



PROVISION OF EXPLORATION GEOPHYSICAL SERVICES

Our Partners and Clients



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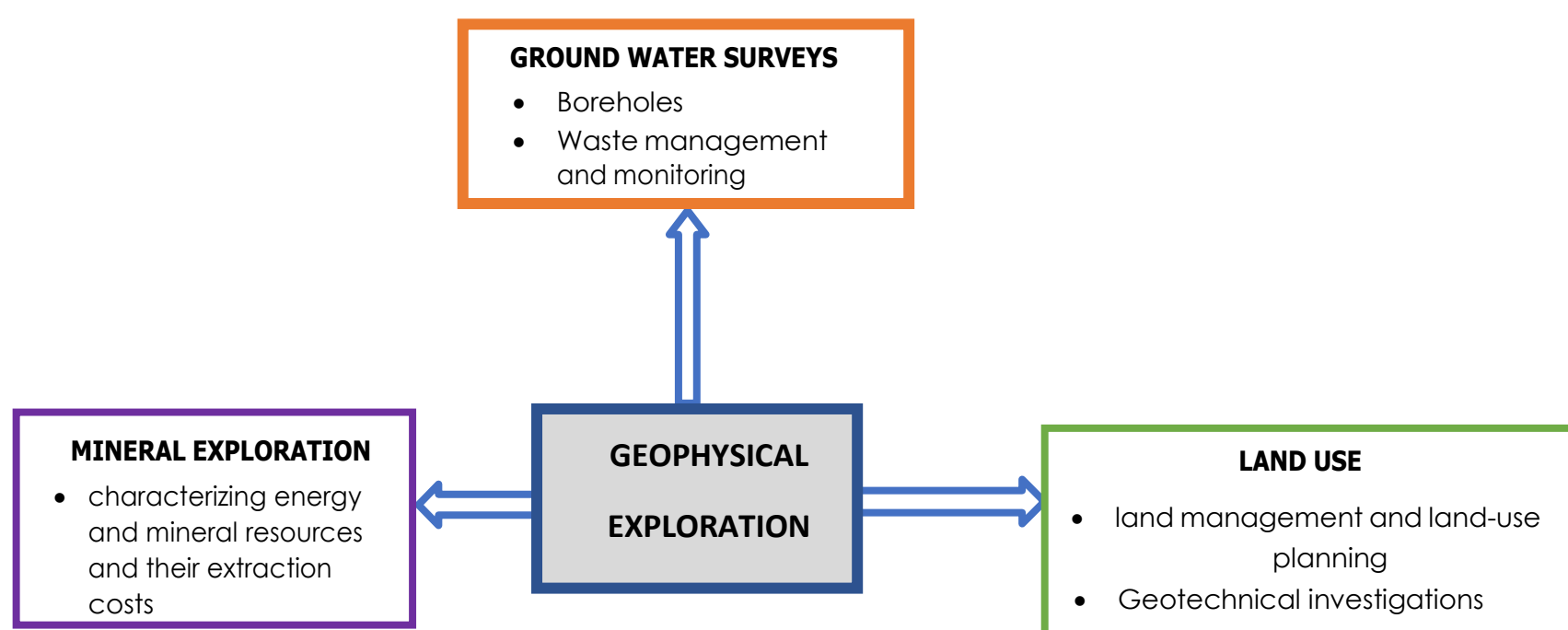
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1.0 BACKGROUND

Geophysical exploration methods detect mineral deposits by measuring physical properties that differ significantly between a mineral deposit and the adjacent rock formations. Historically, geophysical exploration methods have used the principal physical properties of density (gravity), magnetic susceptibility, conductivity, chargeability, resistivity, radioactivity, and seismic velocity. In many cases the desired deposit or mineralized target has a physical property (or properties) that permits direct detection. In other cases, mineral deposits can be detected by virtue of the physical properties of an associated non-economic mineral or by association with a specific rock or alteration type.

Geophysical surveys can often provide critical information to support regional mapping and mineral exploration modelling. Geophysical surveys can be conducted on the ground surface or above the ground surface using aircraft. Geophysical surveys can also be carried out inside the bored-out cavities of exploration drill holes.

APPLICATION OF GEOCHEMICAL EXPLORATION



The main benefits of adopting Geophysical exploration include;

- I. Maps the subsurface structure of a region, to elucidate the underlying structures, spatial distribution of rock units, and to detect structures such as faults, folds and intrusive rocks.
- II. Indirectly assesses the likelihood of ore deposits or hydrocarbon accumulations.
- III. Applicable method for monitoring environmental impact, ground water investigations, subsurface salinity mapping.
- IV. Useful for civil engineering site investigations and interplanetary imaging.

