



 **Nine**

**HIGH-SALINITY,  
HIGH-PERFORMANCE PACKERS**



## LEADING THE PACK IN COMPLETIONS

Nothing is predictable in the oilfield. Maximizing production and minimizing costs is a balancing act. In challenging, unconventional environments, it's important that you have a partner who understands how to get the job done efficiently and effectively. Nine Energy Service is that partner.



# PROOF OF PERFORMANCE

Nine boasts a proven track record of successfully running more than 3,000 liner packer assemblies, 13,000 frac sleeves, and 64,000 swell packers and hydro-mechanical packers.

## TRUSTED PARTNERS

Anadarko Petroleum

Carrizo Oil & Gas

ConocoPhillips

Continental Resources

EOG Resources

Hess Corporation

Marathon Oil

Oasis Petroleum

OXY

Samson Resources

SM Energy

Statoil

XTO Energy

Zavanna

# TIME EQUALS MONEY. SAVE BOTH.

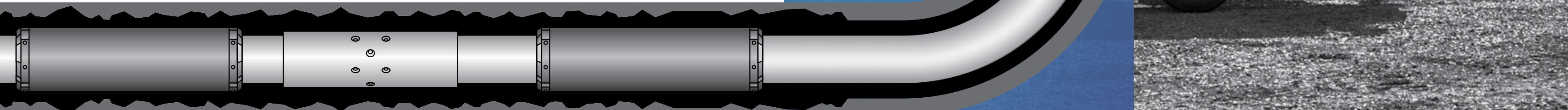
Fluid change out costs time and money. Our Swell Seal Packer is designed to cut that time practically in half. What's more, our product delivers tailored deployment times, high swell volumes, exotic brine compatibility, and oil/water/combo elements.

## FEATURES

- Available in water, oil and hybrid reactive rubber compounds
- Elastomer is bonded to the mandrel—integral assembly
- Element lengths up to 30 feet
- Approximate rating of 1,200 psi/1 foot of elastomer
- Available in API mandrel sizes and grades
- Casing weight compatible with liner
- Casing thread compatible with liner
- Custom rubber diameters for specific applications
- Provides for adequate run in hole time
- Reacts quickly when on depth
- Temperature range of 100° F to 360° F (dependent on type of compound)

## APPLICATIONS

- Multi-stage fracturing
- Multi-lateral isolation
- Well construction
- Aquifer protection
- Micro-annulus control
- Primary isolation
- Solid expandable tubulars
- Completions
- ICD/screen/expandable screen isolation
- Reservoir compartmentalization
- Acid stimulation
- Slotted/pre-drilled liners
- Inflatable/mechanical packer back-up



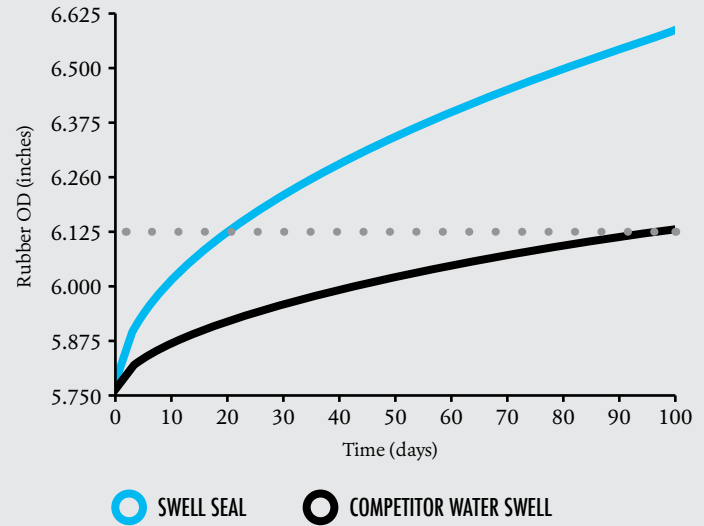
# NINE: SOLUTIONS THAT ARE SECOND TO NONE

At Nine Energy Service, we don't offer off-the-shelf solutions. We customize completion solutions for each product, and provide the tools and knowledge to deliver the lowest costs and highest efficiencies.

