



# JDE



# **COMPANY INFORMATION**

Since our founding 15 years ago, JDE has become one of the country's leading providers of geological & construction services as well as consumables, and a vast array of materials related to our industry. As a leader, JDE always stands behind its core values and its commitment to conduct business in a way that is environmentally sustainable.

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## **HISTORY**

JDE Group is an exclusively Congolese owned, managed and operated multi-service company that was founded in 2007 by a visionary and hard working Congolese entrepreneur. The company has since grown and expanded beyond the borders of the Democratic Republic of the Congo into Zambia, South Africa and the United States. As of 2015, JDE Group had a full time staff of over 150 and a number of interns.

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## **VISION**

To provide the finest world class environmental, mining, geological, construction and groundwater solutions to our clients in the Democratic Republic of the Congo and to contribute to the development and self-sustainability of local communities and villages.

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## **MISSION**

We are committed to providing quality, reliable and exceptional services and products in the fields of geological exploration, groundwater drilling as well as industrial, commercial and residential construction to individual clients, small and mid-size businesses as well as multinational companies nationwide in the Democratic Republic of the Congo. Our company's investment in human resources as well as property, plants and equipments is a testament to our commitment to serve our clients with the utmost care and professionalism.

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## **VALUES**

We believe that personal, intellectual and professional integrity and honesty are the foundations of trust and should be expected in every business dealing. Our ethical standards are set very high for all our officers, employees, associates and suppliers.



# OUR PRODUCTS

JDE has distributorship agreements with a numbers of internationally renowned companies on a number of products that we sell at competitive prices. These are trusted brands that have proven their reliability over the years. We also have a team of experts in the DRC customs clearing process that help expedite the clearing of all the goods that we import in the DRC from several countries.

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## **SOLAR ENERGY**

JDE provides comprehensive renewable solar energy solutions for residential, commercial and industrial applications following the following specifications:

- Residential: From 1KW to 15 KW
- Commercial: From 15KW to 250 KW
- Industrial: From 250KW to 10 MW

We have worked on a number of projects for our clients in the DRC from start to finish. This is made possible because of the technical expertise of our staff, our well maintained equipments as well as our solid experience in the area of project management. So whether you are a homeowner wanting to have more control on your energy or a business wanting to save on your energy spending, contact us today to see what options are available to you.

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## **PUMPS**

We offer a vast array of pumps as well as their installation and servicing for several applications as listed below:

- Mine dewatering pumps (solar powered option available)
- Agricultural pumps (solar powered option only)
- Community water well pumps (Afridev manual pumps - JDE is the main distributor in the DRC)
- Community water well pumps (solar powered option available)
- Commercial and residential water well pumps (solar powered option available)

With the exception of the Afridev pumps which are manually operated, all the remaining pumps are powered submersible pumps that we install for our clients after our drilling crew has completed the drilling portion of the project and has received the okay from our client to proceed with pump installation.

For more information, please contact us today.

## STEEL CASINGS & PVC PIPES

JDE offers an extensive selection of carbon steel pipes. Our inventory includes steel pipes in sizes from 4" to 48" in diameter, both welded and seamless, imported from very reliable manufacturers. We store the same sizes in a variety of grades.

JDE also offers the most comprehensive lines of plastic pipes. Whether it's Polyvinyl Chloride (PVC) or Polyethylene (PE) pipes, the brands we distribute are the very best for their applications. In addition to meeting the required specifications, these plastic pipes maintain their quality and performance over time with zero corrosion, therefore causing no harm to the environment or to people.

For more information, please contact us today.

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## CONSUMABLES

JDE is a supplier of a vast assortment of consumable products across many industries for various applications. below is a limited list of consumables that JDE supplies:

- Drilling mud
- Drilling foam
- Industrial gravel
- Construction gravel
- Potable water well gravel
- Construction materials (residential, commercial & industrial)
- Electrical tools and materials
- Heavy duty and light duty borelines
- More,...

For a complete list of consumable products, please contact us today.



# **OUR SERVICES**

Whether you are a multinational company focused on growing your bottom line and delighting your shareholders or a mid-size company working hard to take your business to that next level you have a thousand demands on your time and resources, JDE can help make one part of your job easier by partnering with you regarding your geological and construction needs. We offer a wide range of services at very competitive rates and we pride ourselves in knowing that our clients can rely on us to add value to their businesses.

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## **GEOLOGICAL SERVICES**

Our fixed assets investment in property, warehouses and equipment is a testament to the fact that we mean business in what we do. We are very well equipped with modern equipment to carry out the services that we offer.