2.0 OUR APPROACH TO GEOPHYSICAL SURVEYING

Exploration Program Planning and Design

Our Geophysicists do ensure that the exploration program is based on a sound understanding of the regional-scale and property-scale geology, the target commodity and the type of mineralization that is either known or being sought on the subject property. This understanding is then supported by relevant field data and includes a thorough review of available corporate, and private information. Our geophysicists design the exploration program and selects the exploration methods and tools that will credibly test the geological premises and interpretation.

In planning, implementing, and supervising exploration work, our geophysicists ensure that exploration practices are based on criteria either generally accepted in the industry or can reasonably be justified on scientific grounds. we periodically review the geological premises the exploration work is based on and update those premises as new field observations and data becomes available. All systematic and thorough review is based on all new information collected from the exploration program, describe and document the interpretation, and discuss any apparent inconsistencies in the data.

Previous Exploration Results

This is an initial step in designing an exploration program, we compile and review previous work that has been carried out on a property, geological mapping and sampling results, geophysical surveys, geochemical surveys, or drilling programs. Our geophysicists can use either public domain information (Mining Cadaster), including Directorate of geological survey and Mines programs and provincial assessment files and information in our internal database.

We validate the accuracy and verify the suitability of the information collected from previous work before using it.

Coordinate System

An exploration program needs a consistent spatial coordinate system from the outset, to locate all exploration information on a property.

Tenure and Access

our team confirm with the client that tenure and access rights to the subject property have been secured before beginning work. Access includes permissions from, and agreements with, indigenous and local communities, land owners, and surface rights holders. our team confirms the location of property boundaries, especially to properly locate significant exploration activities such as drilling.

Permits

Our team confirms with the client, that the project holds all necessary permits and permissions before beginning work. Many exploration activities that require the use of water from surface or groundwater sources or require extended stays on undeveloped lands require notification and permitting. Our team is fully aware of the permitting requirements to work in an area well before activities start. Obtaining permits often requires a component of community consultation, which should not be viewed as the only opportunity to meet with the affected communities and their members.

Corporate Social Responsibility

Corporate social responsibility is a business model by which companies make a concerted effort to operate in ways that enhance rather than degrade society and the environment. This helps both improve various aspects of society as well as promote a positive brand image of companies.

Our geologist is often the first person on a project to meet members of the local community. Before the first visit to the exploration area, the approach to community consultation is considered and responsibility for each element of community relations is documented.



Figure 1 community Engagement

Records and Documentation

All geological, geophysical, and geochemical information is stored in a standard digital format in databases or files which can be distributed over network this makes it possible to compile and analyze data efficiently on computers. Data base is managed by personnel who ensure that files are managed and preserved for the long-term.

Geophysical Surveys

Surveying of any site, regardless of instrumentation, begins by marking off the site into survey grids. Our team walks the instrument along, taking readings at regular intervals. Reference points placed along the corners of each grid mark the collected data, minimizing positioning error.

Data processing and imaging allow the conversion of raw numeric data into interpretable maps. Geophysical data may be rendered as graphics, helping to intuitively recognize cultural and natural patterns and to visualize physical features that are causing detected anomalies.

Our survey includes the implementation of geophysical methods to indirectly determine the geological and structural as well as the physical and mechanical characteristics of the subsurface formation. These methods are used to determine the layout, thickness and properties of individual layers below the terrain surface

Geophysical surveys are performed from the soil surface, through boreholes, excavations or in a combination of placing sources and detectors. The survey scope, the method types and work techniques depend on the survey purpose, the available funds, the geological and topographic conditions.

Geophysical surveys can offer significant time and economic savings and provide data on a much larger volume of soil or rock mass compared to conventional soil and rock mass survey.

Our Geophysical services include;

- electromagnetic methods
- magnetic methods
- seismic methods
- electrical methods
- gravity methods
- Radiometric methods



Figure 2 Electrical resistivity survey.



Figure 3 improved location accuracy survey services using DGPS



Figure 4 Conducting ground Magnetic surveys



Figure 5 very low frequency ground magnetic surveys



Figure 6 Ground Gravity survey



Figure 7 core drilling services

Our team is well versed with **GIS** technology, cartography, spatial analysis, web mapping which facilitates mineral exploration via gathering, storing, and providing access to large spatial datasets. With GIS, the team can collect information on the spatial location of various minerals and uses it to guide mining experts on where best to focus their efforts. As a result, this can reduce costs and increase the efficacy of mining operations.

