



Water and Injection Management

Introduction

S&P Global Commodity Insights has, through various acquisitions, a rich history in working with Exploration and Production companies. In supplying data, software, and insights the sector has been able to maximise yields from extractions, optimise profitability and reduce risk.

What is Water and Injection Management?

Water and CO₂ are used by E&P operators for enhanced hydrocarbon recovery, to maximise the return on their investments. For each single Barrel (BBL) of oil, or thousand cubic feet of gas (a single MCF), three to six BBLs of H₂O are produced that need to be disposed of.

The Water and Injection Management solution from Commodity Insights provides US E&P Companies and Oilfield Service Companies providing water logistics with data, enabling them to monitor injection performance and identify where to dispose of water produced in production efficiently and safely.

There are three challenges being faced today. Disposal, Fluid Injection management and Seismicity. We address the following key questions, and more:

Disposal

H₂O and CO₂ must be disposed of safely, avoiding the potential of leakage and adverse impact on the environment. Clients seek knowledge.

- What is the location of commercial and private saltwater disposal wells (SWDs)?
- What is the current/projected surplus capacity of these wells?
- What is the location of wells used for flooding, or pressurizing, a field?

Fluid Injection Management

Regulations are set by each state on the maximum pressure and volumes of injection. Sites need monitoring to ensure compliance and performance management. Clients need to understand.

- What is the location of wells used for flooding, or pressurizing, a field?
- What are volumes and pressures of SWDs and Injection Wells?
- Do current wells require greater injection, additional pressure or are more wells needed?

Seismicity

Injection volumes and pressure have been identified as contributing to tremors and earthquakes.

- Who are the major contributors to seismicity issues in Anadarko, LA, and Permian Basins?
- Where are the Seismic Response Areas in the US and how do these regulations impact existing, or planned, development?

What are the Water and Injection Management solutions capabilities?

- **Spare capacity locator** – disposal well spare capacity is calculated as being the difference between last reported volume/pressure and maximum permitted volume/pressure. These are categorized as public or private and shown spatially. In knowing this organizations identify where they could inject H2O or CO2.
- **Effective location optimizer** – map feature enables user to see produced water volumes spatially with disposal wells and their surplus capacity.
- **Compliance monitor** – calculates spare capacity as the difference between the last reported volume/pressure against maximum permitted volume or pressure. A gas gauge feature warns user as maximums are approached and assists users in avoiding state regulatory fines.
- **Action required alert** – spare capacity monitor is re-calculated to incorporate reduced volume and pressure maximums associated with state regulatory dictated seismic response areas (SRA).
- **Optimization of resources** – allows user to compare output of hydrocarbons against historical production to check CO2 injection regime effectiveness.

How do clients benefit?

1. Optimize Operational Performance and Efficiency
 - By monitoring and adjusting injection pressure operators can ensure optimal performance is attained.
2. Effective Risk Mitigation
 - Of Regulatory and Financial Risk – ensuring compliance with State volume and pressure limits to avoid fines imposed for non-compliance
 - By avoiding Seismic Risk – by avoiding of high seismic risk areas and the consequences of earthquakes
3. Create Competitive advantage
 - With the ability to make better decisions, faster, with robust data, analytics and insights providing the intelligence, organizations can gain a competitive advantage.

How is it delivered?

For user convenience Commodity Insights Water and Injection Management can be delivered by:

- Snowflake/API
- Via Consultancy services

Where can I get more information?

To learn more about S&P gGLOBAL COMMODITY INSIGHTS Water and Injection Management Technology please visit:

Website Address:

<https://www.spglobal.com/commodityinsights/en/ci/products/water-and-injection-management.html>

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