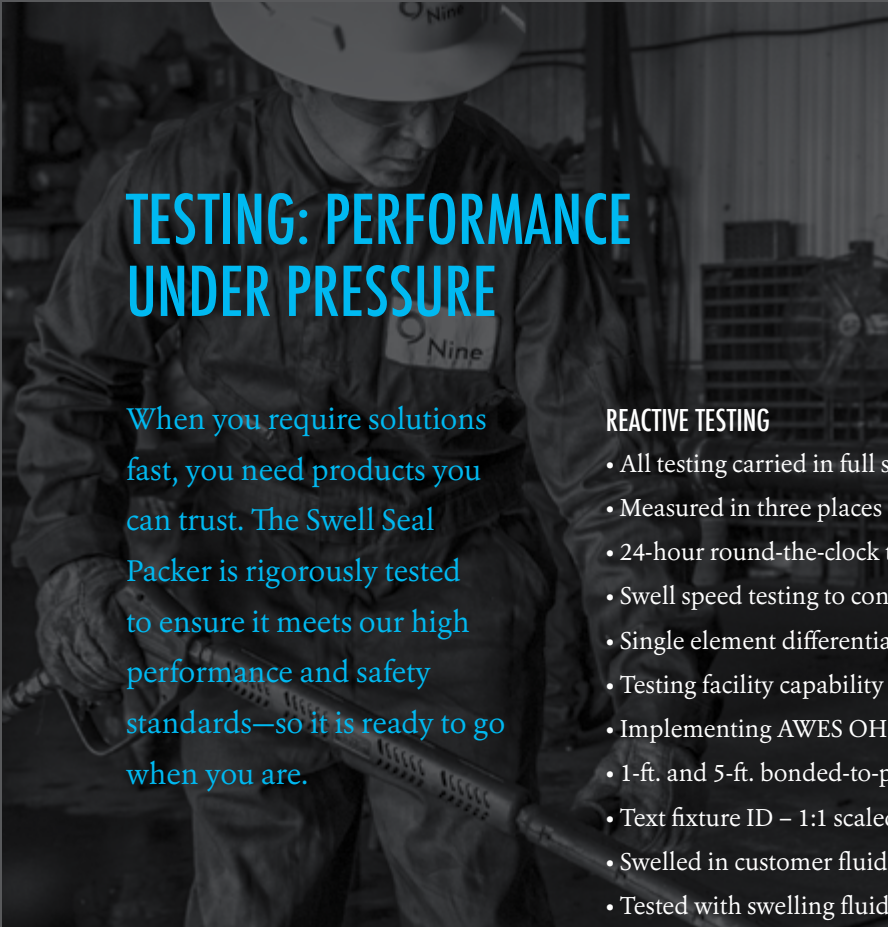
Nine is the first company with a 'high-salinity' swellable packer in the Bakken. Our custom-made packers provide swell times that are twice as fast as our competitors in high salinity fluids. While most swell packers require changing out fluids for fresh water, ours swells in fully saturated brine.

This unique capability eliminates the need for hauling and storing freshwater and disposing of wellbore fluid, while saving significant time on the rig. Our product also provides stable performance in fresh water and oil based fluids with no loss of performance and final swell volume.

PERFORMANCE OF WATER SWELL AT 158°F IN 26% w/v NaCl



- .....
- Custom-made swellable packer designed for each application
- .....
- Up to 26 percent salinity / Fully saturated brine
- .....
- 295 percent swell volume
- .....



# TESTING: PERFORMANCE UNDER PRESSURE

When you require solutions fast, you need products you can trust. The Swell Seal Packer is rigorously tested to ensure it meets our high performance and safety standards—so it is ready to go when you are.

## REACTIVE TESTING

- All testing carried in full scale where possible
- Measured in three places every hour until required OD seal is met
- 24-hour round-the-clock testing
- Swell speed testing to confirm safe deployment window
- Single element differential pressure testing
- Testing facility capability up to 20,000 Psi/up to 400°
- Implementing AWES OHZI Recommended Practices
- 1-ft. and 5-ft. bonded-to-pipe test element mandrels – 1:1 scaled to base pipe
- Text fixture ID – 1:1 scaled to packer seat
- Swelled in customer fluid or approved alternative at required temperature
- Tested with swelling fluid, single-end, at temperature with electronic data acquisition
- 1-ft. and 5-ft. results allow for interpolation
- Current process can be adapted to include 10-ft.+ bonded-to-pipe test mandrels



[NINEENERGYSERVICE.COM](http://NINEENERGYSERVICE.COM)