Below are the different types of rigs we have at JDE Group as part of our assets:

- Blast holes drilling rigs
  - Hydro-geological drilling rigs
  - Exploration rigs
  - Pump testing rigs
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## **GEOPHYSICAL SURVEYS**

At JDE, we have developed geophysics solutions that you can select from whether you are seeking to perform hydrocarbon exploration at depths greater than 1000 meters or need near-surface geophysics for groundwater investigations, which usually are restricted to depths less than 250 meters below the surface. Groundwater applications of near-surface geophysics include mapping the depth and thickness of aquifers, mapping aquitards or confining units, locating preferential fluid migration paths such as fractures and fault zones and mapping contamination to the groundwater such as that from saltwater intrusion.

We closely work in collaboration with universities as well as the geophysics community and specialist societies dedicated to near surface geophysics focusing our work on hydro-geology and the study of groundwater.

The department of geology at JDE understands that three factors are crucial in order to achieve a successful geophysical survey and our geological engineers and staff can walk you through our systematic and rational approach used in the execution of all geophysical surveys.

1. Planning the survey
2. Designing the correct geophysical survey
3. Selecting the appropriate geophysical contractor

Below is a list of the different techniques used in the field of geophysical surveys:

- Magnetic (or Geo-magnetic) techniques
- Gravity
- Electrical
- Direct Current Resistivity (DCR)
- Very Low Frequency (VLF)
- Electromagnetic
- Frequency-Domain Electromagnetic (FDEM)
- Time-Domain Electromagnetic (TDEM)
- Seismic
- Ground Penetrating Radar (GPR)
- Other electrical and electromagnetic methods

For questions, please contact us at [contact@jde-group.com](mailto:contact@jde-group.com)

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## GEOCHEMISTRY

Geochemistry is the study of the composition, structure, processes, and other physical aspects of the Earth. It examines the distribution of chemical elements in rocks and minerals, as well as the movement of these elements into soil and water systems.

Understanding the chemical composition of rocks tells oil companies where to drill for oil; helps environmental management companies decide how to dispose of a toxic or hazardous substance; and steers mining companies toward use of natural resources with a minimum environmental impact.

Our team of geochemists allows JDE to provide services that seek to uncover the wealth of information buried in the liquids, gases, and mineral deposits of rock. At JDE, we pride in our staff that possesses a deep understanding of this information and serves our clients in assisting them make informed decisions on a range of industrial and scientific research applications.

Our geochemists balance their time between the lab, the field and the office. They spend a lot of time in the field, gathering data and analyzing samples on sites.

Below is a list of geochemistry related services we provide at JDE:

- Plan scientific studies, visit field locations, and collect samples
- Analyze samples, either in the field or in the laboratory
- Guide mining exploration using geological data
- Develop remediation plans to clean up toxic waste sites
- Contribute to environmental management policies in the Democratic Republic of the Congo.

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## AQUIFER PUMP TESTING

An aquifer pump testing is a controlled field experiment used to estimate hydraulic properties of aquifer systems. During this procedure, an aquifer is stressed by pumping up water out of a test well at a controlled rate (constant rate) while water levels are measured. This constant rate pump testing is the most commonly used aquifer pump testing.

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## MONITORING PIEZOMETERS

Because of the many years of geological, geophysical & environmental drilling as well as construction services that we have provided, our experience qualifies us to install monitoring wells (designs from ¾ inch diameter to 8-inch diameter) for a variety of different applications such as:

- Environmental chemical monitoring
- Geological sampling and analysis
- Groundwater yield measurement

We maintain a sizeable inventory of materials, which helps us best serve our clients' scheduling and budget requirements. Our objective is to arrive at each job site with the exact materials at hand to complete the project.

## DEWATERING WELLS DRILLING

JDE offers effective and innovative submersible pump solutions to groundwater problems using large diameter deep wells. By offering professional services from initial design, drilling, casing, supply and installation of pumping equipment we assure an effective dewatering solution.

Dewatering wells are installed in-pit to lower the water level and maintain a safe and dry pit which is indispensable to mineral extraction. Large diameter wells, usually on the order of 14" – 18" in diameter, are drilled and cased vertically to the appropriate depths for the project (between 125 mbgl – 200 mbgl.) Once drilled, installed, and developed, the wells are fitted with appropriately sized electric submersible pumps lowered to the bottom of each well. The pumps are then used to push the water up from the bottom of the well and through the discharge piping system.

