, in collaboration with the Rocky Mountain Institute, EcoEngineers, and Netherland, Sewell & Associates.

Workgroup Introductions

- Raise your hand on Zoom and we will call on each member in order on Zoom
- Please briefly introduce yourself, your organization, and your experience as it relates to the development of this protocol

Dan Arthur , ALL Consulting	Jay Wintergreen , First Environment, Inc.
Arjun Patney , Avondale Private Capital	John W. Brooke , Franklin Well Services, LLC
Heather Rogers , California Resources Corporation	Michael Moorhead , PermCap-GHG LLC
Puneet Chhabra , Carbon Containment Lab	Jason Seneker , Seneker & Associates, LLC
Reid Calhoun , ClimateWells	Beth Bader , SES Inc
Miguel Angel Freyermuth Corona , EcoEngineers	Issaí Medellín , TÜV SÜD America Inc.
Margaret Coleman , Environmental Defense Fund	Marc Perez , ZeroWells

Protocol Development Process & Timeline

Milestone	Date
Public Scoping Webinar	November 25, 2025
Statements of Interest Form (Workgroup)	December 1, 2025
Formation of workgroup	December 9, 2025
First workgroup meeting	January 7, 2026
Second workgroup meeting	January 15, 2026
Third workgroup meeting	February 17, 2026
Comments on Eligibility	February 27, 2026 (5:00 PM PST)
Fourth workgroup meeting	March 3, 2026
Fifth workgroup meeting	March 11, 2026
Public comment period	TBD – April/May 2026
Protocol presented to Reserve Board for approval	TBD – June 2026

AGENDA ▶

- Discussion of key considerations for the protocol
 - Eligibility and assessment boundary
 - Ownership of Emission Reductions
 - Performance Standard Test
 - Reporting timelines and requirements
- Next steps



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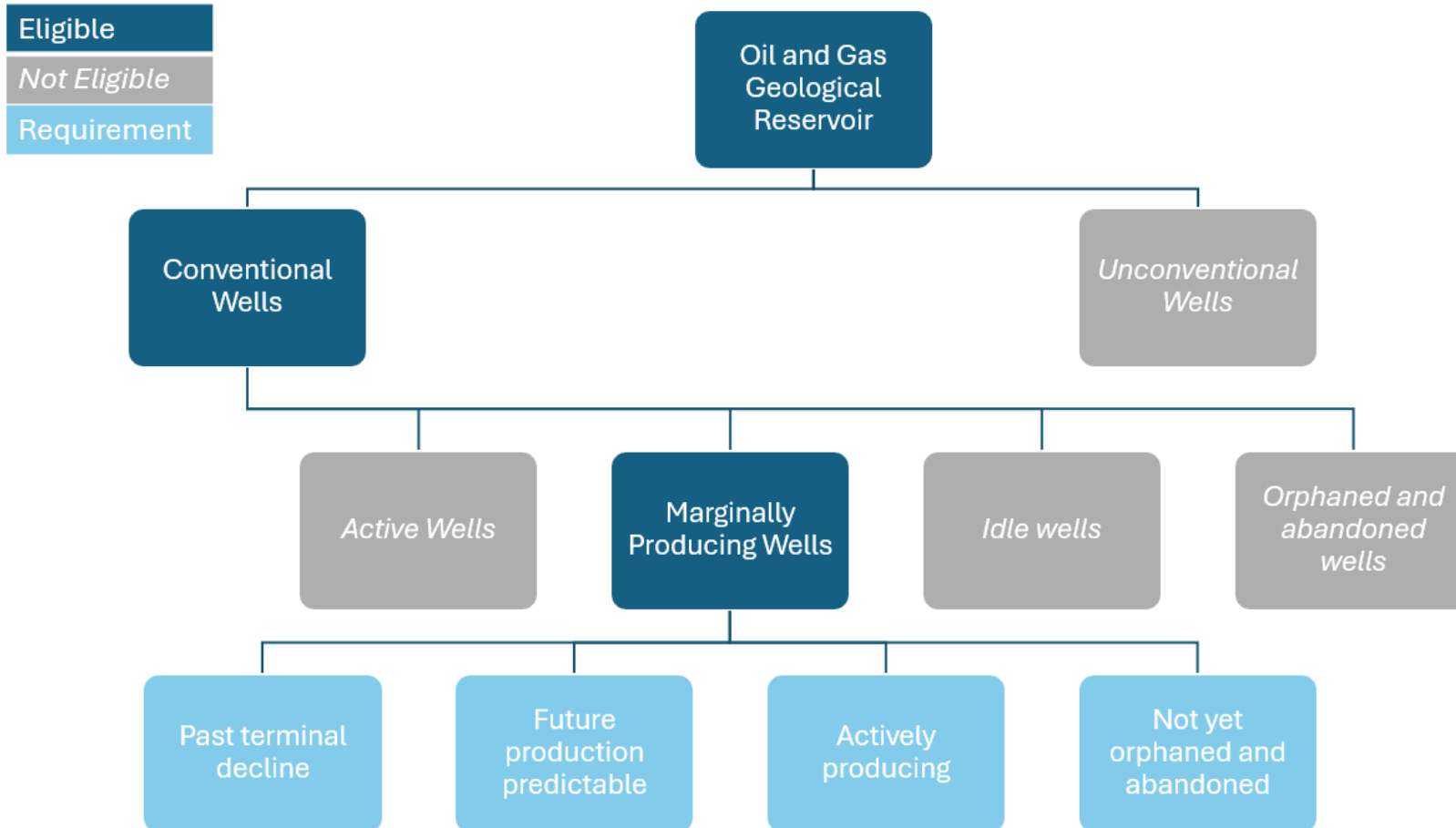


