



Nine

GO FURTHER WITH  
ADVANCED CEMENTING  
SOLUTIONS & SERVICES



# SUCCEED IN THE MOST COMPLEX FORMATIONS WITH ADVANCED SERVICES

Unconventional shale plays are demanding deep, forward-thinking expertise to maximize production. Nine Energy Service has the equipment, the technology and the people to support you with customized cementing solutions in a way no other company can.

# SOLVE CEMENTING CHALLENGES WITH SMART APPROACHES

Nine puts your cementing project on the right path, right now. Our cementing experts look at your project holistically — your geologies, job parameters, challenges and goals. From there, we work directly with you to develop customized solutions using our R&D Laboratory and advanced technology for maximum efficiency.

## ADVANCED EQUIPMENT

Our modern fleet is built for job efficiency. Full-sensor double cement pumps, 100% backup redundancy on hydraulic mixing systems, upright cement bins, 100-barrel batch mixers, full-range cement bond analysis, pump down spreads – we have the right assets to reduce risk and deliver project excellence.

## OPTIMAL EXECUTION

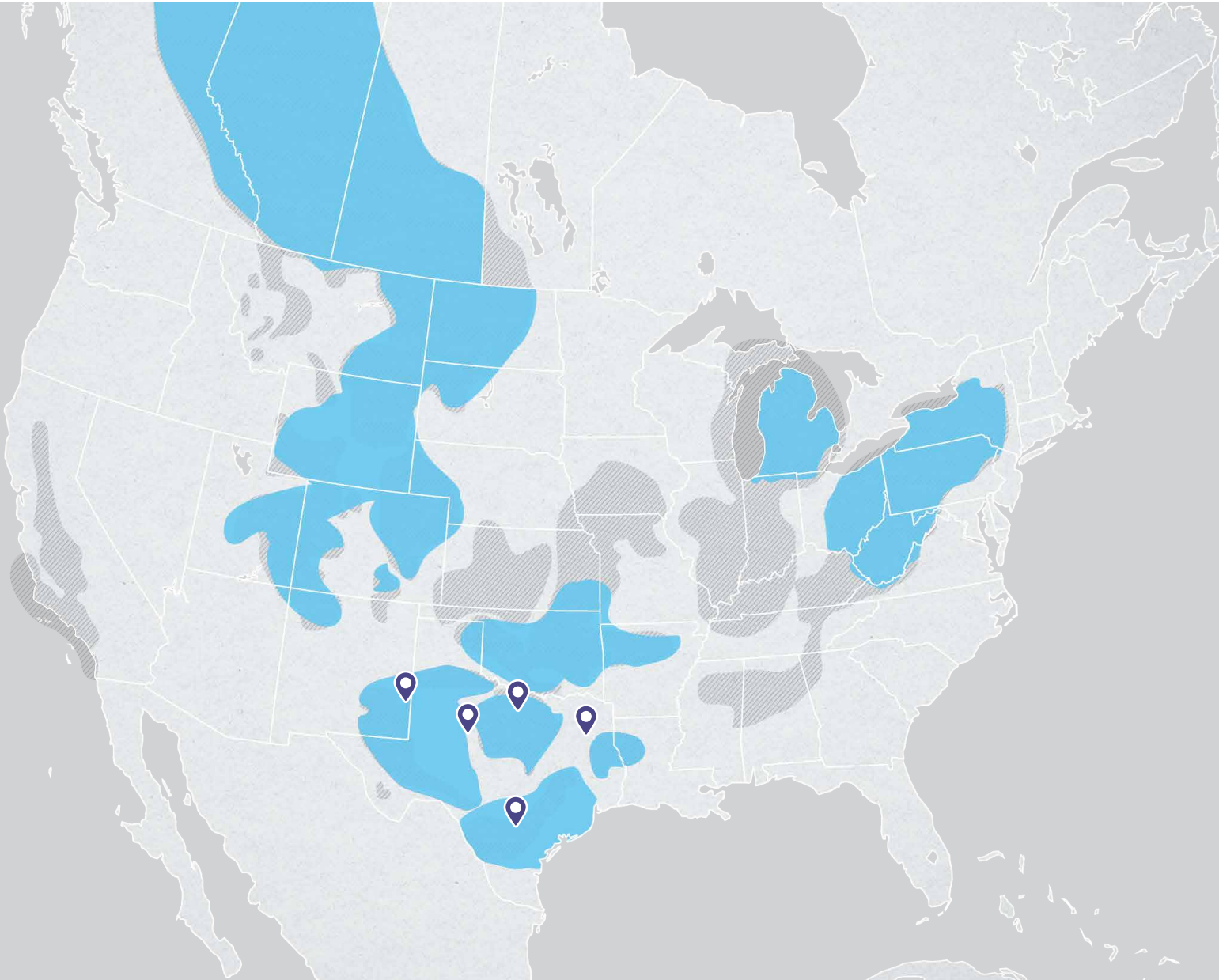
Utilizing the latest modeling software, our cementing engineers design all elements of your job, from mud displacement to flow dynamics to pumping schedules. Then we work with you to execute that model to perfection, always with the goal of achieving the highest levels of efficiency, safety and success.

