



# 01

## ABOUT LAYNE

- With our origins dating to 1882 as a water-well drilling company in South Dakota, Layne has evolved into one of the world's largest, most experienced water and mineral service providers.
- Layne's expert personnel thoroughly evaluate the geologic setting and develop a specialized management plan to ensure that the client goals can be met on time and on budget.
- With human and environmental safety as top priorities, Layne is also noted for its close working relationships with clients in every phase of the project and beyond.

Layne is a water management, mineral exploration and drilling company.

We provide responsible infrastructure solutions for water and minerals, while offering innovative, sustainable services with an enduring commitment to safety, operational excellence, and client satisfaction.

In June 2018, Layne became a wholly-owned subsidiary of Granite Construction, Inc.

# 02

## SAFETY

- Safety is about people, not projects.
- Safety is about stories, not statistics.
- Safety is about connecting people.
- Safety is deeply personal.

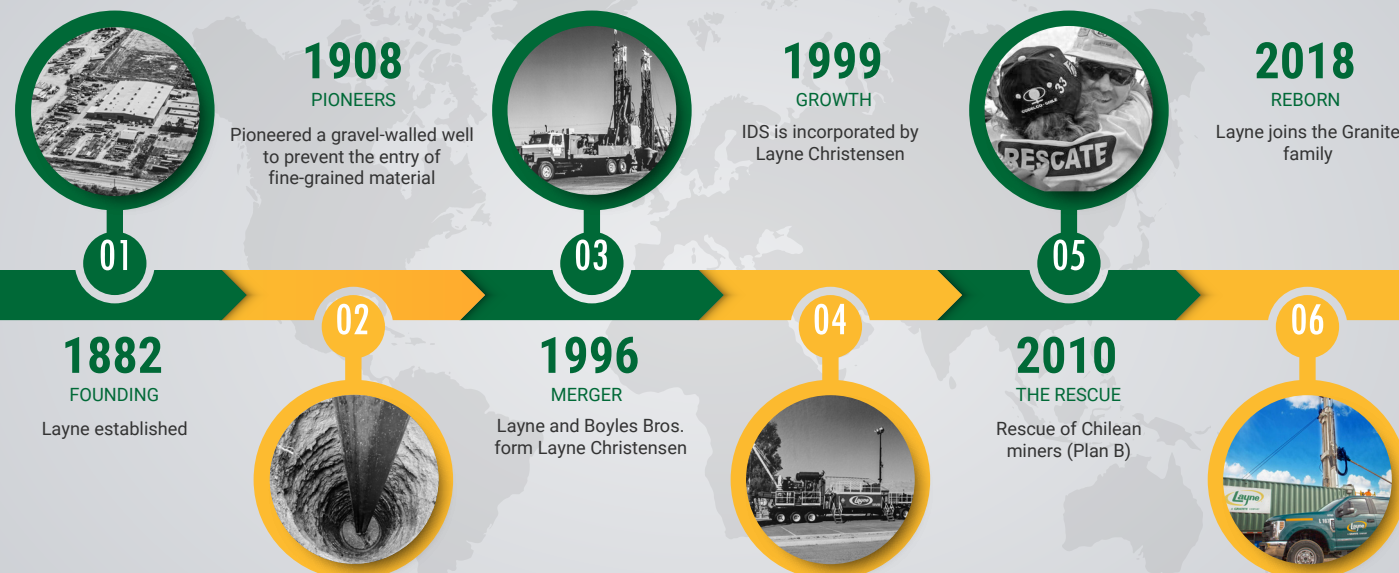
Our safety culture is underpinned with relationship-based training, shared knowledge, and engagement at every level of our organization.

An authentic commitment from all will elevate our program, ultimately achieving safety, success and zero injuries.

At Layne, we are responsible for making safe choices not only for ourselves, but for those around us. We must take care of each other.



