



ACT Ltd.
&
Gannett Fleming



Contracting Issues & Contract Responsibilities:

At the current time, **IntelliGrout®** is only being offered on projects where selection is based on a Best Value Selection Process, Sole Source Selection Process, or through Design-Build Projects. Because of the system complexity and its value, services are only considered as a combined Grouting Contractor & Engineer Team comprised of its developers.

Completed ACT/GF Projects

ACT and GF have completed successful projects together for a wide variety of private and public clients including:

- Penn Forest Dam, Bethlehem, PA
- Hunting Run Dam, Spotsylvania County, VA
- Patoka Lake Dam Seepage Remediation, IN
- Clarksburg Post Office Stabilization, WV
- Waterbury Dam Instrumentation Program, VT
- AMTRAK Compaction Grouting, RI

Publications & Presentations Available

1. Wilson, David B., "Balanced Stable Grouts and Computer Monitoring of Grouting," U.S. Army Corps of Engineers Workshop, Nashville, TN, August 29, 2001.
2. Wilson, David B., and Robert T. Saber. "Successes and Failures of Instrumentation Programs." Twentieth USCOLD Annual Meeting and Lecture, Seattle, WA, July 10-14, 2000.
3. Wilson, David, and Trent Dreese. "Grout Curtain Design for Dams." ASDSO Annual Conference, Pittsburgh, PA, September 1997.
4. Wilson, David B., and Trent L. Dreese. "Computer Assisted Grouting and Grout Mix Technology." U.S. Army Corps of Engineers Grouting Workshop, Penn Forest Dam, Bethlehem, PA, May 12, 1998.
5. Wilson, David B. "Advances in Cement Grouting Technology." 17th Central PA Geotechnical Seminar - Emerging Technologies in Geotechnical Engineering, Hershey, PA, April '99.
6. Wilson, David B., and Trent L. Dreese. "Grouting Technologies for Dam Foundations." 1998 ASDSO Annual Conference, Las Vegas, NV, October 11-14, 1998.

IntelliGrout®

In addition to the **IntelliGrout®** System, Gannett Fleming and ACT are prepared to offer the following services:

- Drilling Investigation and Pressure Testing
- Geologic Mapping
- Test Grouting Programs
- Borehole Camera Inspections
- Seepage Analyses & Grouting Design
- Grouting Program Optimization
- Hydrogeologic Modeling
- Monitoring and Control System Leasing and Technical Support
- Grout Mix Design and Testing
- Conventional Contract Grouting
- Design-Build Grouting
- Automated Instrumentation Systems
- Performance Verification and Analysis
- QA/QC Consultation
- Emergency Services
- Design and Construction Consultation and Peer Reviews
- Value Engineering
- Claims and Dispute Services
- Education and Training Services

Call to talk to one of our experts today:



Gannett Fleming, Inc.
Attn: David B. Wilson
207 Senate Avenue
Camp Hill, PA 17011
Tel: (717) 763-7211

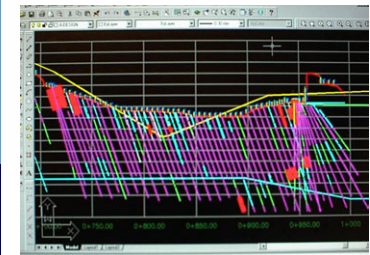


Advanced Construction Techniques Ltd.
Attn: James Cockburn
10495 Keele Street
Maple, Ontario L6A 1R7
Tel: (905) 832-9800

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&

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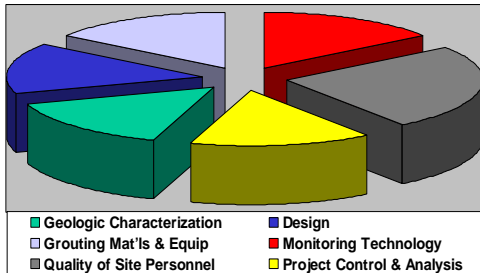


