



Workshop Lessons Learned / Takeaways?

Ernie Perkins

FIRST LESSON

✓ Mobile is has the highest rainfall

Not immediately obvious from baseline observations yesterday and today.

WHAT HAS BEEN PRESENTED

- Sites: onshore – offshore; range of geological conditions.
- Scale: Pilot to millions of tons CO₂ per year.
- Process: CCS monitoring to CO₂ EOR monitoring.
- Project Maturity: from planning stage to ongoing injection.
- Focus: Research to commercial.
- MMV techniques: considerable overlap between projects.

Lots of other differences and lots of similarities.

KEY LESSONS

- **Site:**

- Good geology (containment, capacity, injectivity, seals).
- No (or few) existing wells.
- More and better characterization will pay off.
- MMV methods are site specific.
- Good access for monitoring.

- **Technology**

- It is getting really good.

- **Public Relations - communications:**

- Good relationships with landowners.
- Own / control the “area of influence”.
- Clear communications with sponsors / stakeholders / interested parties.

KEY LESSONS

- The drivers are very different for pilot studies (research) and for commercial sites (risk reduction).
- Research Monitoring does not directly transform into Commercial Monitoring.
 - Are the techniques fast enough, precise enough and cheap enough?
- The scope of MMV is very different for a commercial CCS site than for a commercial CO₂ EOR site.
 - The physical site size is an issue.
 - Baseline data may not be available.

KEY LESSONS

Technologies are getting much more precise.

But they (and our ability to interpret the results) will never be good enough. There will always be signals that can't be explained ... RATS .

Key research area: what is a positive signal? A false positive? A trigger?

KEY LESSONS

Technologies are getting much more precise but....

Reservoirs are always going to give you surprises.