## OUR STORY

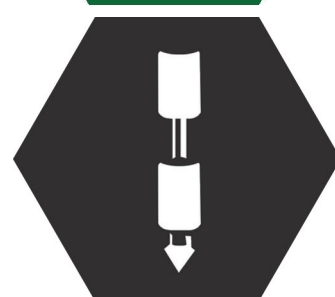
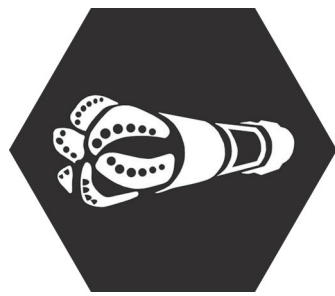




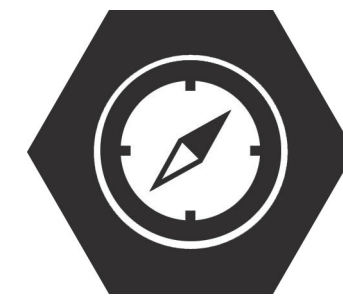
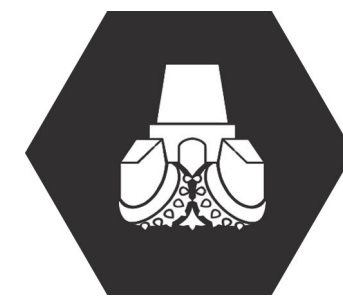
# 03

## OUR SERVICES

- Dual wall reverse circulation
- Flooded reverse
- Coring
- Directionally steered core / rotary wells
- PQ-3, HQ-3, NQ-3 triple tubes/Lexan liners
- Oriented core with ACT III system
- Wireline packer with single and zone testing
- Mechanical packer testing
- Mud rotary W/ SPT testing
- Piezometer and TDR cable installations
- Casing advance
- Down-hole hammer
- Conventional and Air Rotary
- Directional drilling
- Dual wall percussion hammer
- Stratex / Odex casing advance systems



- Water Treatment and Ranney® Collector Wells
- Electrode installation
- Pump Service and Maintenance
- Well Rehabilitation
- Pump System Design and Installation
- Nonmagnetic downhole gyro deviation surveys
- Directional drilling services
- Geophysical logging services
- Rental downhole instrumentation
- Data quality control
- Site work, grading, and paving





# OUR FLEET

## CORING

# 04



RIG NAME	PULLBACK (LB)	STROKE (FT)	DEPTH (FT)
Schramm T685WS	96,000	27	3,000
Epiroc TH75	75,000	27	2,200
Epiroc TH100	65,000	25	2,100
Ditch Witch JT 4020	40,000	15	1,500
Foremost MPD1500	38,000	25	2,100
Foremost Prospector W750	38,000	25	1,500
Schramm 450GT	30,000	25	1,500



## REVERSE CIRCULATION

RIG NAME	PULLBACK (LB)	STROKE (FT)	DEPTH (FT)
Schramm T685WS	96,000	27	3,000
Epiroc TH75	75,000	27	2,200
Epiroc TH100	65,000	25	2,100
Ditch Witch JT 4020	40,000	15	1,500
Foremost MPD1500	38,000	25	2,100
Foremost Prospector W750	38,000	25	1,500
Schramm 450GT	30,000	25	1,500
Atlas Copco T3W-70K	70,000	27	2,000



# CONVENTIONAL, AIR & REVERSE ROTARY

RIG NAME	PULLBACK (LB)	DIAMETER (IN)
Challenger 360	300,000	8 - 42
Challenger 320	70,000	8 - 42
Schramm T200XD	200,000	7 - 36
Schramm T130XD	130,000	7 - 36
Atlas Copco RD20	120,000	7 - 28



# SPECIALTY



RIG NAME	PULLBACK (LB)	DIAMETER (IN)	DEPTH (FT)
Foremost DR 24	74,000	6 - 24	1,200
Foremost AP-1000 Hammer	20,000	3 - 12	500







## EXPLORATORY DRILLING AND FORMATION ANALYSIS

Layne offers drilling methods and sampling techniques for situations requiring a less conventional drilling approach.

**SERVICE OFFERINGS:** Specialized Drilling in Complex Geologic Settings, Environmental Investigation & Remediation, Mine-Dewatering, Utility Boreholes, Hydrogeological Investigations, Geotechnical Investigations, Aggregate Exploration, Soil and Water Sampling, Waste Rock/Tailing Investigations.

**AVAILABLE DRILLING METHODS:** Dual Wall Reverse Drilling, Flooded Reverse Drilling, Dual Wall Percussion Hammer Drilling, Conventional Rotary Drilling.