Deep wells can be located at a greater distance while generating the required drawdown rate and they are also used for several other applications such as water extraction, groundwater remediation and as a point of aquifer recharge in pumping systems to limit ground settlement.

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## GRADE CONTROL EXPLORATION

Grade control is an essential part of the mining process because the metal being extracted from ground is never constant. That is why we use RC drilling also known as in-pit grade control to define ore grades and also provide knowledge for mine planning and blasting. This information is very key and critical in helping our clients reduce waste rock (dilution) in concentrator feed as dilution can vary greatly and this is the defining factor when it comes to profitability.

RC grade control is the most cost effective and accurate way to define boundaries between waste rock and ore bodies.

Finally and from a purely economic standpoint, RC drilling (grade control) is what helps a company determine when the grade is too low and therefore avoid operating at a loss. Our RC rates are very competitive.

## EQUIPMENTS

Our significant investment in modern and state of the art equipment as well as well trained staff is a testament to our commitment to serving our customers with the highest level of professionalism in order to deliver superior quality service. JDE owns the below equipment:

- Blast holes drilling rigs
- Hydro-geological drilling rigs
- Exploration rigs
- Pump testing rigs

In addition, we have a very well maintained fleet of 4X4 Land Cruiser vehicles, several support trucks, fuel bowzers all together giving JDE a competitive and logistical edge over our competitors in being able to mobilize in a relatively short period of time and being able to work on multiple projects simultaneously.

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## CONSTRUCTION SERVICES

JDE offers the following construction services:

- Plant and process
- Heavy and civil
- Utility structures
- Commercial buildings
- Residential dwellings

For more information, please send us an email at [contact@jde-group.com](mailto:contact@jde-group.com)



# **MOBILE MT INFORMATION**

## AIRBORNE GEOPHYSICAL SURVEYS

**MobileMT** is the latest innovation in airborne electromagnetic technology and the most advanced generation of airborne AFMAG technologies. **MobileMT** combines the latest achievements in electronics, advances of modern airborne system design, and sophisticated signal processing techniques.

**MobileMT** technology utilizes naturally occurring electromagnetic fields in the frequency range of 25 Hz – 20,000 Hz band which are mainly associated with lightning discharges over the planet. Thunderstorms release energy, which is converted to electromagnetic fields that propagate through the ionosphere-Earth interspace. The electromagnetic fields and currents induced by these fields in the subsurface are used in **MobileMT** to understand the variations in the electrical resistivity of the subsurface.

Through the audio-magnetotelluric principles, advanced engineering design and sophisticated mathematical solutions, **MobileMT** is the only system proven to deliver geoelectrical information from shallow to > 1 km depth range with high spatial (lateral and in-depth) and resistivity resolution. **MobileMT** system detects resistivity contrasts of geology structures and boundaries of any shape and in any direction due to total field (three components) measurements. Detectable resistivity range is not limited by the range of time-domain principle.

**MobileMT** is the first system from the AFMAG family which has so high digitizing rate of measurements; both, magnetic and electric components; broad frequency range in four orders divided up to 30 customizable windows- channels. Even in conductive environment MobileMT significantly exceeds the depth of investigation of time-domain systems.

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## FEATURES

An airborne bird, towed by a helicopter, measures variations of the magnetic field in the air with three orthogonal induction coils, while a ground station measures variations of the electric field in two orthogonal directions with four pairs of electrodes.

The ratio of the magnetic field magnitude and the electric field magnitude provides analytic parameters in selected bands of frequencies.

Advanced noise processing technique of both electronic and signal processing levels ensures high data quality.

The lightweight, aerodynamic bird is ideal for conducting surveys using small helicopters in a cost-efficient manner.

## SPECIFICATIONS: ELECTROMAGNETICS

- Airborne receiver: Three orthogonal induction coils, 1.4 m diameter each
- Airborne shell: Aerodynamic shaped capsule
- Digitizing rate: 73,728 Hz
- Tow cable length: 97m
- Weight: 250kg
- Ground sensors: 4 pair of electrodes
- Frequency range: 25 – 20,000 Hz
- Output frequencies: Selectable and customizable up to 30 frequency windows
- Output computed parameters: apparent conductivity for selected frequency windows

## MAGNETICS

- Sensor: Geometrics cesium magnetometer G- 822A

## AUXILIARY EQUIPMENT

- GPS navigation system, radar altimeter, PC-104 data acquisition system.
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**MobileMT** deliverable products comprise a full set of processed digital data and visual products:

- Database of apparent conductivity for each frequency;
- Database of resistivity with depth (inverted data);
- Database of magnetic field;
- Apparent conductivity maps for selected frequencies;
- Visual inversions products: conductivity (or resistivity) 2D sections, depth slices and 3D voxels;
- EM and magnetic lineaments maps;
- Magnetic field transformation products;
- Complex data analysis and targeting.

