

when you think grouting, think Groutech
your professional grouting company

WELCOME TO GROUTECH

I WOULD LIKE TO TAKE THIS OPPORTUNITY TO PROVIDE YOU WITH A BRIEF EXPLANATION OF JUST WHO GROUTECH ARE, AND WHAT WE'RE ALL ABOUT...

GrouTech (Aust) Pty Ltd is an Australian owned Queensland Company. We are based in Brisbane. We do however attend to work in all states of Australia and are increasingly being asked to assist with international work. We are professional, efficient, competent & effective in our work.

Our policy is to use only environmentally safe grouting materials. For this reason we predominantly use cement grouts as opposed to chemical grouts. We have developed our company products around handling safe cement grouts.

All of our products can be seen to be extensions or variations of grouting. In particular, we are experts in the controlled pumping of grouts. Our success is due to our professional approach, our experience and our considerable expertise.

In relation to our expertise, our grouts are always placed behind walls, under slabs, or into rock & sand, but being fluids, the controllability of this is sometimes difficult and it is not always predictable where the grout will go. As a company, we have produced controls for all grouting situations. We have developed Quality Assurance Procedures and hold Quality Assurance Certificate number 2430 to ISO 9002 for each of our grouting products. Having said this it needs to be understood that 'Grouting' in reality is an ART.

We ensure our customers receive exactly what they are paying for, and that our company functions in a quality conscious environment.

We believe that a promise will win a customer, but SATISFACTION will keep them. To ensure this, all our Staff are formally trained in all aspects of our work.

Norm Howell
Managing Director
Groutech (Aust) Pty Ltd

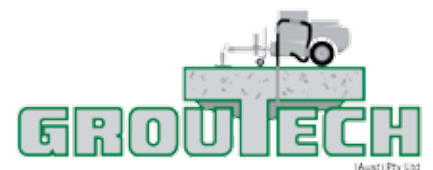
WHAT DO YOU DO?

The core of our business is Grouting. We Grout. We define grouting as the 'mixing, handling, pumping and placing of materials that react and set.'

WHAT HAVE YOU WORKED ON?

We cater for customers' specialised grouting requirements, having designed & built a range of special purpose mixers and pumps. We have constructed underground dams, solidified bauxite spoil, pre-consolidated mining strata and trained various customers and their work forces in grouting.

Our customers include Government Departments, Mining Companies, Private Companies, as well as Individual and Industrial Property Owners.



www.groutech.com.au





**WHEN YOU THINK OF
GROUTING, THINK
GROUTECH!**



**BACKFILL GROUTING
MUDJACKING
SAND STABILISATION
PRE-CONSOLIDATION GROUTING
NON-SHRINK GROUTING
& PAVEMENT MAINTENANCE**



**YOUR PROFESSIONAL
GROUTING COMPANY**



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MUDJACKING

WHEN SUBSIDENCE OCCURS, MUDJACKING CAN BE USED. MUDJACKING IS ALL ABOUT LOCALLY LIFTING STRUCTURES, UNDER CONTROLLED CONDITIONS TO AVOID DAMAGE TO THE STRUCTURE...

The height of lift and the location of the lift are now under your control. Low pressures are used but high forces result thus needing formally trained professionals like Groutech.

THE BENEFITS TO YOU ARE...

Lifting Pavement Slabs

Lifting Houses and Structures

Local Lifting with High Lifts

Fast lifting with quick turn around

Measurable results with Quality Assurance Procedures

Core holes provide a survey

Use your slabs almost immediately

Minimal disruption to your operations

No potentially dangerous chemical products are used!

Reduces tripping liabilities

We are able to take a subsided structure and with the application and our special grouts (not chemicals) we are able to lift the structure back to near level conditions...

This is no mean feat. It requires formally trained operators, special grout pumps, several different grout mixes and control of the application of these things to ensure that the lift not only occurs, but occurs without further damage to the structure.