## PUMP SYSTEM DESIGN AND INSTALLATION

In the pump repair business for over 100 years, Layne combines its expertise and experience with the latest technology to provide a full line of pump products and services. Long-standing relationships with many equipment providers allow Layne to design, furnish, and install the most appropriate and efficient pumping solutions for your water system.

**IN-HOUSE PUMP DESIGN AND ASSEMBLY**  
Layne owns and operates its own machine shop facilities and stocks an array of bowl assembly components. This allows Layne experts to quickly design and build custom pumping assemblies to meet the exact needs of a pumping situation.



## WATER TREATMENT

Serving clients throughout the United States, Layne has been developing practical approaches to water treatment systems for decades, having designed, manufactured and installed thousands of treatment units. Layne combines innovative technologies with experienced personnel to remove water contaminants and optimize water treatment center operational efficiency.

- Nitrate and Perchlorate Removal
- Ion Exchange Systems
- Advanced Amberpack™ and Packed Bed Low Waste
- VOC and Radon Removal
- Air Stripping Systems
- Arsenic, Iron, Manganese, and H2S Removal
- LayneOx™ (Coag/Filtration) and LayneRT™ (Adsorption Media) Water Purification
- RO, UF, CCD
- Chrome VI, PFOS Solutions



## RANNEY® COLLECTOR WELLS

Ranney specializes in the design and turnkey construction of high capacity water supply systems including radial collector wells, surface water intakes, infiltration galleries, riverbank filtration, and sea water systems. Collector wells typically combine high yields with lower operating and maintenance costs. Complete hydrogeological services for optimum siting are also available. From the initial consultation and evaluation to construction, our professionals will create the most cost effective and efficient system to deliver water in the quantity and quality you need. We can provide design-build or complete turnkey services to meet your project specifications for municipal, industrial, and utility needs.



# WELL DESIGN AND CONSTRUCTION

No single method of well construction suits all purposes. Layne considers not only geologic factors, but the intended use and available budget. Our 139 years of experience designing and constructing wells, combined with present day technology, allows us to determine the best method and use of equipment for your drilling needs.



# PUMP SERVICE AND MAINTENANCE

With our knowledgeable staff and highly equipped machine shop, Layne offers complete in-house repairs of your pumping equipment. Layne can select the most efficient new pump equipment for your application. Failure of pumping equipment can lead to lost revenue and may create a critical situation. Our service crews are available to respond quickly and minimize downtime.

## IN-HOUSE REPAIR SHOPS

Repair and maintenance is conducted at Layne’s wholly owned machine shop facilities. Keeping the repair and maintenance of your pumping equipment in-house allows Layne to uphold firm quality controls throughout the repair process.

## EMERGENCY SERVICE

Dependable service means peace of mind for you. Sometimes emergencies happen on weekends or holidays. Layne teams are available 24 hours a day, 7 days a week, 365 days a year to assist in any well or pump issue, whether or not Layne originally installed the well or pumping equipment.

## PREVENTATIVE MAINTENANCE

Layne believes in a twofold approach to service—problem solving and problem prevention. Utilizing the problem prevention method will likely avoid any unexpected shutdowns or costly repairs.