## R&D LABORATORY

Our technicians and engineers work around the clock to develop and test advanced slurries to API specifications and promptly deliver the results to you—all to create the right properties for optimal performance in your particular formations.

# CEMENTING FACILITIES & OPERATIONS

Our cementing facilities are strategically located in the Permian, Eagle Ford, Barnett, and Haynesville basins to provide our customers with rapid response time for their operations day or night— available 24 hours a day, seven days a week.



~3% OF OVERALL REVENUE COMES FROM OUTSIDE NAM<sup>1</sup>

- Service Coverage Area and Revenue by Region<sup>1</sup>
- Major Unconventional Basins

📍 Locations

<sup>1</sup> YTD as of 12/31/2018 and pro forma for Magnum acquisition

## RELIABLE

- Requires only a 6-hour callout time
- 98% on-time delivery rate
- Quote vs. invoice transparency
- Fully staffed lab, bulk plant, shop, and office with 75 total employees providing excellent service quality

## WELL-MAINTAINED EQUIPMENT

- Patriot Cement Pump 1, 100 HP and automatic density control allow for high pump rates while maintaining cement quality
- Wi-Fi connectivity for remote data view
- Batch mixers, bulk trucks and cement freuhaufs

## TECHNICAL

- Engineering staff for technical guidance
- Rebound shallow single-stage intermediate solution
- Trident-deep single-stage intermediate solution
- FlowLOK expansive and rapid transition production cement
- 8–10 lb/gal bead slurries

## OPEN 24/7

- Double-sided bulk plant (Hobbs, Sweetwater, and Pleasanton)
- State-of-the-art laboratory
- Full shop with five maintenance bays

## R&D LABORATORY

Fully staffed 24/7 by qualified technicians and engineers, our facility is capable of designing and testing any cement slurries currently used in the industry. Utilizing the latest equipment, all tests are performed to API specifications and results are delivered promptly to our customers. Tests include:

- Thickening Time Testing
- Comprehensive Strength Testing (destructive and non-destructive)
- Static Gel Strength Testing
- Dynamic settling
- Stirred and static fluid loss
- Fluid rheology
- Free fluid and settling
- Mud/Spacer/Cement compatibility
- Spacer wettability

# MORE POWER = MORE PRODUCTIVITY

1,100

## HYDRAULIC HORSEPOWER

Cementing power at a full gallop—the Patriot is capable of pulling some very serious weight.

With the Patriot, you can work smarter and faster while saving on maintenance capital. Nine has built a cementing unit to accommodate faster pumping rates, reducing downtime along with the likelihood of equipment failure. Delivering 1,100 hydraulic horsepower, the diesel-driven Patriot is the most powerful cementing unit in the U.S. land market.

- Faster pump rates reduce cycle times and reduce risk to assets and personnel
- Larger, more powerful centrifugals for mixing water, recirculation, and increasing the mixing energy (45% larger than others on the market)
- Fewer valves and connections decrease risk and training time while eliminating potential points of failure
- 50 percent more deck space coverage gives operators room to perform necessary job functions and protects them from outdoor elements
- Wireless transmission capabilities for remote job sites enable real-time data transmission and status updates

### DOUBLE CEMENT PUMPS

Newly fabricated trailer-mounted units feature:

- Data acquisition monitoring system
  - 2 Cummins QSK engines (rated @ 665 brake HP)
  - 2 Allison 6061 transmissions
  - 2 Demay HD-500 triplex pumps with 4.5" plungers (11,200 PSI)
  - 240 feet of 2" Fig 1502 treating iron
  - 2 4x5-foot water-suction centrifugals
  - 2 5x6-foot recirculating centrifugals
  - Recirculating mixing system with an 8-barrel tub
  - Pumps, hydraulic systems, mixing pumps and electrical systems for 100% redundancy
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### UPRIGHT CEMENT BINS

Safe, cost-effective and operationally friendly units allow for on-site cement storage with a reduced footprint.

