

QuantumPro, Inc.

Intelligent Diagnostics for CO2 Geological Storage



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FloTrac™ Ultrahigh-resolution nanoparticle tracer

- Compatible in both water and oil.
- Temperature stability up to 2,000°F (1,093°C).
- Physics-based, sub-atomic detection.
- Inert, non-hazardous, non-radioactive.
- Unique, distinctively tagged nano-tracer added to each of the frac stages



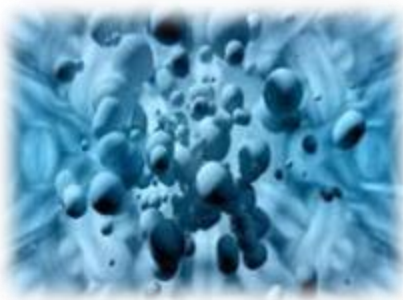
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<https://quantumprot.com/>

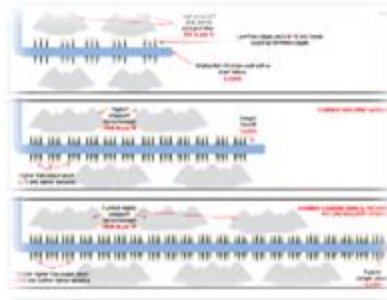


Physical properties	FloTrac tracers
Specific gravity, g/cm ³	0.92 – 1.17
Temperature limit, F	2,000
Number of FloTrac tracers	220 unique tracers

FloTrac™ tracer – value creation (220 unique tracers)!



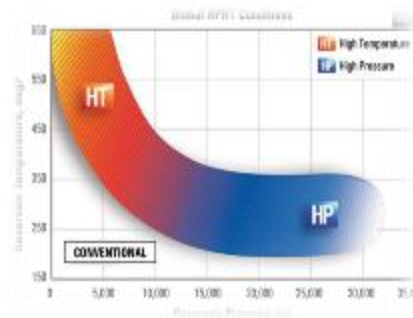
**Cost-effective and
inert particles**



**Non-intrusive
to completion design**



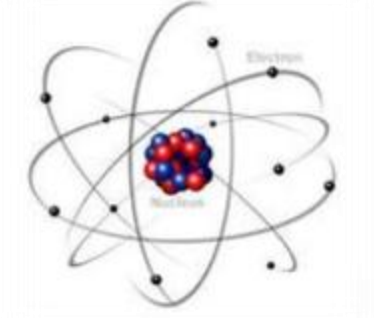
**Easy deployment
(per mixed in liquid)**



