

SINGLE WELL INJECTION-WITHDRAWAL TRACER TESTS FOR PROPPANT DETECTION



TECHNOLOGY READINESS LEVEL: 2

US PATENT PENDING

CONCEPT AND APPLICATION HAS BEEN FORMULATED

TECHNOLOGY SUMMARY

A large question preventing optimal natural gas production from "hydrofracked" shales is how far proppants, injected to keep shale fractures open, move into the gas-bearing shales. Knowing precisely where injected proppants go in the subsurface is the first step to optimizing the spacing of hydrofrack jobs. Sandia researchers propose that subsurface proppant distribution can be imaged using single-well tracer techniques. By analyzing the lag time in appearance between interacting and inert tracers in hydrofrack flowback waters appearing at the wellhead, the extent of proppant movement can be estimated. The approach requires no new drilling and involves no hazardous chemicals.

POTENTIAL APPLICATIONS

- Oil & Gas Production
- Geothermal Energy

TECHNOLOGICAL BENEFITS

- Increased gas production
- Better reservoir management

TECHNOLOGY INQUIRY?

For more information or licensing opportunities contact us at

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Refer to SD # 11938

or visit

https://ip.sandia.gov