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### MODELING SOFTWARE

To optimize the operational safety and efficiency of your job, our experienced engineers employ the latest modeling tools available, including CemPro+, ensuring your job is executed right the first time. Our software accurately calculates:

- Temperature modeling
- Mud displacement
- Pressures
- ECDs
- Flow dynamics
- Rheological properties
- Pumping schedules

### BATCH MIXERS

100-barrel mixers featuring multiple centrifugal pumps for:

- Consistent mixtures of numerous spacers
  - Consistent weighted cement slurries
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### CEMENT BOND ANALYSIS

- Traditional and Radial Cement Bond Logging Tools
  - Ability to perform analysis on 4.5" to 20" casing sizes
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### PUMPDOWN SPREADS

Trailer-mounted units feature:

- Cummins QSK 50 V-16 diesel engine coupled to a twin-disc torque converter and twin-disc transmission
- Gardner Denver 2500 HP quintuplex pump with 4.5" YWS fluid ends
- Remote-control digital data acquisition system
- Approximately 300 feet of 3" treating iron and swivels on separate trailer accompanying each unit





BLEND 27

# LIGHT DENSITY, HEAVY-DUTY STRENGTH, PUMPING PERFECTION

40%

## STRONGER THAN SIMILAR DENSITY SLURRIES

Building faster strength, pound for pound, while solidifying your well integrity.

Blend 27 is an advanced slurry for harsh downhole conditions that allows you to achieve lighter density without compromising cement integrity—saving you significant material costs.

- Formulated to allow a higher water ratio in the slurry delivering the light density desired for certain shale formations and job designs
- Builds strength 60% faster and has 40% higher compressive strength than slurries of similar density
- Successfully pump across depleted zones without collapsing the formation and compromising the integrity of the cement job, casing, or the well itself
- Contains a Young's Modulus value of 6.24 for greater elasticity and improved blend ductility compared to conventional cement

# PERFORMS WHEN YOU NEED IT, WHERE YOU NEED IT.

The MS Spacer system reduces cement losses and formation damage from filtrate migration while eliminating the need to compromise on thickening times and compressive strength.

- Uses ultralow invasion fluid technology to form a strengthening barrier at the wellbore wall , retaining its integrity and permeability for optimized production
- Reduces slurry fallback after placement, preventing induced losses and eliminating costly remedial cement jobs
- Enables the use of standard slurry designs and densities where highly extended or special lightweight slurries were previously required
- Enhances hole cleaning prior to cement placement, effectively removing gelled drilling fluid by optimizing flow regime, density and chemical enhancement
- Prevents cement fallback after placement, providing predictable and effective isolation
- Allows increased ECD at casing depth in wells where the fracture gradient limits design density of the cement
- Compatible with virtually all cement systems and drilling fluids

### FAST-ACTING RESIN TECHNOLOGY

Resin is a common fluid system used in oil well remediation. It is known in the industry to have superior mechanical performance when compared to conventional or micro cement systems, and a price tag to go along with that.

- Customizes the chemistry for specific well conditions allowing operators to reduce conventional resin wait times by up to 75% (depending on the application)
  - Available in four bbl kits for jobs up to 235°F and inside of casing up to a 9.625-inch ID
  - Can run at densities from 9.0 lb/gal up to 16.0 lb/gal and provides a zero-permeability seal
  - Fluid system is applicable from 70°F up to 300°F and can be blended with cement to significantly improve the mechanical properties of the cement slurry
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### FLEX 50H

Flex50H is a versatile, advanced polymer additive optimized for maintaining slurry stability and fluid properties in a wide range of applications. The highly engineered additive can be used in high-temperature applications for slurry stability, lower ECDs and outstanding fluid loss. In higher temperatures, Flex50H is one of the only polymers that maintain cement integrity, especially during long periods where the fluid may be static, such as the opening of an expandable liner hanger.

- Exhibits 16x more acid resistance than conventional cement slurries and can be used in applications with high H<sub>2</sub>S content and harsh well bore conditions, such as disposal wells
- Reduces risk of radial cracking with improved ductility compared to conventional cements
- Used in narrow annular wellbores up to 370°F
- Helps preserve sensitive formations and decreases surface viscosity making cement easier to mix ensuring a better quality cement job
- At typical loadings, Flex50H will provide a fluid loss value of 50ccs or less

### FLOWLOK

FlowLOK is a specialized combination of additives that gives cement slurries the enhanced ability to resist gas and water invasion during and after placement.