Groutech offers this expertise and backs it with procedures that prove the results. We are able to lift the structure to any height in any location. No doming of floors. No cracking of concrete. We protect the structure and we keep it clean.

We have the expertise to provide you, the owner or engineer, the control that is needed to do this work.

Mudjacking allows a quick turn around:

In domestic applications you are able to use the structure even while we work.

In industrial application, twenty four hours will see full use of your pavements returned to you.

We work around machinery while you work so you can maintain your income. At Groutech, we care about these things.

This is part of what professionalism is all about at Groutech.

I NEVER KNOW THIS COULD BE DONE!

This statement is heard by Groutech employees every day.

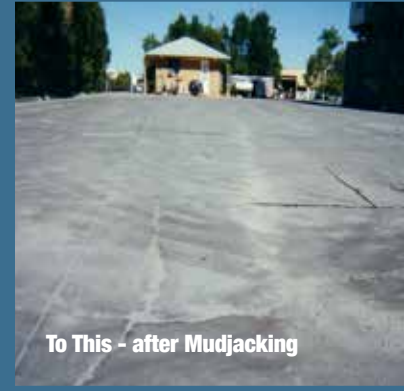
Most people are unaware of what highly specialised services are available to them, let alone just how important this process is.



Void



From This...



To This - after Mudjacking



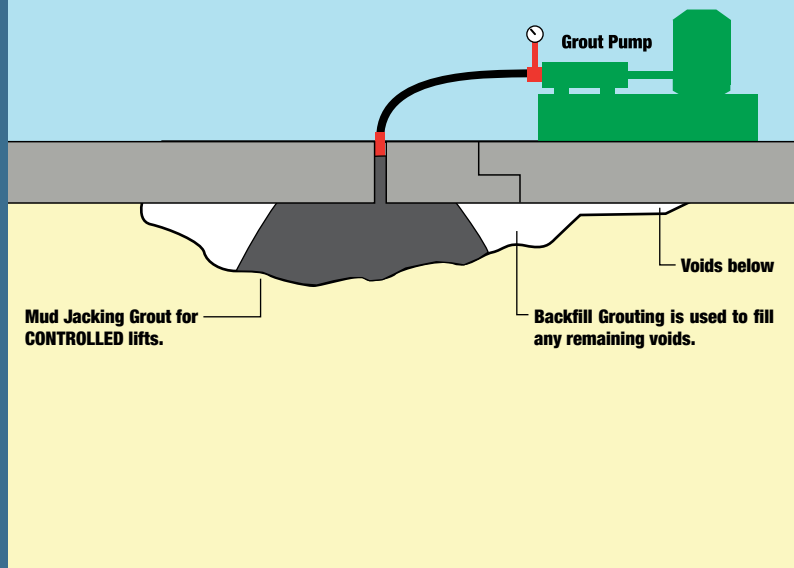
After Mudjacking



Area prior to Mudjacking

MUDJACKING

Controlled Lifting of Pavements



INDUSTRIAL & COMMERCIAL BACKFILLING PROJECTS UNDERTAKEN BY GROUTECH...

AMPOL MARYBOROUGH PAVEMENTS
 BOC GASES PAVEMENTS
 BULIMBA OFFICE BLOCK
 CALOUNDRA COUNCIL PARK
 CROWN FORKLIFTS PAVEMENTS

EGR PLASTICS FACTORY
 MOOLOOLA PRIVATE HOME
 ROCHEDALE UNITS
 ROSS & EDMOND STREET WAREHOUSE
 SCHONNELL THEATRE QLD UNIVERSITY

SHELL - ROCKLEA PAVEMENTS
 SUNGOLD PETROLEUM PAVEMENTS
 TELECOM TELEPHONE EXCHANGE
 WARREN COTTON GIN PAVEMENTS
 WOOLWORTHS PADDINGTON PAVEMENTS

PGH INALA
 EXCEL CONCRETE

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BACKFILL GROUTING

BACKFILL GROUTING IS ALL ABOUT FILLING VOIDS BELOW PAVEMENT CONCRETE, BEHIND WALLS OR IN CONCRETE BLOCKS. IT'S ALL ABOUT SUBSIDENCE...

