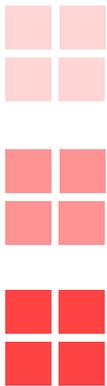




Expert Solutions in



THRUST BORING • SEISMIC SHOTHOLE • SOIL INVESTIGATION • MINPILE • DEEP WATER WELL • GROUTINGS • SOIL NAILING • GROUND ANCHOR •
LABORATORY & ON-SITE TESTING • GEOTECHNICAL DESIGN & ANALYSIS • TOPOGRAPHIC SURVEY



DRILLING & GEOTECHNICAL

PT. GEONUSA UTAMA

www.geonusa.com



TRUSTED SOLUTION



PT. GEONUSA UTAMA is a service company specialized in providing Thrust Boring, Seismic Shothole, Soil Investigation, Minipile, Deep Water Well, Groutings, Soil Nailing, Ground Anchor, Laboratory & On-site Testing, Geotechnical Design & Analysis and Topographic Survey services

To be a trusted solution for your peace of mind is our true ambition. That's why we focus to ensure safety at workplace, continuously enhance our delivered quality and maintain speed to meet your tight schedule.

We believe safety can be improved through awareness and risk reduction. With teamwork and safety so critical on the job, our personnel look out for each other every day. A site safety culture is instigated prior to work commencing and is developed throughout the course of project execution.

By applying best practice and the right technology we strive to deliver superior results to meet customer satisfaction. Best quality is achievable through on-the-ground expert personnel and well maintained top quality equipments. Our employees are committed to working with our customers to create the highest level of added value.





SAFETY • QUALITY • SPEED

SOIL INVESTIGATION

The objectives of the soil investigation services is to investigate geological and geotechnical condition for various purposes such as foundation design, mining exploration, slope stability, road building, etc. Our service covers coring and non-coring drilling and in-situ testing such as Standard Penetration Test (SPT), Cone Penetration Test (CPT), Field Vane Shear Test and Permeability Test. Disturbed and undisturbed samplings taken from the borehole are analyzed at our soil laboratory for soil index and engineering properties such as water content, density, particle size grading, Atterberg limits, specific gravity, unconfined compression test, triaxial test, direct shear test, consolidation, etc



Soil Investigation at Lampung, PT. JFE Engineering Corp

Soil Investigation at Lampung, PT. Punj Llyod Indonesia

MINIPILE

Minipile is a small bored pile with diameter ranged from 300 - 600 mm. The hole is drilled using wash boring method and cleaned by water flush until the overflow water is clean. The pile is reinforced by deformed steel bars with stirrups to develop moment capacity and to maintain concrete solidity. The concrete pouring uses tremie (multiple segment pipes up to hole bottom) or grouting pump if required. Pilecap is installed at the top of the pile.



Minipile Underpinning at Gedung Serba Guna Universitas Terbuka, Lemtek Universitas Indonesia

Soil Investigation at Wayang Windu, PT. Magma Nusantara Ltd.



DEEP WATER WELL

Deep water wells are drilled using rotary drilling machine up to aquifer saturated with groundwater at specified quality. Water or bentonite mud is used as a circulation fluid to displace cutting from borehole and to cool and lubricate the drill bit. The well is cased with PVC or galvanized steel pipe and screen is installed in the aquifer zone. The annular space between the well screen, well casing and borehole wall is filled with gravel or coarse sand to prevent sand and fine sand particles moving from the aquifer formation into the well. The uppermost section of the annulus is sealed with a bentonite clay and cement grout to ensure that no water or contamination can enter the annulus from the surface. Our services include water quality testing, filter installation and pump & piping installation

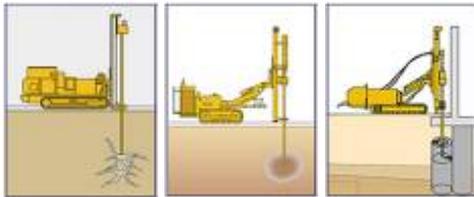


Drilling works, Star Energy



GROUTINGS

We render services of cement grouting, compaction grouting and jet grouting. Cement Grouting is the intrusion under pressure of flowable particulate grouts into open cracks or voids and expanded fractures. Compaction Grouting uses displacement to improve ground conditions. A very viscous (low-mobility), aggregate grout is pumped in stages, forming grout bulbs, which displace and densify the surrounding soils. Jet Grouting is a versatile ground modification system used to create in-situ cemented geometries of soilcrete