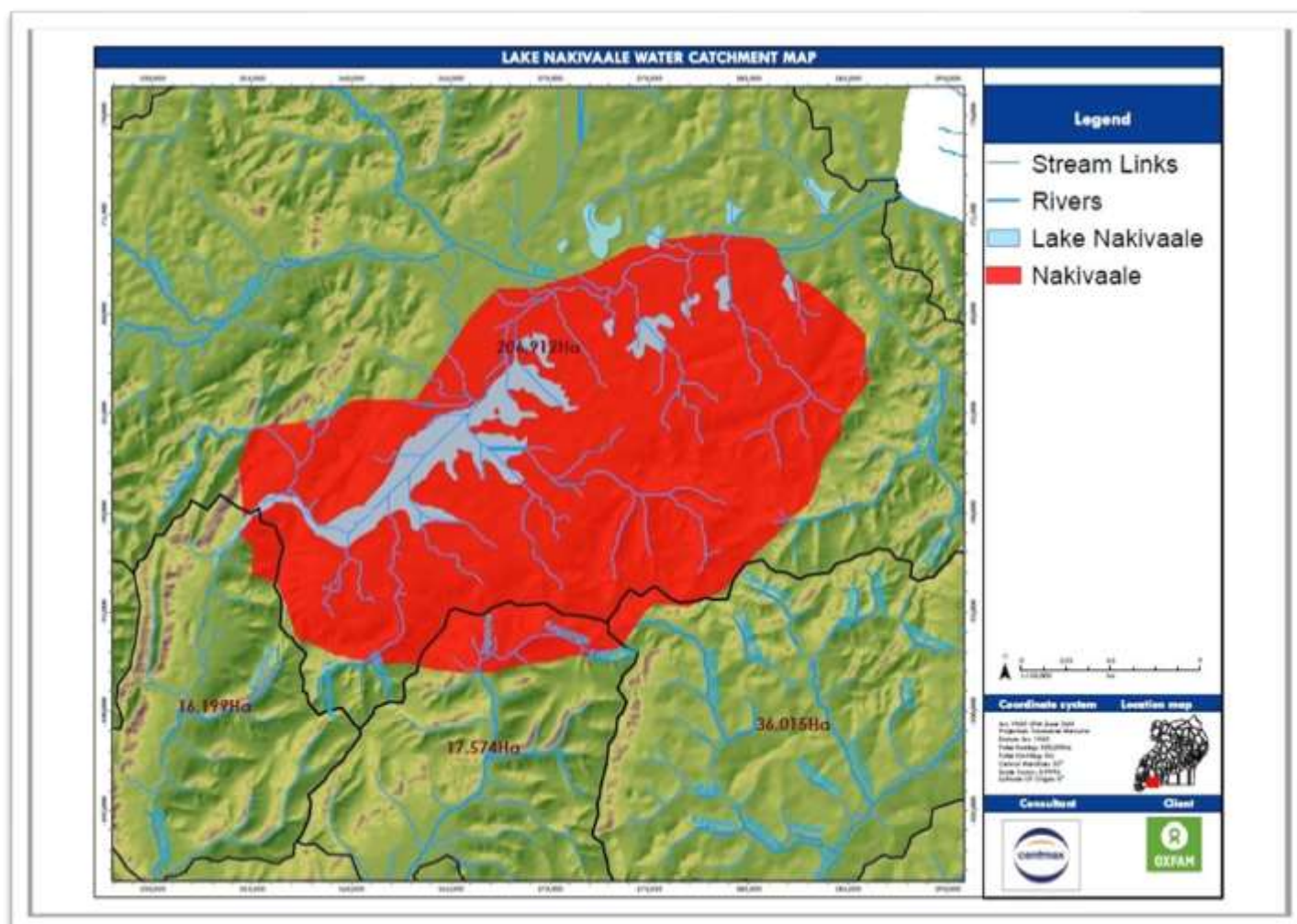


Figure 8 sample of our Base map for background detail necessary to orient the location of the map

