Exploration and Mining Services



PSEUDOX EXPLOME TANZANIA LIMITED

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1.0 Introduction

PSEUDOX EXPLOME TANZANIA LIMITED is a Tanzanian – based professional services company with an experienced team of a local competency professionals in mineral exploration industry, making it part of the geophysical and geological consulting and non-consulting company in Africa. The Company was established and registered in September 2020 with intention to undertake contracts nationally and internationally.

The company is managed by a team of highly qualified and experienced partners who previously worked in various projects within Tanzania.

2.0 Our Mission and Vision

PSEUDOX EXPLOME has as a mission to guarantee quality services and establish endless relationships with our clients based on the provision of an optimal services of consulting and non-consulting, within a framework of ethics and performing with environmental and social responsibility.





PSEUDOX EXPLOME has as a vision to be an African organization that will leads mineral exploration activities and management of projects using the quality of our services, and our qualified team.



3.0 Our Services

PSEUDOX EXPLOME was established to provide both consultant and non-consultant services for our esteemed clients in the following areas;

3.1 Minerals, Groundwater and Energy Exploration Services

- **Consulting services** we provide excellent services as per client demand. These include:
 - > Technical due diligence of the property
 - > Data and property acquisition, management and permitting
 - > Resources evaluation and modeling
 - Geotechnical site investigation
 - > Feasibility study on renewable energy
 - QA/QC for exploration program
 - Sampling/mapping programs
 - > Drilling and HSEC management
 - > Geophysical programs
 - > Training and courses
- **Exploration services** our services range from grass roots exploration to advanced resources definition. These include;
 - > Data compilation and target generation



- Project design, planning, budgeting and permitting
- Set up and management of field camps, and procurement/supplying of all field PPE and consumables
- Geophysics services Ground/Drone Magnetics, Electromagnetic, Induced Polarizations and Ground/Drone Radiometric)
- ➤ Conduct and supervise exploration in the field including geophysics, geological mapping, geochemical sampling, and drilling plus all associated tasks (logging, sampling, reporting etc.)
- Maintenance of up-to-date deposit models and database including data entry and QA/QC
- ➤ Training and maintenance of the HSEC management plan and relevant HSEC policies and procedures during all fieldwork
- > Resource evaluation and modelling
- > Equipment rental and safety inspection for field equipment i.e. drilling rig, excavator/bulldozer, vehicle etc.
- Preparation of Statutory Report for Exploration property
- **Contract Geologist Services** we provide Competent Persons to meet with client demand.
 - Project geologist/manager
 - Exploration geologist
 - > Field geophysicist
 - > Logistic manager
 - > Field technician
 - GIS/database expert

3.2 Mining services

- Mineral resource evaluation and modelling
- Grade control and report compilation
- Supplying/procurement of mining equipment/consumables

4.0 Details for our Geophysics Services/Equipment

PSEUDOX EXPLOME has an access to a pool of state of the geophysical survey instruments for time domain Induced Polarization (IP), Electromagnetic (EM), ground and drone magnetics/Radiometrics.

- For Magnetic survey, the company has four GEM system Overhausser Magnetometers with inbuilt enhanced GPS, and 1 unit of Dronemag—GSMP-25 using DJI Matrice 600 Pro and DJI 300M RTK.
- For IP and EM, the company has Three sets of IP equipments comprises of WALCER GEOPHYSICS 10kw transmitters and 10 Channels IRIS ELREC PRO



receivers, and has an access to a ZONGE GDP 16 receiver and ZONGE GGT10 transmitter for Electromagnetic survey.

• For Radiometrics, the company has Medussa Gamma Ray sensor model MS-1000, used for either Ground or Drone option.

1.	Ground/Drone Magnetics
2.	Ground/Drone Radiometrics
3.	Induced Polarization(IP)
4.	Time Domain Electromagnetic(EM)

4.1 Ground Magnetic survey

- High resolution survey useful as an initial mapping method and are of great assistance in completing detailed interpretation of other survey method like EM and IP.
- Application in Mineral, Energy, Engineering design and Ground water exploration.