The fill material used below slabs or behind walls subsides or erodes taking the concrete with it. Backfill grouting is used anywhere voids exist.

The objective is to fill the void to re-support the slab, strengthen the wall or pipe.

The process is very economical compared to removing and replacing the concrete. Backfilling is done by drilling holes through the slab and pumping cement grouts into the void.

THE BENEFITS TO YOU ARE...

Re-supports pavement slabs which means they won't break or bend.

In effect this negates removal and replacement of broken concrete slabs.

More economical than removal & replacement of concrete.

Stop slabs pumping out fines so that the voids don't grow larger.

Prolongs joint seal life which reduces the amount of water that can get below slabs softening & damaging the sub-base further.

Stabilised slabs don't move and as such don't distort & de-bond the joint seals.

This method of repair has very minimal disruption compared to slab removal and replacement.

Stops the pavement moving up and down which stops the edges of the concrete breaking off.

The process is very suitable in tight access situations negating disruption.

I DON'T SEE ANY VOIDS...

They're there. We know from experience that voids will exist below all concrete slabs. Even Brand New Slabs! They become a problem when they grow large enough to not maintain support of the slab and allow it to bend, crack, and break.

VOIDS OCCUR WHEN...

Water is present
Dynamic Loads are present
Concrete Pavements exist

FAST & STRONG...

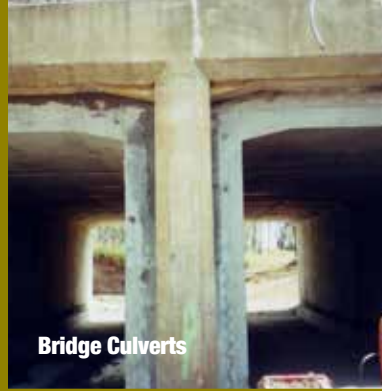
Need it fast? We can produce 3000m² per day or more. No one is faster.

You need it strong? Don't settle for weak grouting products, ours will carry 2000 tonnes per square metre minimum!

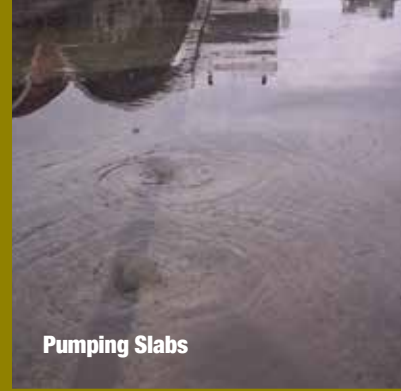
GET WITH THE STRENGTH!



Voids under a bridge



Bridge Culverts



Pumping Slabs



Purpose Built Machinery

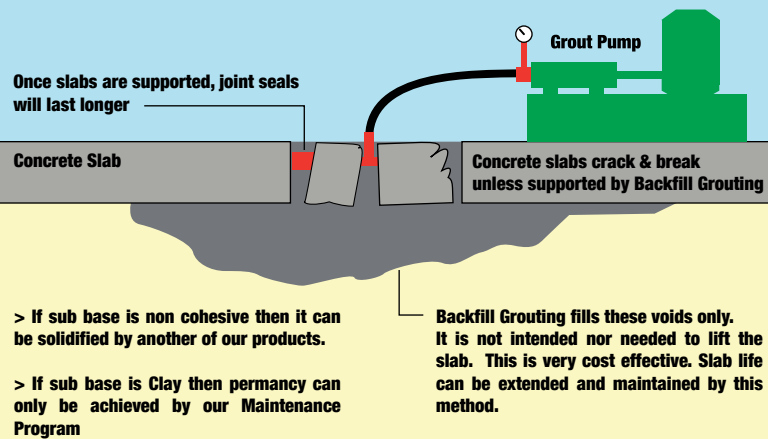


Crack in Pavement



Voids found under an industrial slab

BACKFILL GROUTING



INDUSTRIAL & COMMERCIAL BACKFILLING PROJECTS UNDERTAKEN BY GROUTECH...

