

Carbon Capture & Sequestration Project Risk Evaluation

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CCS - Characteristic Risks



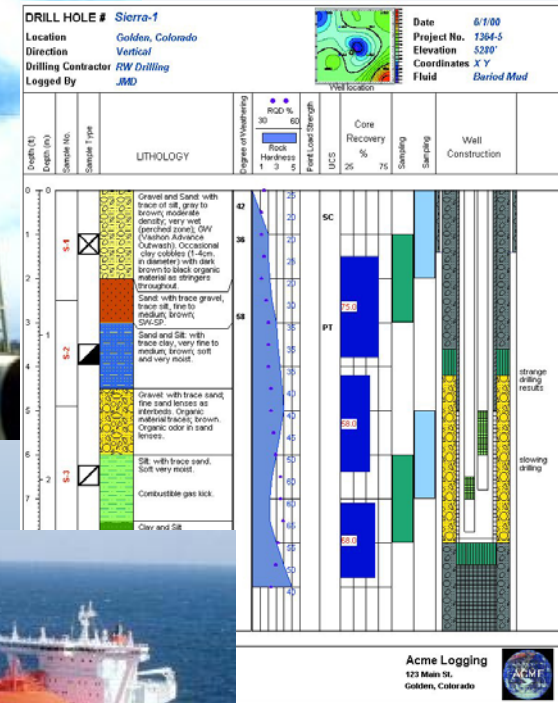
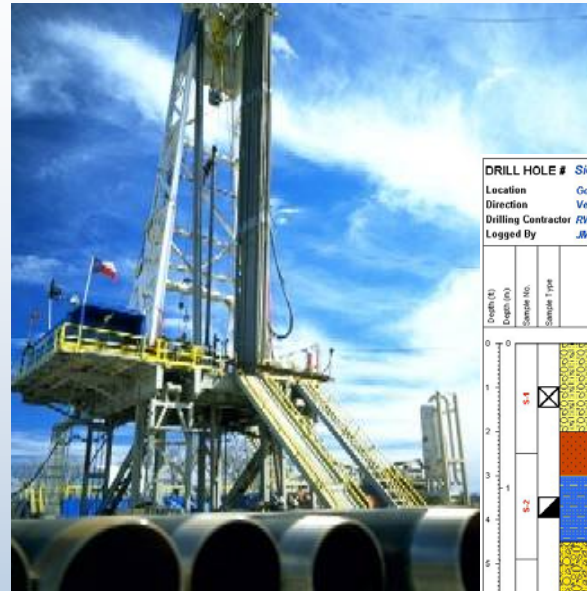
- Site Technical
 - scientific opinion of the plan
- Environmental Setting
 - adjacent property uses and landowner issues
- Legal
 - division of risks
 - regulatory climate
- Financial
 - demonstrated long term corporate stability
 - strength of insured entity and parent companies

CCS – Site Technical Risks



- An engineering view of the conceptual model
 - geology
 - hydrogeology
 - capture technology
 - transportation method

- Develop a predictive model of “what ifs?”



CCS – Environmental Setting

- Includes both physiographic, economic, and social settings



Physiographic

- area of known/likely mineral or oil and gas reserves?
- area of elevated seismic activity?
- adjacent large groundwater extraction zones?

Economic and Social Characteristics

- population
- density
- socioeconomic conditions
- community portrait

CCS – Legal Risk Management



- What is the regulatory climate affecting the site?
- What is the relationship of the insured parties?
- How is the named insured formed?
- Is there a division of risk?
- Contractual arrangements?
- Performance guarantees?

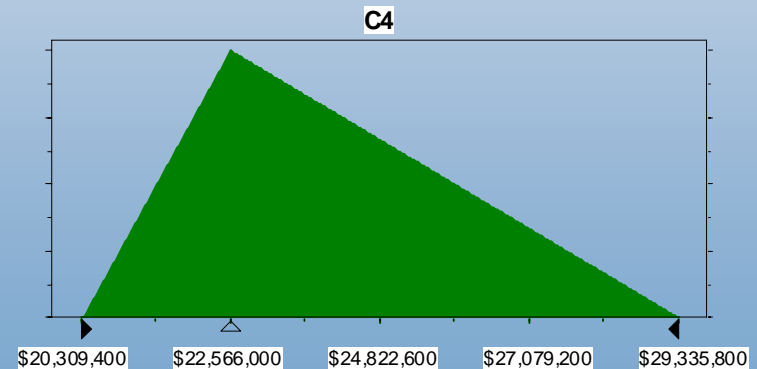
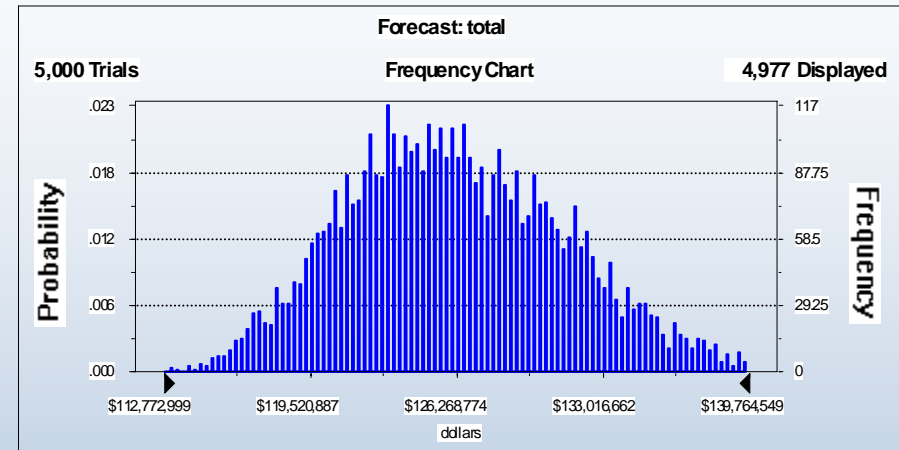
CCS – Financial Risk Management

- financial strength of insured entity and parent companies
- evaluation of financial guarantees including loans, grants, etc.
- demonstrated history of success on projects of similar complexity



CCS – Risk Evaluation

- uses mathematical model (Monte Carlo simulations)
- inputs from described characteristics
- accounts for desired coverages and limits
- output is probability of success stated as a percentage.



CCS – Risk Evaluation

- Fatal Flaws
 - likely technology failure
 - significant natural resources reserves adjacent
 - site situated in a volatile environment
 - alignment of interest among parties is unclear
 - adverse contractual arrangements
 - weak financials