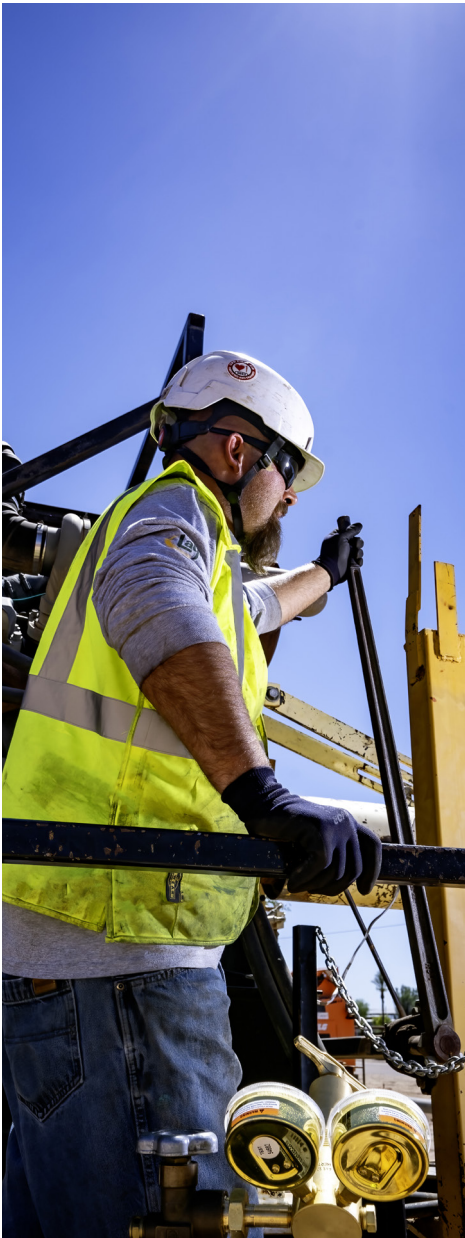
## SERVICES

- Pump Equipment Design and Installation
  - Lineshaft Turbine
  - Submersible
- High HP Medium Voltage Applications
- Pump Equipment Maintenance and Repair
- Electrical Drive Installation and Maintenance
- Predictive Well Maintenance Programs
- Performance Testing

# WELL REHABILITATION

Even under normal operating conditions a well may experience diminished biological activity or mechanical plugging calling for the utilization of chemical treatments, mechanical treatments, or specialized well redevelopment methods. Using one or a combination of these techniques, we can offer the best opportunity to restore a well’s capacity.

- Mechanical Methods: Boreblast II®, Sonar Jet, Roto-Scrub, Aqua Freed
- Traditional Mechanical Methods: Brush, Bail, Dual Swab Airlift, and Test Pump Development
- Chemical Methods: Innova Deep Well Chemistry, QC-21, Layne Oximate™
- Self-Contained Mobile Treatment Units (CTU)
- Well Testing Services: Diagnostics and profiling on well conditions, flflow, and water quality
- Logging Services: Video, caliper, electrical, and gamma ray logging
- Well Development and Redevelopment
- Well Abandonment







International Directional Services (IDS) is a premier provider of nonmagnetic downhole gyro deviation surveys, directional drilling services, geophysical logging services and rental downhole instrumentation to the minerals, energy, and civil construction markets.

# ABOUT US

**As a key partner to many of the world's largest clients, IDS is trusted to provide its services on surface and underground, across the globe.**

- **PRECISE BOREHOLE STEERING**
- **ACCURATE BOREHOLE SURVEYS**
- **GEOLOGICAL INTERPRETATION**
- **SURFACE AND UNDERGROUND APPLICATIONS**



## DIRECTIONAL DRILLING SERVICES

IDS pioneered the use of directional drilling in the U.S. hard rock mining industry several decades ago. Methodology enhancements and equipment development have led to a premier service across a wide range of applications in mining, geotechnical construction, municipal projects, and energy sectors.

IDS provides services for directionally drilled core and rotary boreholes, including coretails and precollars, in surface and underground applications to depths limited only by rig and pump capacity. IDS utilizes the latest MWD technology when applicable to expedite drilling processes and provide the highest level of accuracy available.

## DEVIATION

IDS maintains a large mobile surveying fleet with an extensive suite of the latest instrumentation to provide high quality deviation survey services for complex projects with strict accuracy requirements.

### TECHNOLOGIES USED

- North-Seeking Gyro
- Surface Recording Gyro
- MEMS Gyro
- Magnetic Instruments
- Continuous Data Collection
- Memory deployable



## GEOPHYSICAL LOGGING

IDS is a key supplier of borehole geophysics services for mining, geotechnical, water infrastructure, and environmental markets. IDS provides geophysical logging services to collect lithological, structural, and hydrological data.