OIL REFINERY PAVEMENTS

CSR WOOD PANELS PAVEMENTS

QUF - SEWER MAN HOLE

ROAD GROUTING MARY STREET

AMPOL STRATHPINE PAVEMENTS

DOCTORS CREEK ROAD CAUSEWAY

RAILWAY TUNNEL BALLAST GROUTING

ROSALIE SHIRE CAUSEWAY

BORAL PLASTERBOARD PAVEMENTS

GMH OFFICE FLOOR SUBSIDING

READYMIX BATCH PLANT PAVEMENTS

DUMP HOPPER WEIPA COMALCO

COLES DISTRIBUTION PAVEMENTS

NESTLES ZILLMERE PAVEMENTS

ROAD GROUTING CAUSEWAY

GATEWAY BRIDGE

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PAVEMENT MAINTENANCE

PAVEMENT MAINTENANCE INVOLVES THE COMBINATION OF A NUMBER OF PROCESSES INCLUDING BACKFILL GROUTING, MUDJACKING, CONCRETE EDGE REPAIR & JOINT SEALING...

Why Does Concrete Crack & Subside?

Lack of slab support. Over time, water from various sources fills voids under the concrete slabs, softening the sub-base. When a load is applied to the slab, more voids are created due to the softend sub-base. Left with a lack of slab support, your concrete will begin to crack and fail.

THE BENEFITS TO YOU ARE...

No disruption to your business - no negative affects to your cashflow as your repaired area will be immediately ready for reuse.

Personal Safety Issues - no exposure to harmful chemicals. Reduce your risk of a Public Liability case due to accidents caused by unlevel pavements.

Better value for money - no costly removal and replacement of concrete slabs. And, no disruption.

What is your First Step?

Call us now and one of our experienced Grouting Technicians will visit your premises for a FREE consultation.

Receive your proposal within days, detailing the work required to rectify your problem, and a cost estimate - ABSOLUTELY FREE OF CHARGE.

Upon acceptance of the proposal, we will begin work as soon as possible. As we are sensitive to your individual needs, evening or week-end maintenance can be arranged.

Our state of the art equipment and methods will ensure the day after we finish, you will have immediate access to the area.

Regular Long Term Inspections & Maintenance...

As part of our PAVEMENT MAINTENANCE PROGRAM, our Professionals will add your site records to our database. This will enable us to re-visit your site (at a time frame previously agreed with you, the customer), to advise if there are further problems developing.

This service is free of charge.

Should there be any problems, we will provide you with another report and proposal to remedy the situation for your approval.

These inspections will ensure extreme environmental and load conditions have not had an impact on the site. And if it has, quick, decisive action can be taken to minimise, if not negate further damage.

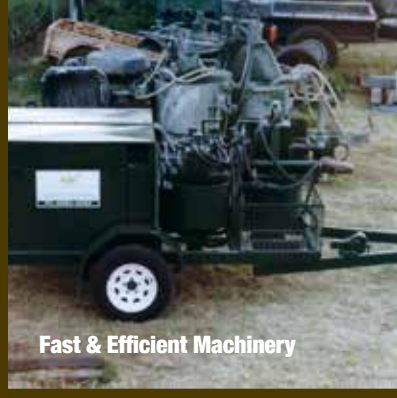
CRACKED, SUBSIDED, CONCRETE?

5 ways to ensure you never have the expense and disruption of having to remove and replace concrete slabs & sub-base.