IntelliGrout®

*The Science of
Grouting*



Components of Successful Grouting

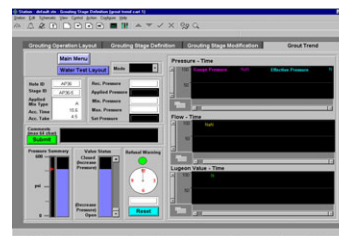


Successful grouting requires best practice in multiple components including geologic characterization, design, materials and equipment, quality of site personnel, monitoring technology and effective project control and analysis. Methods and systems used to monitor and control grouting operations and to perform analyses of grouting effectiveness while the program is underway have been crude, limited and largely unchanged for decades. It is only recently that specialized electronic and computer monitoring systems have become sufficiently powerful and reliable enough for this application. Gannett Fleming, Inc. and ACT Ltd. have, in a quantum leap forward, advanced this technology with development of the first Advanced Integrated Analytical (AIA) System, **IntelliGrout**[®]. **IntelliGrout**[®] is a comprehensive integration of data collection, real-time data display, database functions, real-time analytical capabilities, and CADD.

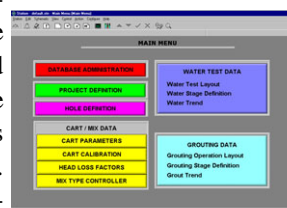


IntelliGrout[®] The Science of Grouting

The **IntelliGrout**[®] system consists of both hardware and software components. The system has been conceived, designed and constructed to enable grouting personnel to easily, thoroughly and completely visualize and understand large amounts of complex data. It has also been designed to provide all the data, documentation, and reports needed to be evaluated the effectiveness of the grouting operations. These unprecedented analytical capabilities are the basis for real-time engineering evaluations that maximize the efficiency of the grouting operations by allowing technically sound and cost effective reductions in grouting programs where possible and the concentration of efforts where they are necessary to satisfy design requirements and special geologic conditions. **IntelliGrout**[®] thus enables grouting work to be performed more quickly, at less cost, and with better quality. In addition, **IntelliGrout**[®] reduces project costs by reducing the required inspection effort. Reports and evaluations that previously required hours and hours of effort to develop can now be developed



IntelliGrout[®] real-time grouting display



IntelliGrout[®] Main Menu

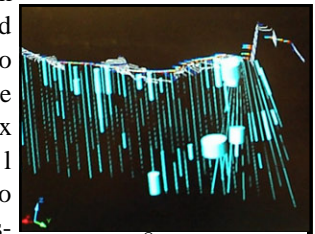
automatically with simple queries of the **IntelliGrout**[®] database. Grouting personnel can quickly and easily determine the status of grouting operations within

specific work areas, evaluate individual groups or types of holes that have permeabilities exceeding threshold values or display which grout holes had water losses during drilling operations.

Hole ID	Station	Drilling Method	Dr	Rate	Press
1	AP33	E30	Rotary Percussive		
2	AP34	E40	Rotary Percussive		
3	AP34	E40	Rotary Percussive		
4	AP33	E76	Rotary Percussive		
5	AS33	E30	Rotary Percussive		
6	AS34	E32	Rotary Percussive		

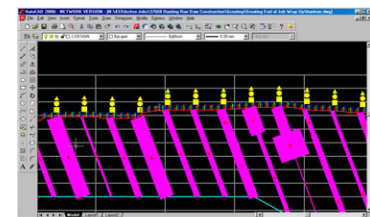
IntelliGrout[®] Standard Queries

Similarly, closure analyses can be performed based on bay numbers, geologic units, depth, or station. In short, the power of **IntelliGrout**[®] lies in its ability to perform instant and unlimited grouting program analyses and to be able to convert these complex numerical analyses into simple, visual color displays.



IntelliGrout[®] 3-D display of permeability test results

Patterns, anomalies, compliance or non-compliance, and areas of special interest are immediately evident to even an untrained eye.



IntelliGrout[®] 2-D display of grout takes

