Leveraging Expertise for Accelerated Carbon Sequestration Opportunity Assessment

Area of Expertise:
Exploration

Enterprise Solution:
ThinkOnward Projects

The objective of this two-phase project was to screen large areas and narrow focus for potential carbon capture and storage (CCS). The part-time and overlapping timelines of the projects allowed collaboration between two veteran geological experts from the ThinkOnward community. Data from two previous regional projects was also incorporated. The subsurface models delivered accelerated the assessment decision by three months combined.

Challenge

The exploration and identification of suitable areas for carbon capture and storage (CCS) initiatives present significant challenges. The vast geographical scope combined with the intricate nature of subsurface structures makes it difficult to efficiently screen and interpret potential sites within business timelines. Additionally, the regional expertise and resources required for such assessments are often limited, further hindering progress.

Solution

To address these challenges, a collaborative approach leveraging expertise in multiple phases was adopted. The goal was to explore larger areas for CCS opportunities within the same timeframe by integrating insights from two overlapping projects. These projects shared identical objectives but operated with staggered timelines to allow cross-leveraging of expertise and data. The proposal involved selecting expert-in-residence (XiR) contributors from the ThinkOnward community based on their known expertise, including a retired geologist and a veteran explorer balancing consultancy work with family responsibilities.

Implementation

The two phases of the project were executed over 10 and 16 weeks respectively, totaling six months of combined effort. Both projects operated part-time, allowing flexibility for XiRs like the work-from-home veteran explorer, who found the project structure conducive to managing her professional commitments alongside personal responsibilities.

The integration of well information and seismic data as well as results from two previous regional projects facilitated the evaluation of CCS opportunities and the creation of subsurface models.

Result

The collaborative approach yielded significant results, including a more robust and comprehensive regional model that accelerated and supported crucial business decisions. By leveraging the expertise and insights from both projects, the assessment process was accelerated by three months, enabling the narrowing of focus within the expansive region. The outcome confirmed initial impressions on one area while highlighting a second area for more focused efforts, thereby optimizing resource allocation and enhancing the efficiency of CCS opportunity assessments.

Conclusion

This outcome validates the effectiveness of a collaborative, crowdsourced approach and underscores the importance of leveraging diverse expertise and data to drive impactful decisions in complex domains like CCS exploration and development. By narrowing the focus, the project has paved the way for more targeted initiatives, ensuring that efforts are concentrated where they are most likely to yield positive results.

- **Comprehensive Assessment** - Collaboration allowed for integration of diverse expertise and data and improved high-grading of prospect areas.
- **Increased Efficiency** - Crowdsourcing and ThinkOnward project management optimized resource allocation and enabled a more targeted focus on high-yield areas by leveraging data from two previous projects in two phases.
- **Accelerated Decisions** - The project ultimately provided three months acceleration in the CCS opportunity assessment.

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