1. Remove any Voids
2. Raise the Subsided Slabs
3. Reinstate Damaged Edges
4. Install New Joint Seals
5. Have the Slabs Regularly Inspected to keep abreast of any movement problems before slab damage is done.



BUBBLES RISING FROM A FLOODED SLAB INDICATE VOIDS UNDERNEATH. CONTACT GROUTECH FOR THE BEST SOLUTIONS & A PAVEMENT MAINTENANCE PROGRAM.



Fast & Efficient Machinery



Voids lead to problems...

WHEN YOU THINK GROUTING THINK GROUTECH!

YOUR PROFESSIONAL GROUTING COMPANY



Like these...

PAVEMENT MAINTENANCE PROJECTS UNDERTAKEN BY GROUTECH...

**HILLIER CARTER PROPERTIES
CROMWELL PROPERTY SERVICES
COCA COLA AMATIL**

**CSR PGH
HILL INDUSTRIES
STAR GROUP**

**DOBOY COLDSTORES
JAMES HARDIE
MEADOW LEA FOODS PTY LTD**

TOLL NORTH PTY LTD

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NON SHRINK GROUTING

NON SHRINK GROUTING IS ALL ABOUT MIXING AND PLACING PROPRIETARY GROUTING PRODUCTS THAT HAVE SPECIAL REQUIREMENTS...

These include products that:

Are difficult to handle and mix, particularly in large volumes. Such as epoxies and high early strength grouts.

Are a danger to the operators in various ways. (Chemical, and caustic burns).

Set quickly, needing fast casting times, e.g. HES has a pot life of about 10 minutes.

Require considerable expertise to get excellent results every time.

Groutech have two mixers and each can mix and place up to 500 litres (one pallet) of High Early Strength - Non Shrink Grouts every 10 minutes.

We call these machines - GT 500's.

'Nth' Degree planning, Training, Organising and Controlling of these projects is absolutely necessary and this is where we excel in this type of work.

THE BENEFITS TO YOU ARE...

Large Volumes of high early strength grouts placed quickly and effectively.

Allows projects never before contemplated.

No disruption due to short casting times.

Up to 100 bags in a mix if need be.

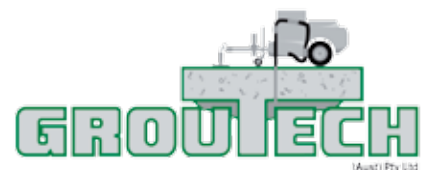
We train your people in the entire grouting part of the project.

We have developed the equipment, the professional people, and the methods to achieve this effectively. In winter, summer, on shore or off, above or below ground, even underwater.

If you want to place this type of grout quickly, then ask for advice from Groutech, you'll be very glad you did. We can provide you with references for this type of work

OUR CLIENTS INCLUDE...

Government Departments
Councils
Shires
Road Tek
Mines
Industrial
Commercial

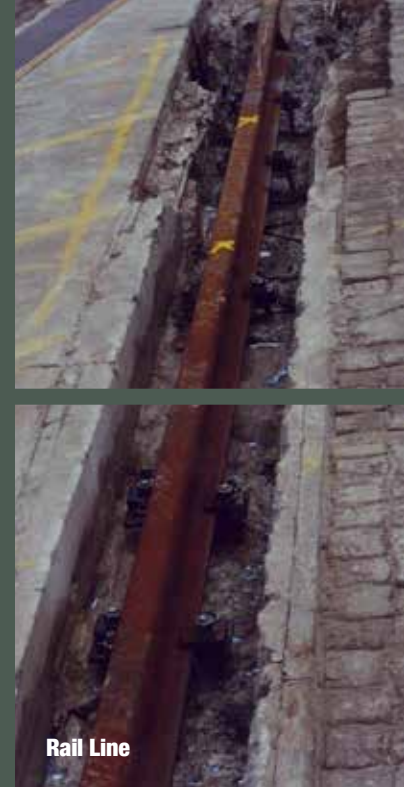


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Comet Ridge

👉 **COMET RIDGE -
MACHINE BASES AND
COOLERS REQUIRED
GROUTING AT BASE WITH
NON-SHRINK GROUT...**



Rail Line



Experienced Professionals



Comet Ridge

NON SHRINK GROUTING PROJECTS UNDERTAKEN BY GROUTECH...