### INSTRUMENTS USED

- Acoustic Measurements (acoustic televiewer)
- Optical Measurements (optical televiewer and borehole video)
- Electric and Magnetic Measurements (normal resistivity, single point resistance, spontaneous potential)
- Fluid Measurements (temperature/differential temperature, fluid resistivity/conductivity)
- natural gamma
- Deviation Measurements (non-magnetic gyro and magnetic)
- Geophysical Data Interpretation







# INFRASTRUCTURE & MINING SERVICES

## MINING CAPABILITIES

Granite Construction has been a leader in mine reclamation and infrastructure solutions in Nevada since 1980. We have been operating in some of the world’s largest mines, side-by-side with mine operators. Across the western United States, we continue to foster relationships with 25 of the world’s largest private mining clients, providing crushing, leach pads, roads and airfields, foundations, reclamation, water management and power services. We partner with Nevada Gold Mines (Barrick & Newmont), ASARCO, BHP Billiton, Coeur Mining, Davy McKee Corporation, Freeport McMoRan, Kennecott Utah Copper, and Kinross Mining Company. We are also proud to work with our federal government, including the Nevada Department of Environmental Protection, Bureau of Land Management, U.S. Forest Service, and the Department of Energy.



## INFRASTRUCTURE EXPERIENCE

Granite provides infrastructure solutions for public and private clients throughout Nevada. We deliver ideas, innovations, products and services that power today’s mobile society and improve the everyday life of our clients. Granite specializes in high-profile, schedule-driven site development projects, while fostering relationships with stakeholders to ensure project success.

## STRUCTURAL SOLUTIONS

Our structural experts bridge the gap between fundamentals and innovative practices. Solutions include simplifying pier and pylon design to reduce construction costs, streamlining design to improve navigational clearances and design-build for future growth and prosperity. Our scope includes structures, drainage, drilled shafts, maintenance of traffic, shoreline protection, slope stabilization, and demolition/removal.



## TRANSPORTATION INNOVATIONS

For nearly 40 years, Granite has constructed some of the most iconic and complex transportation projects in Nevada, including the SR 28 Lake Tahoe East Shore Trail improving connectivity at Lake Tahoe. From rural roads through Yosemite Valley to high-profile highway expansions, we are experts in advancing roadway systems across the country.



# 05



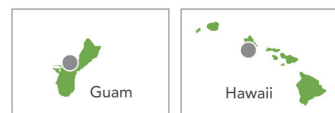
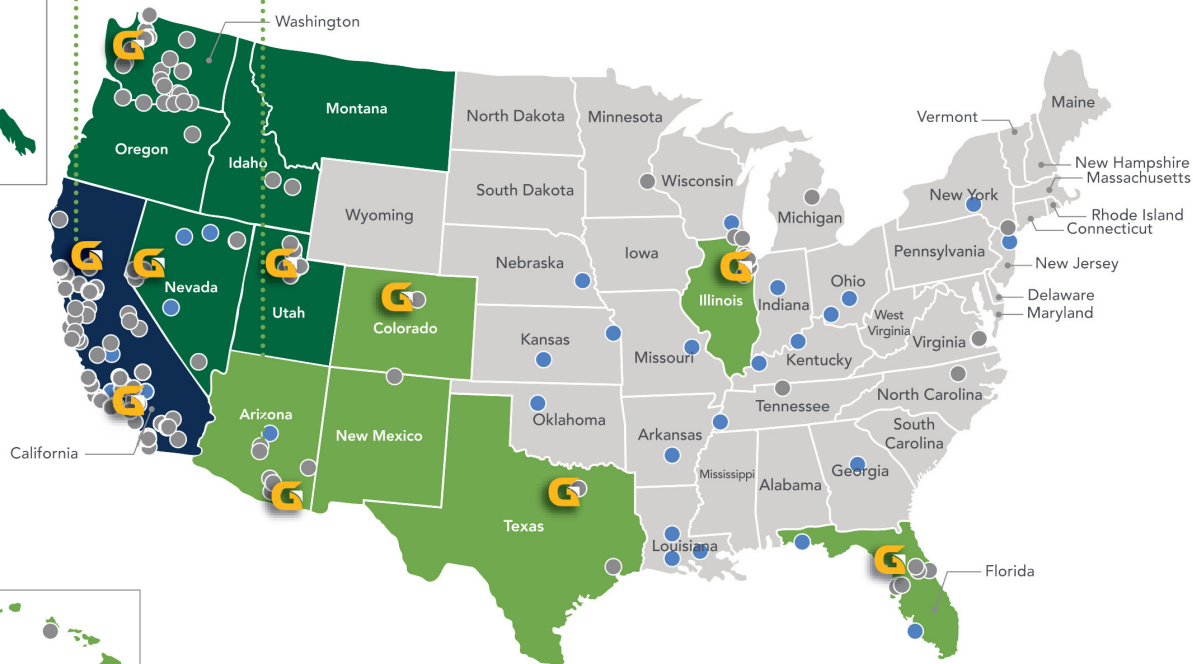
## PARENT COMPANY