- Has controlling properties such as post set expansion, static sel strength development, zero gel time and fluid loss
  - System initially developed to control shallow gas flows in the Potash mines area but has since been applied for shut off of formation water and injector well cross communication in the Delaware and Permian basin with marked success
  - Can eliminate sustained casing pressures
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### NINE LITE HOLLOW GLASS SPHERES (HGS)

Nine Lite Hollow Glass Spheres (HGS) is a lightweight beaded cement material used to achieve low-density slurries, which are needed in all areas that have low fracture gradients and/or issues getting fluids to the surface. Nine Energy has successfully pumped Nine Lite HGS for hundreds of customer jobs across several basins in Texas, Oklahoma and New Mexico.

- Achieve low densities, high compressive strengths
- Variety of crush strengths up to 8,000psi+ can accommodate any situation
- Ensures beads are stable throughout an entire job and allows the design density at the surface to be the final density down-hole
- Can formulate density to be anywhere between 8.4–13.2 PPG, with a final compressive strength from 150 psi to greater than 2000 psi
- Combining our lightweight cement and Nine Lite HGS can reduce differential pressure and allow for elimination of lost circulation and reduction in formation damage

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SAFETY IS OUR PRIORITY

# OUR COMMITMENT TO HEALTH, SAFETY AND THE ENVIRONMENT REMAINS ABSOLUTE.

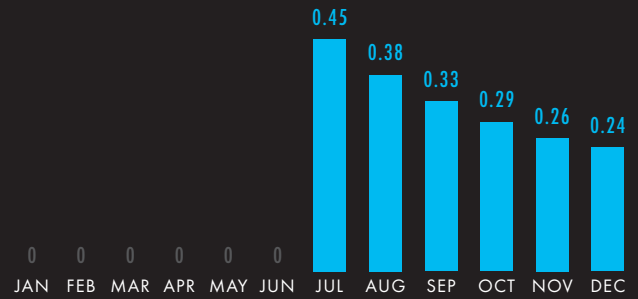
We'll never compromise the safety of our employees or other on-site professionals. We continually roll out industry-accepted best practices, which include safety leadership training and incentives for responsible performance.

We also mandate compliance with all laws, standards, rules and procedures. We emphasize individual responsibility while encouraging mutual respect—to each other and to the communities in which we operate.

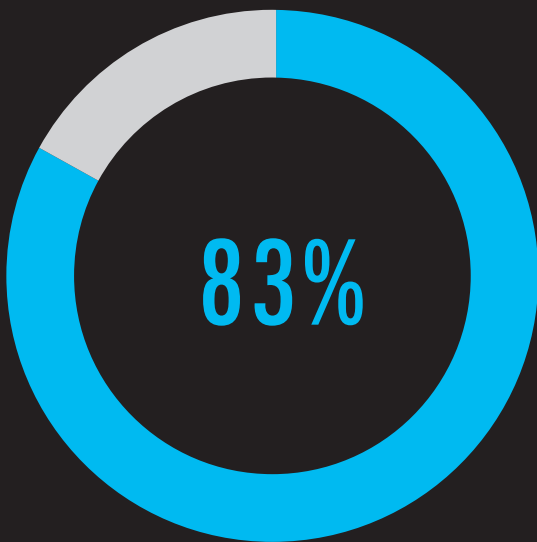
YEAR TO DATE  
TOTAL RECORDABLE INCIDENT RATE (TRIR)

↑ 0.24

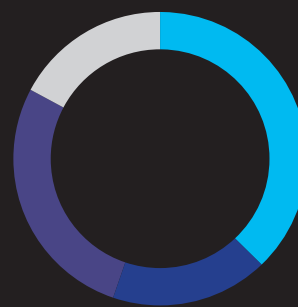
TRIR



LMS TRAINING



INCIDENT CLASSIFICATIONS



- 11% MVI
- 8% STOP WORK
- 5% INJURIES
- 5% NEAR MISS
- 0% PROPERTY DAMAGE
- 0% SECURITY
- 0% ENVIRONMENTAL

INJURY CLASSIFICATIONS




- 5% FIRST AID
- 0% RESTRICTED DUTY
- 0% FATALITY
- 0% MEDICAL TREATMENT
- 0% LOST TIME




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