

Initial Meeting
***Water Management Practice Documentation:
What and Why?***

May 18th 1:00-2:00

Noble Energy Offices (1625 Broadway, Suite 2200)

Facilitated by CEWC and COGA

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Documentation of Best Practices

- Is it worthwhile?
- Could the CEWC facilitate with COGA?
- Potential deliverables:
 - 1) White paper describing water management practices in CO.
 - 2) Consensus description of potential environmental and community impacts.
 - 3) Analysis of how best practices mitigate environmental and community impacts (quantify when possible).
 - 4) Identify gaps for additional research.



Documentation of Best Practices

| CONCERNS | POTENTIAL DATA COLLECTION |
|----------------------------------|--|
| Regional Water Depletion | <ol style="list-style-type: none">1) Water use for drilling, fracturing2) Water intensity |
| Potential Water Contamination | <ol style="list-style-type: none">1) Document practices for water management2) Identify risks3) Correlate practices with risks4) GIS tools for optimizing recycling |
| Air Emissions Due to Completions | <ol style="list-style-type: none">1) Document practices used in CO2) Identify risks3) Correlate practices with risks4) Monitoring VOCs versus practices |
| Truck Traffic | <ol style="list-style-type: none">1) GIS analysis of PW2) Optimization tools |



Effect of Best Practices

Examples

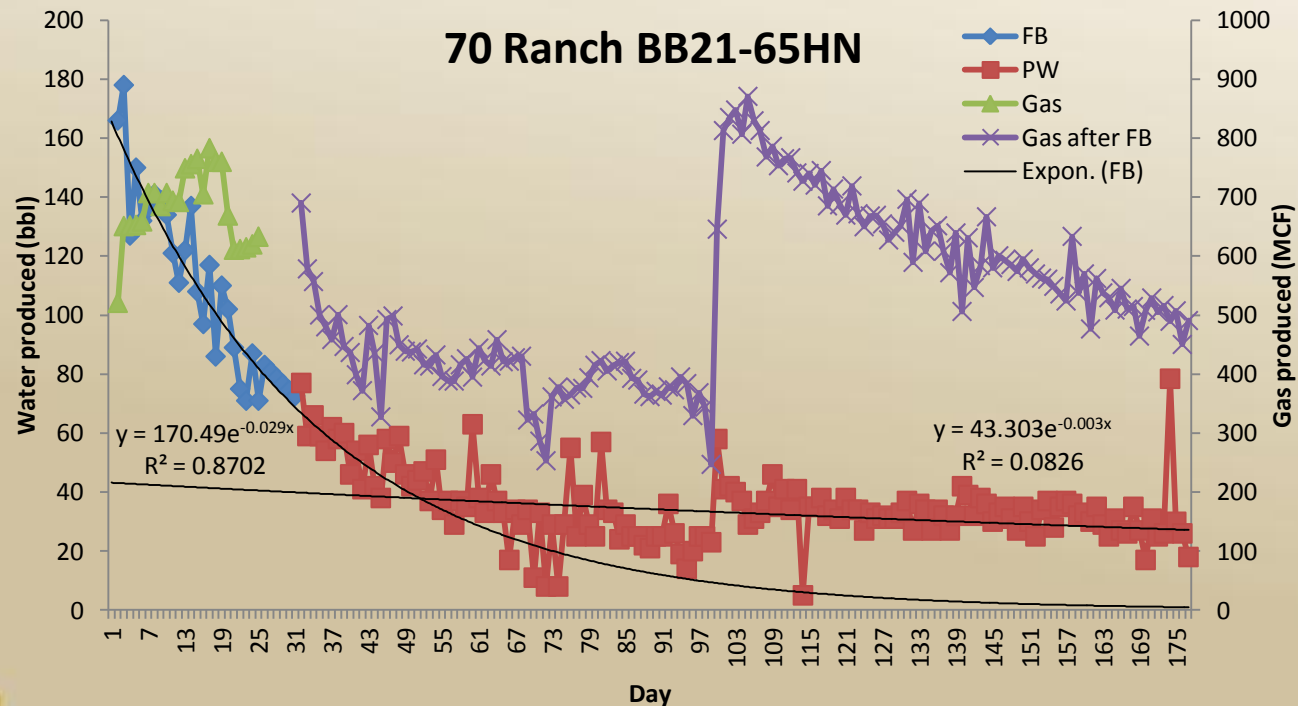
- Quantify how best practices minimize water use
- Quantify impact of green completions
- Quantify how best practices minimize community impacts
- Other metrics to be developed



Greater focus needed on methane leakage from natural gas infrastructure

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Documentation of Best Practices

Examples

- Water use and intensity
- Green completion technologies?
- Optimized fluids management logistics
(pipelines, recycling, alternative sources)