COMET RIDGE

BORAL

VICTORIA BRIDGE

BESSER (HANSON MASONRY)

ORIGIN ENERGY SPRING GULLY

QRX

CUB YATALA

GANTRY CRANE RAILS BP REFINERY

CALTEX REFINERY

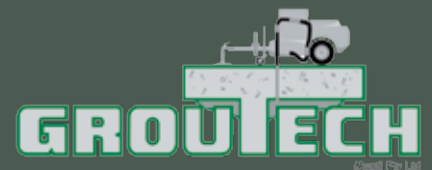
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SAND STABILISATION

SAND STABILISATION IS ALL ABOUT SOLIDIFYING SANDS AND SOME GRANULAR SOILS FOR ENGINEERING PURPOSES...

This process reduces cave-ins during excavation, increases the bearing capacity of sand below foundations or piles & reduces and even stops permeability during construction projects. Basically, it's underpinning in sand. Major projects like construction of underground dams have all been attended to by Groutech using this process. Provable work as it is being done with professional Quality Assurance Procedures.

THE BENEFITS TO YOU ARE...

Solidify Sand to increase it's bearing capacity.

Reduce permeability in sand, water flows and erosion without excavation.

Construction of underground dams without excavation.

Create Dead Man Anchors in sand.

Sub-base solidification below concrete slabs and around pipes.

Can eliminate the need for underpinning.

Solidified sand strengths of up to 10Mpa.

Protects our environment - No chemicals used.

A world exclusive, right here in Australia - Lake Kounpee

Sand has always posed a medium that is hard to control in a construction retaining / sealing sense. Now special techniques can be used to solidify sand and reduce its permeability. The grouts used are NOT chemicals. They are completely environmentally safe.

CASE STUDIES...

LAKE KOUNPEE - STRADBROKE ISLAND

Groutech (Aust) Pty Ltd proposed and used special pumps, processes and techniques to construct an underground dam. The dam was 275mm long by 12m deep. The dam was FIFTY metres below the surface and constructed without any excavation at all! It took just one month for Groutech's professionally trained team to complete this work! A world first...

CASE STUDIES...

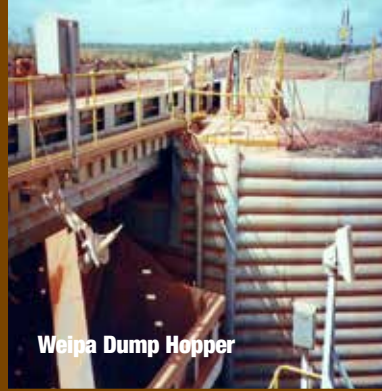
WEIPA DUMP HOPPER

Poor compaction behind a retaining wall in Weipa was also corrected by this procedure. Work was attended to after the failed construction of a Dump Hopper. Access was very difficult, but design and construction of specialised equipment allowed our specialised techniques to be applied.

These projects were completed on time & BELOW budget



National Bank Sand Stabilisation (As Underpins)