Granite Construction Incorporated (NYSE: GVA), America's Infrastructure Company, has a workforce of 9,100 and a combined revenue of \$3.4 billion annually. As an industry leader in the transportation, water resources and mining markets throughout North America, Granite provides infrastructure solutions for construction, program management, alternative procurement, and is a vertically-integrated contractor with aggregate materials reserves throughout the U.S.

**HQ** Granite Construction, Inc.  
585 West Beach St.  
Watsonville, CA 95076

**HQ** Layne  
12030 E. Riggs Rd.  
Chandler, AZ 85249

- California Group
- Mountain Group
- Central Group
- Regional Office
- Granite Office Locations
- Layne Office Locations



**100 YEARS**  
EST. 1922  
**GRANITE**  
IN BUSINESS  
Since 1922

**10K**  
EMPLOYEES

COMPLETED OVER  
**50,000** WATER WELLS



**#7**  
RANKED ENR  
FOR TOP WATER  
TREATMENT CONTRACTOR



**Inclusive Diversity  
2021 Performance**

Female representation:  
**12.6%**

Women in leadership:  
**15.3%**

Persons of color in  
leadership:  
**17.4%**

Inclusion index:  
**70%**

**#8**  
RANKED ENR  
FOR TOP WATER  
SUPPLY CONTRACTOR



**#2**  
RANKED ENR  
FOR TOP MINING  
CONTRACTOR



**NYSE:GVA**  
Publicly Traded Since 1994

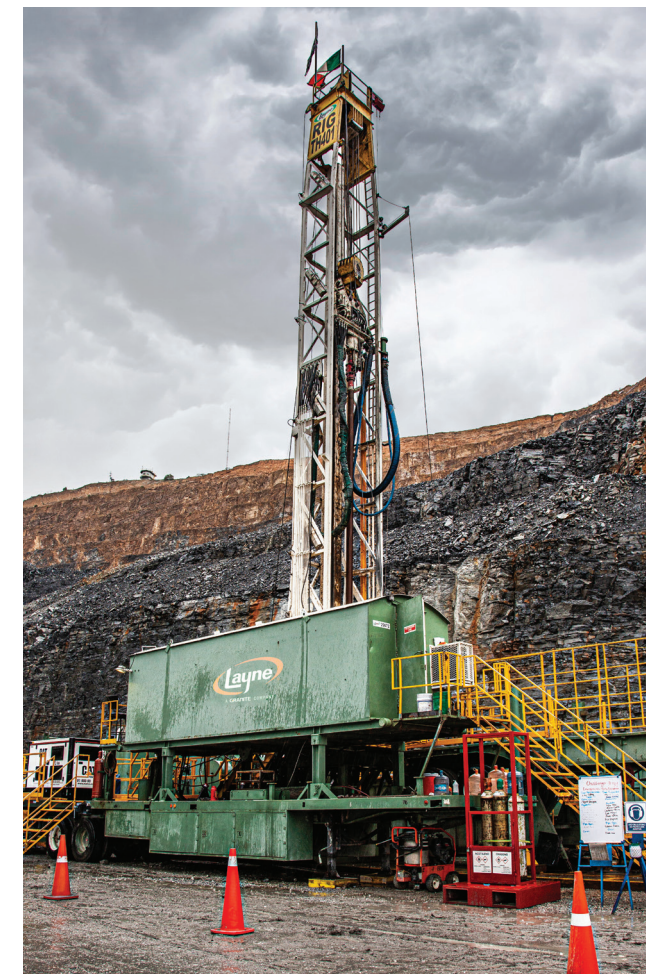
**\$3.5B**  
2021 Annual Revenue



**>60M**  
Meters drilled searching  
for mineral resources  
around the globe.

**0.72**  
2022  
OSHA TRIR

Lowest safety  
record in company  
history.





# CONTACT US



WWW.LAYNE.COM