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KEY CONSIDERATIONS FOR PROTOCOL DEVELOPMENT

Eligibility and Assessment Boundary

Eligibility and Assessment Boundary



➤ Marginal Wells

- ✓ No exclusion based on drilling method
- ✓ Past its terminal decline
- ✓ Future production is predictable
- ✓ Actively producing
 - ✓ Consistent production over previous 12 months from start date
 - ✓ No defined production rate or sufficiently high (e.g., 75) BOE/day
- ✓ Not yet orphaned/abandoned
 - ✓ Demonstrate ownership of well
 - ✓ Government classifications?

Criteria for each requirement is established in the performance standard test covered in future slides

Outstanding Considerations

Plugging a well may result in secondary effects when the plugging of that well increases the production of nearby wells (e.g., Texas). Can the protocol include a qualitative safeguard or quantitative leakage deduction to address these situations?

- Option 1: require all wells within a given distance or wells drilled to the same depth be plugged
 - Requires all wells to have the same owner/operator or multiple entities to work together
 - What distance or depth requirement would be sufficient?
- Option 2: project developer must demonstrate that the risk is minimal
 - How could the project developer demonstrate the risk is low?

Outstanding Considerations

Well owners/operators typically control multiple wells and may want to plug multiple wells under one project. Since the well would have its own start date, eligibility assessment, and quantification, should the protocol allow for multiple projects under one project ID?

- Given the potential concerns of secondary effects, should the protocol require the wells within a given distance or depth (as presented in Q1) to report under the same project ID?
- If the risk of secondary effects is low, should the protocol allow for multiple wells to report under a single project ID? If yes, under what conditions?
 - All wells must have the same owner/operator
 - All wells must be in the same reservoir? Basin?
 - All wells must be plugged within X months of the first well that is plugged
 - Other conditions?
- Alternatively, should there only be one well per project ID

Outstanding Considerations

After well is plugged, there is a risk of leakage if an entity drills a new well and access the reserves. What qualitative safeguards should be included?

- Option 1: verification body must confirm that no new wells were drilled each verification. If wells are identified, project is not eligible for future crediting.
- Option 2: require all wells within a given boundary (distance, depth, ownership, basin, reservoir) to be plugged.
- Option 3: require retirement of the mineral rights and conservation easements.

Outstanding Considerations

What social safeguards should be included in the protocol to ensure projects will not give rise to social harm?

- Ensure tribal sovereignty (e.g., CARB requires waiver of tribal sovereignty)
- Surface and mineral rights often passed down within families
- Related to notifying relevant parties (e.g., mineral estate, surface estate, nearby communities)



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OWNERSHIP OF EMISSION REDUCTIONS

Ownership of Emission Reductions

- Parties with possible claim:
 1. Surface Estate
 2. Marginal Well Operator (may be same as surface estate)
 3. Mineral Estate
- Transfer of ownership
 - Surface estate transfers land rights to the well operator
 - Mineral estate has rights to hydrocarbons, thus resulting emission reductions
 - Mineral estate transfers mineral rights to well operator
 - Well operator plugs well, mineral rights restored to mineral estate
- Lease with well operator to extract hydrocarbons then transfers the ERs rights to the well operator
 - After well is plugged, lease with mineral estate expires. No longer has ownership of hydrocarbons.
 - Does the ownership of emissions reductions revert to the mineral estate?
- ✓ Default ownership of ERs is the well operator, unless rights have been transferred to another entity (e.g., hired project developer)



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PERFORMANCE STANDARD TEST

Components to Assessment

- What economic reserves are being credited?
 - P1 vs P2 vs P3 Reserves
- Who is assessing the reserves?
 - Criteria for Professional Petroleum Engineering Firm
- How is it being assessed?
 - Economic reserves modelling approaches
- Criteria for determining economic limit
 - How to determine economic limit
 - Demonstrate carbon market incentive

What Economic Reserves are Credited?