1.	Location of iron ore and gold bearing iron formation
2.	Chromite and Manganese prospecting
3.	Sulphide occurrences associated with magnetite/pyrotite
4.	Location of Kimberlite pipes (Diamond) and Placers
5.	Geological mappingmagnetic susceptibility contrasts
6.	Structural mapping

Ground magnetic instrument - Overhausser Magnetometer		
	General Information	Technical informations
	Manufactured by GEM	Resolution: 0.01nT
	Systems	Accuracy:0.01Nt
888	Model:GSM-19W	Range: 10,000 to
170 GR	Equipped with inbuilt	120,000Nt
Systems Constitute of the Cons	GPS	Operating temperature: -40°C to 60°C
1000	Serial no:	
0000	8082881/8082872 8108202/8108213	
	,	



DRONE-DJI Pro 600 Matrice		
	General	Technical Information
	Information	Teenmeal Information
1 No	Manufactured	Dimensions:
	by DJI	1668x1518x727(mm) with
STATE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS N	mounted with	, ,
/ \	DJI ZENMUSE	
1 1	Z3 Camera	Max Takeoff: 15.5kg
1	Serial no:	Max wind Resistance: 8m/s
		Max Speed: 65kph(no wind)
		Operating temp:-10°C to -40°C
Drone magnetic instrument –GSMP-25U version 8.0		
	General	Technical Information
	Information	
	Manufactured	Power:18.6 - 32Vdc
	by GEM	Sensitivity: 0.022nT@1Hz
	System with	Resolution:0.0001nT
	5m long	Absolute Accuracy: +/-0.05nT
	interface	Heading error: :+/-0.05Nt
	sensor cable	Dynamic Range:15,0000-
	Serial no: 105668	120,000
		Gradient Toralence: 50,000nT/m
		Sampling intervals:
		1,2,5,10,20Hz
		Operating temp:-40°C to -55°C

4.2 Radiometric Survey

- The Survey detect and map natural radioactive emanations from rocks and soils. The gamma radiation takes place from the natural decay of elements like U, Th and K. The radiometric method is capable of detecting these elements at the surface of the ground.
- Application in Mineral exploration.
- 1. Detection of U, Th and K elements
- 2. Geological mapping



Drone/Ground Radiometrics - medusa MS1000



General Information
Manufactured by Medusa and used for Drone and Ground survey.

Technical Informations
Power: Low power
Weight: Light
weight(7kgs)

Function: 3.5 x 6.5 inch Crystal(Csl), <9% at 662keV Resolution and 1000(ml) volume



Drone for Radiometric Survey manufactured by Jiangsu Digital Eager, model SK-62 Pro Payload: Maximum 20kgs

weight

Speed: Max cruising

speed 20m/s

Wind resistance: 4-5

Level

Duration: 20 to 60mins Power System: Battery

4.3 Time Domain Induced Polarization survey

- Survey useful as for detection of resistive, conductive and polarizable features.
- The electrode configuration and spacing are the key parameters to ensure the success of the program. Gradient array for reconnaissance, Profile sounding array such as Dipole Dipole, Pole Pole and pole dipole for 2D and 3D environments, and Schlumberger/Wenner for sounding arrays for 1D.



• Application in Minerals, Energy, Environmental, Engineering and Ground water exploration.

1.	Detection of a buried conductor and disseminated metallic luster mineral occurrences(porphyry copper, gold bearing veins/structures)
2.	Detection of poorly to non-conductive massive sulphide occurrences(sphalerite rich, discontinuous banded mineralization, insulated sulphide grains, stockworks)
3.	Discrimination between barren and mineralized conductive features(fault/shear zone)
4.	Mapping of alteration zones and structural features controlling mineral deposition.
5.	Detection of disseminated sulphides or stringer surrounding a massive deposit.

Ground IP/Resistivity instrument- WALCER TXKW10 TRANSIMITTER		
	General	Technical informations
	Information	
	Manufacture	Input voltage: 120V
ner reason 1997 call the call of the call	d by Walcer	Output voltage: 100V- 3200V
A D	Model:	Output current: 0.05A- 20A
	TXKW10	Power: 10KW
MASA AF DEOMINESOS AT TORONTO CANADA	Serial no:	
	T20911,	
	T21003 &	
	T202210	
Ground IP/Resistivity instrument- WALCER MG6 GENERATOR		ALCER MG6 GENERATOR
	General	Technical informations
	Information	