Weipa Dump Hopper



Weipa



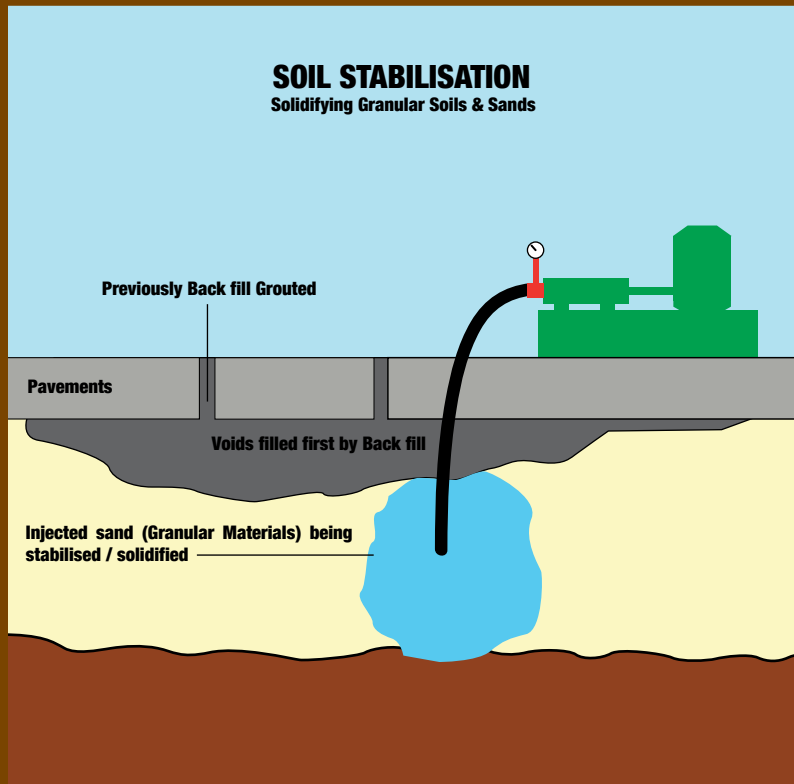
The best equipment for the job



Weipa Dump Hopper - solidified cores in background



Solidification in action Stradbroke Is.



TECHNICAL GROUTING & SAND STABILISATION PROJECTS UNDERTAKEN BY GROUTECH...

AUS. FAIR COMPLEX COLUMN FOOTINGS

LAKE KOUNPEE TRIALS & TESTS

PORT OF BRISBANE STORM WATER LINES

TWIN TOWNS - GOLD COAST

AUS. FAIR COMPLEX EXTENSION FOOTINGS

LAKE KOUNPEE UNDERGROUND DAM

VISYBOARD WALLS

PUMP STATION - RUNAWAY BAY

DUMP HOPPER RETAINING WALL

NATIONAL BANK FOOTINGS

QANTAS DOMESTIC TERMINAL

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PRE-CONSOLIDATION GROUTING

PRE-CONSOLIDATION GROUTING IS FOUNDATION GROUTING.
PRE-CONSOLIDATION GROUTING IS OFTEN USED IN MINES TO ENSURE
MINING PRODUCTIVITY IS MAINTAINED...

This process is used to solidify strata and subsequently stop falls and cave-ins in under ground mines. It is a proactive process in that we solidify the strata several months prior to mining through the area. This is a sensible means of insurance. The old process of mucking out and solidifying the face falls with poly-urethanes is not only expensive but a very dangerous chemical injection process. Pre-consolidation uses cement grouts and goes a long way to removing most, if not all, of this dangerous process. ACARP Research Project 'C7017 Dec 1999' was commissioned to manage moving the mining industry onto newer and proven techniques like pre-consolidation. The process can be done above, or below ground.

THE BENEFITS TO YOU ARE...

Maintain continuous productivity.

Proactively manage cave-ins and face falls increasing safety.

Introduce new technology and processes to the mining industry.

Use our expertise to solidify the strata, reduce its permeability and increase the strength of the strata.

Proof of QA with written reports.

Environmentally friendly process.

Groutech become an extension of your management team for this process.

Set us to work and almost forget about the project until the job is done.

A Recent History of the Process...

In the beginning, the mining industry realised that the reactive approach of solidifying the face falls with poly-urethanes was not conducive to productivity. A face fall would occur. The Longwall mining machine would then be mucked out with many days of lost production, only to have another face fall within hours of startup. Painful, hard won progress. Dangerous chemical urethanes would be used for their fast setting abilities. A loss-loss situation.