- Mapping deep host/over laying rocks alteration and basement conductors in unconformity uranium deposits exploration.
- Exploring diamond ferrous regions, detection kimberlites fields controlling structures and direct kimberlites detection.
- Delineation shallow and deep fault zones which have experienced fluid flux as indicated by low resistivity (mineral and geothermal exploration).



# **OPPORTUNITIES WE OFFER**

## EMPLOYMENT

At JDE, we are always looking for motivated, talented, driven, proactive, and humble individuals to join one of our teams below.

- Geological & Analytical Services
- Engineering: construction & civil
- Field Technicians & Operators: drilling
- Non-Geological Services
- Accounting & Finance
- Marketing & Sales
- Information Technology
- International Trade & Customs Clearance

Whether you are a civil engineer, a chemical engineer, an electrical engineer, an architect, a geologist, a geochemist, a drilling operator, a mechanical or electrical technician, or even a recent college graduate seeking to get your foot in the door, once you come onboard at JDE, you become part of something bigger than yourself and you help add value to everything that we do for our customers. We deeply value our employees and we invest in training and equipping them so that they can do their job to the best of their abilities and delight our clients.

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## INTERNSHIPS

Are you a university student looking for a training opportunity to start learning about the professional world and to link your academics to the real world? Are you enrolled in a program that leads to an undergraduate degree in a technical or administrative field? If so then you might want to consider the limited number of internship positions that JDE offers to students for practical training assignments. Internship opportunities are currently available only in the DRC.

Below are the eligibility conditions established by JDE Group for prospect interns:

- You must be a full-time student at undergraduate level and at least 18 years old.
- Your main field of study must be one of the following: geology, surveying, engineering (civil, electrical, mechanical) and safety & environmental protection. A very limited number of positions may be available in administrative fields: front desk work, accounting & finance, marketing, IT, legal services and HR.
- Your work at JDE must be a mandatory or recommended part of your studies.
- You must be fluent in French, English and one of the DRC 4 national languages (Swahili, Lingala, Tshiluba or Kikongo)
- You must return to your university after completion of your work at JDE.
- You must have adequate financial resources to support yourself in the local area where JDE assigns your internship.

## BURSARIES/ SCHOLARSHIPS

At JDE Group, we believe in social responsibility and giving back into the community where we conduct business. Part of our profit is placed into a fund that is managed by an independent board. This board is in charge of setting up annual goals in line with programs established by JDE Group's Social Department.

Part of our philosophy at JDE Group is the concept of organizational focus. This is well practiced by our Social Department which allows it to efficiently and effectively allocate the scarce resources available to it on an yearly basis. Although our social agenda looks at human development as a whole, a special emphasis is placed on education because of how important it is for every human being. Currently JDE Group grants bursaries and scholarships to orphaned students and other needy students from the DRC, Zambia and South Africa. These scholarships are currently not available to students in the US.

JDE Group also supports a number of orphanages and Non-Governmental Organizations involved in the welfare and assistance of vulnerable children by funding the education of a number of students from those groups. Students from 2nd grade of primary school to final year of undergraduate at colleges and universities are encouraged to apply for the annual bursary/scholarship. Those students that are approved are free to pursue a field of study of their choice.

Students wishing to apply for the JDE Group Access to Education Bursary Program can do so by going to the resources tab to download and print the application form. The completed form needs to be sent electronically to [social@jde-group.com](mailto:social@jde-group.com) following all the instructions thereon.



# **CONTACT INFORMATION**

## INQUIRIES

- Please direct all general inquiries to [contact@jde-group.com](mailto:contact@jde-group.com)
- To check the payment status of your invoice, please direct your inquiry to [ap@jde-group.com](mailto:ap@jde-group.com)
- If you wish to become a supplier of JDE or to send us a quote on goods or services, please direct your mail to [supply.chain@jde-group.com](mailto:supply.chain@jde-group.com)
- For matters related to our various operations, please direct your inquiry to [operations@jde-group.com](mailto:operations@jde-group.com)
- For inquiries related to our Health, Safety and Environmental policy, please direct your inquiry to [hse@jde-group.com](mailto:hse@jde-group.com)

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