Manufacture d by Walcer Model: MG6

Serial no: M20207, M20911 & M21304 Gasoline engine

Output voltage:120V- 220V AC

Power: 13Hp

Ground IP/Resistivity instrument- IRIS ELREC-PRO RECEIVER



instrument- IRIS ELREC-PRO RECEIVER		
General	Technical informations	
Information		
Manufacture	Input voltage: 12V internal bat	
d by Iris	Channels of input:10	
instrument	Chargeability window: 20	
Model:	Sampling time: 10ms	
ELREC PRO	Resolution(Chargeability):0.01mV/	
	V	
Serial no:	Signal of waveform: Time	
2315411478370282 , 2315283368789103	domain(0.5,1,2,4 and 8s)	
& 23152090659315126		



4.4 Electromagnetic Survey

- Survey useful for conductive location and delineation, deeply buried conductive mineralized body by use of large transmitting loops. Depth of investigation of 100m up to 300m depending on the size and conductance of target. Loop positions critical in order to obtain a good coupling. Large IN-LOOP technique suitable for gently dipping conductor and FIXED-LOOP technique suitable for steeply dipping conductor.
- Application in Mineral and Groundwater exploration

1. Detection and delineation of a buried conductor

Ground EM instrument – Zonge GDP 32 Receiver		
General Information	Technical informations	



Ground EM instrument - Zonge GGT 10-Transmitter



strument – Zonge GGT 10)-Transmitter
General Information	Technical information
Manufactured by Zonge.	Input: 120/208 volts 3
Model: GGT 10	phase 400 cycle
	Standby power:25VA
Using Transmitter	Output/Control
controller	range:50V- 1000V
	Output/Frequency
	domain: 0.2 - 6.0 amp
	Output/Time domain:0.2
	– 10 amp
	Operating temperature: -
	40°C to 60°C

4.5 LIDAR SURVEY

LiDAR surveying is a fast and effective way to capture 3D data. Using laser pulses to calculate distances, capture precise measurements and measure ranges is growing in popularity. With cutting-edge drone technology, LiDAR enables laser pulses to penetrate dense vegetation in order to reach the ground surface. This technology is ideal for terrain modelling, works perfectly in low-light conditions, and offers a distinct advantage over photogrammetry. While photogrammetry can deliver a reconstructed digital surface model (DSM), only LiDAR can deliver accurate and survey-grade DSMs and digital terrain models (DSM).

Our use of UAS (unmanned aerial systems) with LiDAR enables highly accurate terrestrial surveying, land surveying, and topographical mapping among other services. Ideal for easement assessments or land surveying, laser scanning is the fastest and most affordable way to survey difficult terrain. We can deliver terrain data in a number of practical formats, including LAS/LAZ laser point clouds, 3D models, DXF/DWG vector files, ground contours, TIN, etc.







Psoudox Exploite Tanzania Limited	
General	Technical Information
Information	
Manufactured by DJI mounted with DJI ZENMUSE L1-Lidar SENSOR	Dimensions 152×110×169 mm Weight 930±10 g Power Typical: 30 W; Max: 60 W IP Rating IP54 Supported Aircraft Matrice 300 RTK Operating Temperature Range -20° to 50° C (-4° to 122° F) 0° to 50° C (32° to 122° F) (when using RGB mapping camera) Storage Temperature Range -20° to 60° C (-4° to 140° F)

5.0 Management/Personnel

Special Company Advisor/Consultant

- Dr. Dave R. Webb (Ph.D., P.Emg) (NAPEGG, CIMM, PDAC, SEG, NWT) Principal Geologist
- Dr. Haitao Yuan Principal Geologist with 20+ years' experience on metals exploration in Africa and Australia.





Company Founder/Managing Director

Mr. James Mabula(BSc) – Senior Exploration Geologist



Mr. James Mabula born in 1979, holds a bachelor degree of science with honor in Geology from University of Dar es salaam. He has continuous 17 years of experiences in mineral explorations, and has been served as graduate/ field geologist with GeoCan Company (Gold/Uranium) from 2007, senior geologist with Lake Victoria Resources (Gold) from 2009, independent consultant in geology and geophysics with various small to large scale companies (Gold/Copper/Mineral sands/Graphite/Diamond/Manganese) from 2013, and Senior II exploration geologist for Strandline JV RioTinto (Mineral sands) from 2016. Later on, served as a founder of Pseudox Explome Tanzania Limited in 2020.