Groutech were approached to prove that foundation grouting techniques and processes could be used to PROACTIVELY manage the face falls. This was done by drilling holes through the fault zones, and using proven construction industry techniques, inject cement grouts to stabilize the strata. All done months before the Longwall was working near the fault zone. Many projects later, it is now clear the introduced processes have worked very well.

There is no doubt this is the way to go forward.



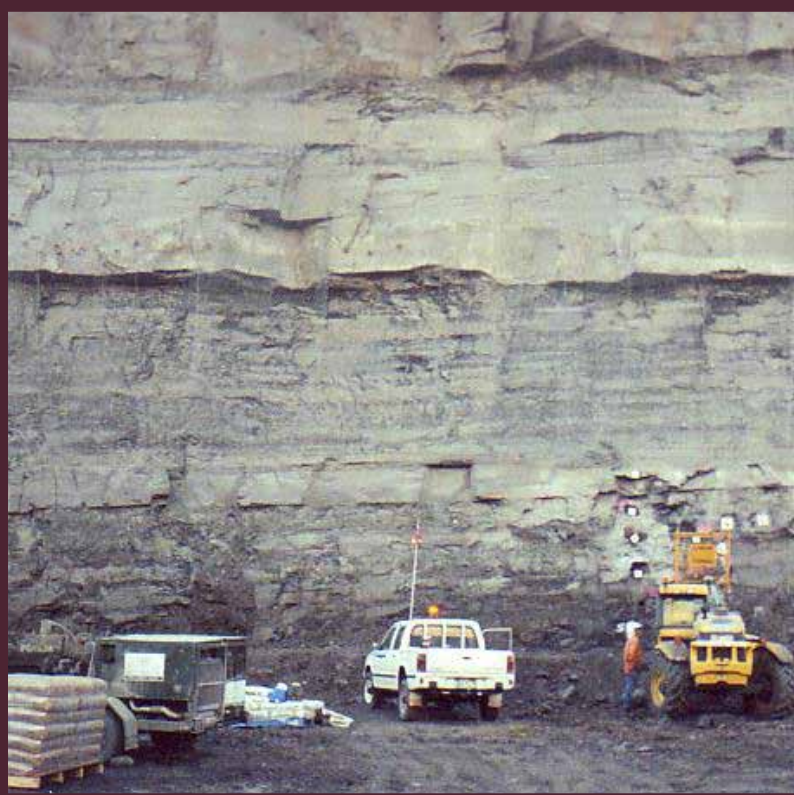
☞ A SPECIMEN OF COAL BEING INJECTED WITH GROUT. USING GROUTECH'S TECHNIQUES & METHODS, GROUT CAN BE USED TO CONSOLIDATE AND STRENGTHEN STRATA.



Longwall Shearer

**HASSLE FREE FAULT ZONE
PRODUCTION INCREASES**

**ASK US ABOUT OUR:
SEMINARS
TECHNICAL ADVICE
TRAINING**



A pre-consolidation project completed in January 2004 helped to produce record results. It was reported that whilst mining through the fault zone consolidated by Groutech that production increased. The production through this zone was a new site record and only 4 tonne off the Australian record for general mining.

Groutech (Aust) Pty Ltd have done several foundation grouting projects for various coal mines. In all cases there have been no reported cave-ins. Groutech's methods work!

Using Groutech's vast experience from civil works and mining projects, you can be assured that your project will be handled professionally and completed on time.

ACARP C7017 Cec 1999 and C10019 Aug 2003 support the use of a professional company to perform cementitious pre-consolidation grouting.

MINING PRE-CONSOLIDATION PROJECTS BY GROUTECH...

**NORTH GOONYELLA
NEWLANDS NORTHERN UNDERGROUND
OAKY CREEK NO. 1 MINE
NEWLANDS SOUTHERN UNDERGROUND
MORANBAH COALMINE**

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