As defined by the Petroleum Resources Management System (June 2018)

➤ Proved Reserves (“P1”)

- ✓ Quantity of oil and/or gas anticipated to be commercially recoverable by application of development projects to known accumulations from a given date forward under defined conditions
- ✓ At least 90% probability of being recovered
- ✓ Accessed through traditional extraction methods (horizontal and/or vertical drilling)

➤ Probable Reserves (“P2”) – *not eligible, consider in a later version*

- ✓ Quantity of reserves which are estimated to have better than 50% chance of being technically and economically produceable
- ✓ Require additional technical intervention to extract reserves (e.g., well flooding)

➤ Possible Reserves (“P3”) – *not eligible*

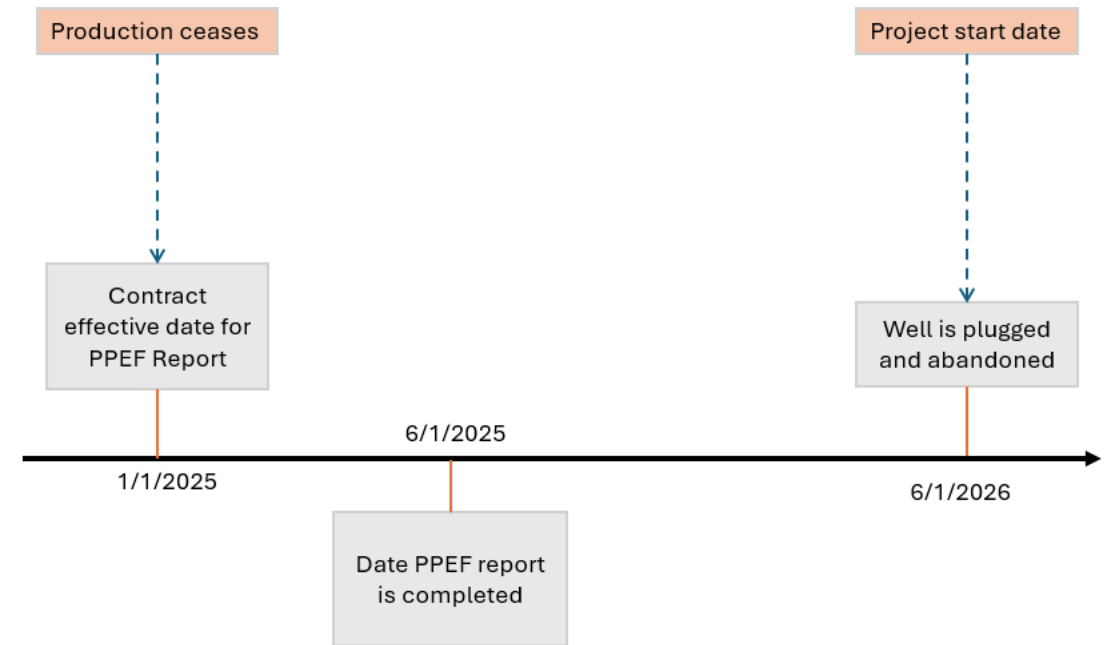
- ✓ Quantity of reserves estimated to have less than 50% chance of being technically and economically produceable.

Who is Assessing the Quantity of Economic Reserves?

- Well-specific assessment conducted by a third-party Professional Petroleum Engineering Firm (PPEF)
 - ✓ Demonstrate low conflict of interest during verification
 - ✓ Demonstrate PPEF is qualified (work history, Petroleum Engineering Certification, etc.)
 - ✓ Be in good standing with the Society of Petroleum Engineers

Additional Requirements

- Report developed in accordance with the most recent version of the Petroleum Resource Management System (PRMS) and PRMS Application Guidelines
- No production may occur from PPEF contract effective date to date well is plugged or economic reserves must be re-evaluated
- Well must be plugged within **12 months** of the date the report completion date or economic reserves must be re-evaluated



How are the Reserves Assessed?

As defined by the Petroleum Resources Management System (June 2018)

1. Analogy method – not eligible for use

- Estimates reserves by directly comparing new discovered or poorly defined reservoir with a known reservoir that is believed to have a similar geological or petrophysical properties

2. Volumetric estimates

- Uses reservoir rock and fluid properties to calculate total petroleum initially in place (PIIP) then estimates the portion that will be recovered
- Probabilistic approach is applied in early stages when data is limited – not applicable
- Deterministic approach is applied in later stages of development

3. Performance-based estimates

- Material balance method – analysis of pressure behavior as reservoir fluids are withdrawn
- Production performance analysis (decline curve analysis) – change in production rate and production fluid ratios vs time and vs cumulative production as reservoir fluids are withdrawn

Outstanding Considerations

PRMS provides volumetric and performance-based modelling approaches for determining a well's economic reserves. To ensure consistent and appropriate evaluation of economic reserves, should the protocol:

- Require a specific approach to be used for all projects? If yes, which approach?
- Require a specific approach depending on the project? If yes, under what conditions?
- Allow the PPEF to determine the appropriate approach?
- Require use of multiple approaches?
- Alternatively, should other modelling approaches be used?

Next Steps



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Next Steps



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- ***For workgroup members:***

- Attend fourth workgroup meeting March 3, 2026 (11am – 12:30pm PST)
- Review the eligibility criteria and provide written feedback by **5:00PM PST February 27, 2026.**



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- ***For Reserve:***

- Develop and share documents for next workgroup meeting
- Publish recording and presentation

Contact Information

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THANK YOU!