Throughout his continuous working experiences, **Mr. James** has a fully and extensive experience in field management and data acquisitions for geophysical survey (EM/IP/Magnetic/Radiometric), mapping and Geochemical samplings, GIS applications (ArcMap/MapInfo), all types of drillings (Auger/RAB/AC/RC/DD), property valuation for mineral resources and statutory report writing for exploration property.

Moreover, in his career, **Mr. James** has shown and demonstrating strong field team leadership and been involved in raising numbers of the projects from reconnaissance (grassroots) to near mine i.e. Uyowa/Singida/Kinyambwiga gold projects by Lake Victoria Resources, Namangale graphite project by Volt Resources and Madimba Heavy mineral sands project by Strandline Resources JV RioTinto.



Company Secretary/Office Manager

Ms.HadijaJuma(BA) – Senior Customer officer



Ms. Hadija Juma born in 1980, has a bachelor degree of Arts in Journalism from St. Augustine University of Mwanza in Tanzania. She has 14 years continues reputable experience in public institute (SHUWASA – Shinyanga Urban Water and Sewage Authority & MWAUWASA – Mwanza Urban Water and Sewage Authority) and been served as Customer/Public relation officer since 2008 up to recent. In her experiences, she also has fully experience in community relations and office management. Lastly, **Ms. HadijaJuma** serves as a Company secretary and Director of Pseudox Explome Tanzania Limited since 2020.

Technical Manager – Geophysics

Mr. Sindi Maduhu (MSc)(SEG) – Senior Exploration Geophysicist



Mr. Sindi Maduhu born in 1980. Currently, Mr. Sindi is an employee of the Tanzania Petroleum Development Corporation (TPDC) as a Geophysicist since January 2014. His main duties is Geophysical data acquisition, processing and interpretation specialized in Potential field data.

Mr. Sindi holds Bachelor degree and Master's Degree of Science in Geology (Research based Geophysical Methods) from the University of Dar es Salaam in Tanzania.

He has been worked with Geological Survey of Tanzania as a Geoscientist for Six (6) years from 2008. He is also working as an independent Consultant in the Mining industry especially acquiring, processing and interpreting geophysical data (IP, Magnetic, Electromagnetic, Borehole Geophysics, Gravity and Radiometric).

Mr. Sindi is an active member of Tanzania Geological Society (TGS), European Association of Geoscientist and Engineers (EAGE) and Society of exploration



Geophysics (SEG), currently nominated among the SEG membership committee team. Joined PSEUDOX EXPLOME in 2020 and working on contract basis.

Company Accountant

Mr. Amani Leonard Sam (CPA) – Senior Accountant



Mr. Amani Sam born in 1991, holds a Bachelor degree of Accounting and Finance in Business sector from Mzumbe University in Tanzania. He is the member of National Board of Accountant and Auditor (NBAA) with CPA (T) holder. Mr. Amani has over 8 years' experience in Accounting and Finance Services. He is current an Accountant at AfrikaKazi Limited, exploration and mining company and he has joined PSEUDOX EXPLOME since 2020.

6.0 List of our Technical Team

PSEUDOX EXPLOME has an access to expert varieties from junior to very senior technical person in all explorations aspects as shown below. Previously, the team has been worked together and continues work on contract basis under PSEUDOX EXPLOME TANZANIA LIMITED.

- Dr. Harish Ahuja (Ph.D.) (AusIMM) Senior Exploration Geologist
- Mr. James Mabula (BSc) Senior Exploration Geologist
- Mr. Sindi Maduhu (MSc)(SEG) Senior Exploration Geophysicist
- Dr. Didas Makoye (Ph.D.) Senior Exploration Geophysicist
- Mr. Felix Mponzemenya (BSc) Senior Exploration Geologist
- Mr. Paul Madata (BSc) Exploration Geologist and Remote Pilot
- Mr. Daudi Banza (BSc) Remote Pilot
- Mr. Boniface Mahede (BSc) Exploration Geologist
- Mr. Happiness Manten (BSc) Exploration Geologist
- Mr. Kelvin Felix (BSC) Exploration Geologist
- Ms. Janeth Tesha (BSc) Exploration Geologist
- Mr. Mkutwa Mpenzly Senior Officer-Health, Safety and Environment
- Mr. Shaban Mohammed Senior Geotechnician
- Mr. Daniel Sondo Senior Geotechnician
- Mr. Burton Muhando Senior Geotechnician