Table 1 List of our equipment

Equipment	Make and year	Condition	Ownership	Use
Hilux	Pick up double cabin, 1994	Good	Hired	Transport
Thermo Niton XL3t XRF Analyzer	Niton XL3t 900	Good	Hired	Analysis of elements
Resistivity equipment	ABEM SAS 1000 terameter, 2003	Good	Hired	Siting
Resistivity equipment	ABEM SAS 300C terameter, 2000	Good	Hired	Siting
2 GPS	Garmin GPS Etrix 2010 & Oregon 300, 2010	Good	Owned	Location
3 EC meters	Eijkelkamp, 1999	Good	Owned	Water quality
3 pH meters	Eijkelkamp, 1999	Good	Owned	Water quality
2 Water level meters/dippers / solinst	1 of 50m and 1 of 100m	Good	Hired	Water depths
2 Laptop Computer	Toshiba and a dell		Owned	Field data collection and Reporting
1 Generator	Hale Pumps Hot4200GE-D W/ Lombardini, Motor 1 Ph 17937LR	Good	Hired	Test pumping
Over Hauser Proton Precession system magnetometer	GEM GSM-19T	Good	Hired	Conducting ground magnetic surveys
Gamma ray spectrometer	RS-125 NaI	Good	Hired	Conducting radiometric surveys

Software

Software name	Ownership	Application
Microsoft office (word, Excel, Access)	Owned	Reporting, data, analysis, presentation of geophysical data
RESSOUND	Owned	Sounding interpretation
Aquitesolv & Aquitest	Owned	Pumping test data interpretation
Surfer version 8.0	Owned	Presentation of data on Maps
Arc GIS 10.5	Owned	Interpretations and analyses

3.0 OUR TEAM OF EXPERTS

No	Technical staff	Qualifications	Years of experience	Position in the company
1	Ecau James	M.Sc. Petroleum Engineering and Production, BSc. Geological Resources Management	9	Senior Geologist
2	Mulinde Rodrick	BSc. Geology, physics	6	Geologist
3	Angeyango Consulate	MSc Environmental Engineering PDG in Project planning and Management BSc. In Water Resources Engineering	6	Environmental Engineer
4	Angumenawe Nichodemus	Diploma Workplace Safety and Health, Diploma Environmental Science, Occupational health and safety.	7	Health and safety Engineer

4.0 OUR TEAM ON SITE



Resistivity survey in Nebbi District



Exploration for Bentonite Ihimbo district



DGPS station Establishment



Exploration for Rare earth elements Bugiri district



VLF Survey for sulphides in Ntungamo



Panning for Gold in Busia

SELECTED MINING PROJECTS

S/N	Projects	Client(s)
1	Jan, 2018 –to-date <ul style="list-style-type: none"> Field geological mapping of Marble and Granite Quarries Geological Sample analysis and interpretation, Reserve estimation of Marble & Granite quarry for dimension stones 	Mechanized Agro (U) Ltd, P.O. Box 16616, Kampala (Project Areas include: Kotido, Mubende and Mukono)
2	Nov to 2019 Dec, 2021 <ul style="list-style-type: none"> Field Geological Mapping Supervision of Core drilling (up to 250m Depth), Core Sampling and Logging of Ultramafic rock formation, Quarry Reserve estimation 	Pearl Mining (U) Ltd P.O. Box 2903, Kampala; project areas are in the Rift Valley, Mubende and Mukono)
3	September, 2019 to July, 2020 <ul style="list-style-type: none"> Geotechnical design of oil waste dump sites Well designs for ground water wells Ground Resistivity Measurements for oil waste dump sites Environmental Impact Assessment Soil Classification and Compaction studies Borehole data acquisition and interpretation Borehole drilling Supervision 	CNOOC Uganda Ltd (Project was at King Fisher - Block 3 Area, Albertine Graben)
4	August 2019 to June, 2021 <ul style="list-style-type: none"> Geotechnical and Environmental Impact Assessment for an Iron Ore Processing Plant Use of Gold Scanner (Vector Trek- long Range Scanner) for mapping precious metals Soil and Stream Sediment Geochemical exploration Ground water Investigation and Hydrogeological investigations Geophysical mapping GIS and Remote Sensing Mapping 	Banta Investments Uganda Ltd P.O Box 7459, Kampala (Projects in Gold exploration and Mine development in Ibanda, Mubende, Muko-Tororo, Grounwater projects across Uganda)
5	March, 2018 to date <ul style="list-style-type: none"> Geological mapping and sampling for Limestone Lab and Core Analysis supervision Drill-hole supervision 	Bamburi Minerals Co. (U) Ltd, P.O. Box 5136, Kampala, Projects were in Kasese, Kotido and Tororo
6.	March 2018 to September 2019 Review of Energy and Mineral Development Sector Development plan for the key government institutions in Uganda	GIZ Funded Project-for ADROIT CONSULT INTERNATIONAL