Cement Grouting

Compaction Grouting

Jet Grouting



Grout Mixer



Soil Nailing



Ground Anchor

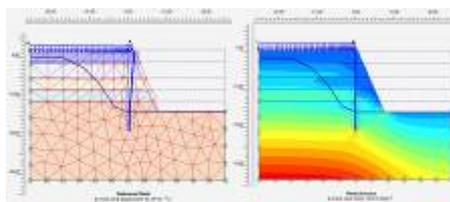


LABORATORY & ON-SITE TESTING

On top of the laboratory and testing capabilities to support soil investigation works as described previously, we render also on-site testing services for quality control and project supervision such as falling head permeability test for bentonite cement mix, on-site unconfined compression test, plastic/liquid soil density survey, bored pile static axial compressive load test, compaction and field density test, plate loading test, installation of Piezometer, water stand pipes, inclinometer and extensometer, settlement probes, pumping test, data acquisition and monitoring, etc.



Bentonite Cement Quality Control, PT. Pakubumi Semesta



SOIL NAILING & GROUND ANCHOR

Soil Nailing is an in-situ technique for reinforcing, stabilizing and retaining excavations and deep cuts through the introduction of relatively small, closely spaced inclusions (usually steel bars) into a soil mass, the face of which is then locally stabilized.

Ground Anchors offers an economical solution to permanent stability or support problems. Designed to withstand lateral and uplift forces, these structural members are typically used as a part of permanent retaining walls, for dam stabilization or to resist uplift forces produced by wind

TOPOGRAPHIC SURVEY

The objectives of the topographic survey services is to prepare Digital Terrain Maps (DTM) for engineering and construction of access road, utilities, runway, railroad etc. When a project has been identified to be built, a topographic survey has to be completed to select the route, to locate existing features of the route, to identify areas of environmental impacts, to identify areas of Right of Way acquisition, to help to determine the costs of the project and to design the project.



GEOTECHNICAL DESIGN & ANALYSIS

We provide geotechnical design and analysis services on shallow and deep foundations, diaphragm wall, slope stability, dams construction, soil retaining structures and walls, soil improvements and reinforcements, etc.



..... FOR YOUR PEACE OF MIND

THRUST BORING

When you need a horizontal hole under an obstacle such as road, railway or building, whether to install gas pipeline, water sewage or other purpose, our thrust boring service is the solution.

Our method combines thrust boring with rotary and water flush. First, launch and target pits have to be constructed. The boring starts with the pilot pipe drilled until reaching the target pit. Soil cuts are transported out of the hole by water flush from drilling rod. To enlarge the hole, a reamer bit is pulled out or push in and guided by the pilot pipe. Casing or product pipe is installed after the hole cleaning.



Gas pipeline installation at Cilegon, PT. Winatek Widita



Gas pipeline installation at Cilegon, PT. Meisha Internusa Teknik



Horizontal drilling at Purwakarta, PT. Budi Daya Mandiri



SEISMIC SHOTHOLE

Seismic shothole is used to install shot gun or explosive to create ground vibration shock as a signal source for seismic survey.

The drilling works starts with the site clearance and installation of suitable drainage system. The over flow water from the hole in the drilling and cleaning process will be collected in surface settling pit. The clean water at the top of settling pit flows or is pumped to water pit to be re-used. The drilling advances in the ground using rotary method. Soil cuts are automatically flushed out by the drilling fluid pressure through the annular space between drilling rod and the borehole surface. In order to minimize the sedimentation, the hole is cleaned up using water flow from the rod to push up debris out of the hole. The quality of water over flow from the hole will indicated the cleanliness of the water inside the hole. PVC casing is then installed to prevent the hole from collapsing.



Seismic shot hole drilling for PT. Schlumberger Geophysics Nusantara at Kondur Site, Riau

Drain pipes installation at Pangalengan, PT. Magma Nusantara Limited



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