- Mr. Paul Nguku Geotechnician
- Mr. Emmanuel Mwinamila Geotechnician
- Mr. Masesa Joseph Emmanuel Geotechnician
- Mr. Festo Sam Geotechnician
- Mr. Marwa Meteti Mwita Geotechnician
- Mr. Laurence Sospeter Geotechnician

7.0 Recent Works Completed

In 2021 to 2025 PSEUDOX EXPLOME has completed numbers of consulting and non consulting works in Geology and Geophysics surveys. Some of the Geophysics surveys completed includes;

- 467 line kilometers of Ground Magnetic survey at Jirani Kabanga Nickel project own by Adavale Resources.
- 133 line kilometers of Gradient IP (GAIP) survey at Shakta Gold prospect owned by North Mara Gold Mine Limited, Barrick Company.
- 230 line kilometers of Gradient IP (GAIP) and 24-line kilometers of Dipole Dipole IP (DDIP) survey at Tembo prospect owned by Bulyanhulu Gold Mine Limited, Barrick Company.
- 95 line Kilometers of Gradient IP (GAIP) survey and 35-line kilometers of Pole Dipole IP (DDIP) survey at Gokona prospect owned by North Mara Gold Mine Limited, Barrick Company.
- 1915 line kilometers for the Drone magnetic and 364-line kilometers of Gradient IP (GAIP) survey and 36-line kilometers for Dipole Dipole IP (DDIP) survey at Chunya Gold project owned by African Village Limited.
- 220-line kilometers for the Drone magnetic and 55-line kilometers for the Gradient IP (GAIP) survey at Handeni Gold project owned by Livingstone Resources Tanzania Limited.
- 12 line kilometers of Pole Dipole IP (PDIP) Survey at GOKONA Mining Pit owned by NORTH MARA GOLD MINE LIMITED, BARRICK Company.
- 32 line kilometres for Dipole Dipole IP (DDIP) survey at Dodoma Iron ore project owned by PRECISION MINING LIMITED
- 270 line kilometers for Gradient IP (GAIP) survey at TAGOTA project owned by North Mara Gold Mine Limited, Barrick Company.
- 3050 -line kilometers for Drone Magnetic survey at Mumbwa Project, Central Province, Zambia.



- 195 line kilometers for Ground and Drone Magnetic survey at BULY SOUTH Gold project owned by FUDE RESOURCES LIMITED
- 102 line kilometers for Ground Radiometric survey and 58 line kilometers for Pole Dipole IP (PDIP) at ISONDA Gold project owned by ROCH ISONDA LIMITED
- 175 line kilometers for Pole Dipole IP (PDIP) and Ground Magnetic Survey at MPWAPWA COPPER PROJECT owned by VARI MINES TANZANIA LTD under GEOROCKS CONSULTING Company
- 55.75 line kilometres of Gradient IP (GAIP) Survey at GOKONA EAST project owned by NORTH MARA GOLD MINE LIMITED, BARRICK company.
- 96 line kilometres for Ground Magnetic survey, 46 line kilometres for Gradient IP (GAIP) survey and 16-line kilometres for Dipole Dipole IP (DDIP) Survey at Iseche Songwe Gold project owned by CHRYSUS INDUSTRIES LIMITED.
- 78 line kilometres for Ground Magnetic survey, 39 line kilometres for Gradient IP (GAIP) survey and 9-line kilometres for Dipole Dipole IP (DDIP) Survey at Saza Gold project owned by KENZ GOLD LIMITED.
- 52 line kilometres of Gradient IP (GAIP) Survey and 15 line kilometres of Dipole Dipole IP (DDIP) Survey at SGB Gold Mine in HANDENI area.
- 185 line kilometres of Pole Dipole IP (PDIP) survey and Ground Magnetic survey at Vari Mine Limited copper project in Mpwapwa, sub contract by GEOROCK CONSULTING.
- 470 line kilometres of Ground Radiometrics Survey at Sinda, Katete Petauke Phosphate project in Zambia, under subcontract by GEOPHEX SURVEYS LTD.



8.0 Site Works & setup





