**Stable at very
high-temperature**

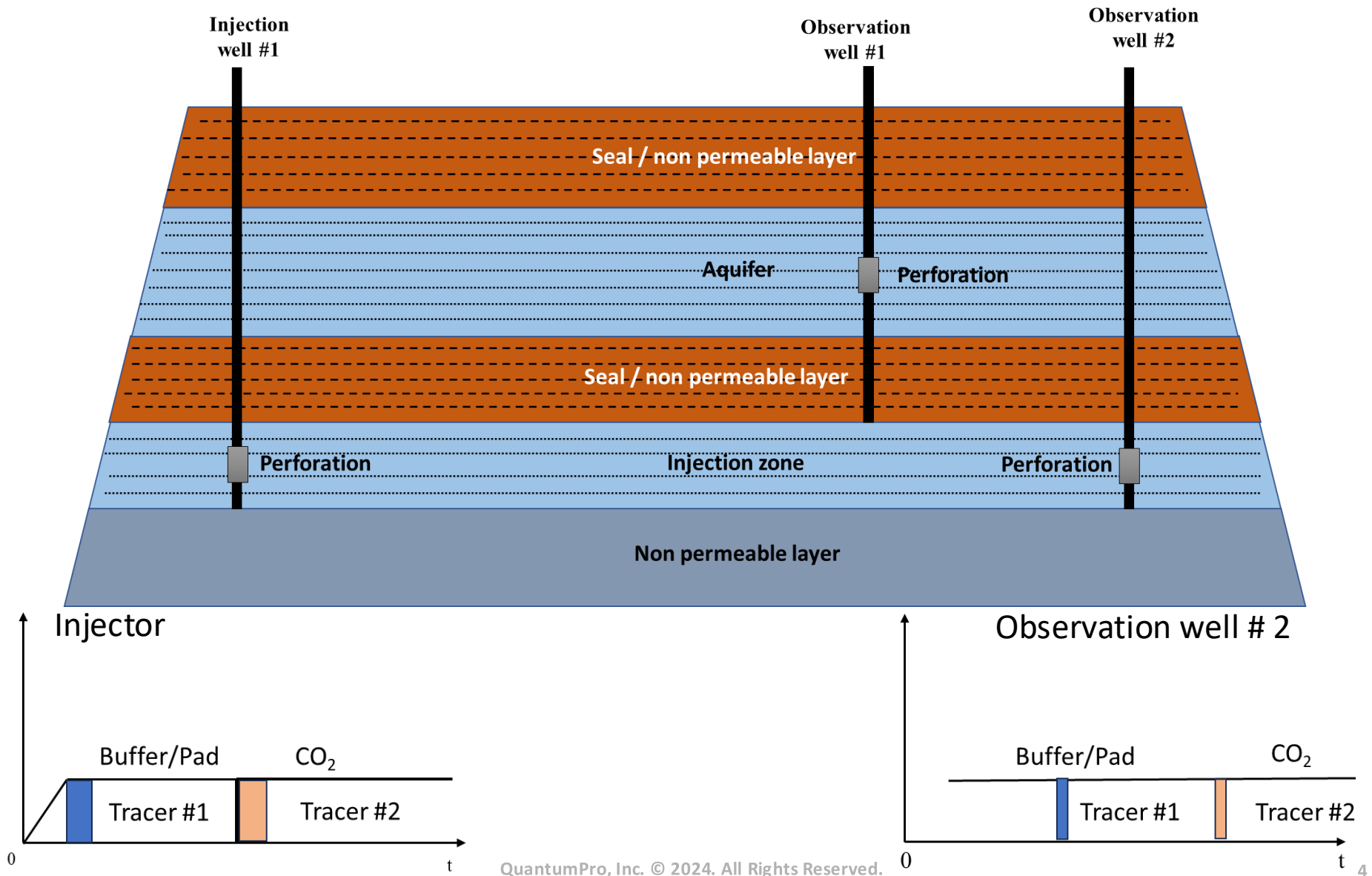


**Tracer compatible with
oil and water**



**Quick testing
& sub-atomic accuracy**

Geological Storage – Injection and Seal Integrity



FloTrac & PerfTrac for CCUS Monitoring & Assurance

- Regulation requires CO₂ plume monitoring to ensure safe containment of injected CO₂
- Strategically placing monitoring wells can provide warning and provide data for model calibration
- E.g., before any CO₂ injection, start with FloTrac nanoparticle tracer #1, any detection of FloTrac tracer #1 in a monitoring well gives warning
- During CO₂ injection operation, periodically adding different unique FloTrac nanoparticle tracer in CO₂, tracer monitoring provides data for CO₂ plume monitoring, model calibration and assurance.

Flow profiling technologies comparison

	Fiber Optic (DAS & DTS)	Production Logging (PLT)	Chemical Tracer	QuantumPro's FloTrac Tracer
Type of technology	Downhole fiber	Production Logging	Chemical Liquid Tracers	Nanoparticle Tracers
Temperature limits	Up to 700F	Up to 700F	Up to 400F	Up to 2,000F
Detection accuracy	Very High	Medium	Low	Very High
Production profiling timeline	Long-term	Short-term	Middle-term	Long-term
Deployment requirements	Downhole with completion	Intervention with logging	Multiple tracers per Stage	Single tracer per stage
Mobile lab with onsite analysis	No	No	No	Yes
Results turnaround time	3 weeks	2 weeks	3 weeks	Near real-time
Precision in “frac hits” mapping	No	No	Medium	Very High
A.I. and ML enabled optimization	No	No	No	Yes
Cost to E&P Operators	Very High	High	Medium	Low

~ 98% of wells have no stage-by-stage production profile information!

Some Of Our Clients

The ExxonMobil logo, featuring the word "Exxon" in red with a stylized "X" and "Mobil" in red.The ConocoPhillips logo, featuring a red chevron symbol above the word "ConocoPhillips" in black.The eog resources logo, featuring a red flame-like symbol to the left of the word "eog" in bold black letters, with "resources" in a smaller black font below it.

You can find us at LinkedIn and website:

www.quantumprot.com