

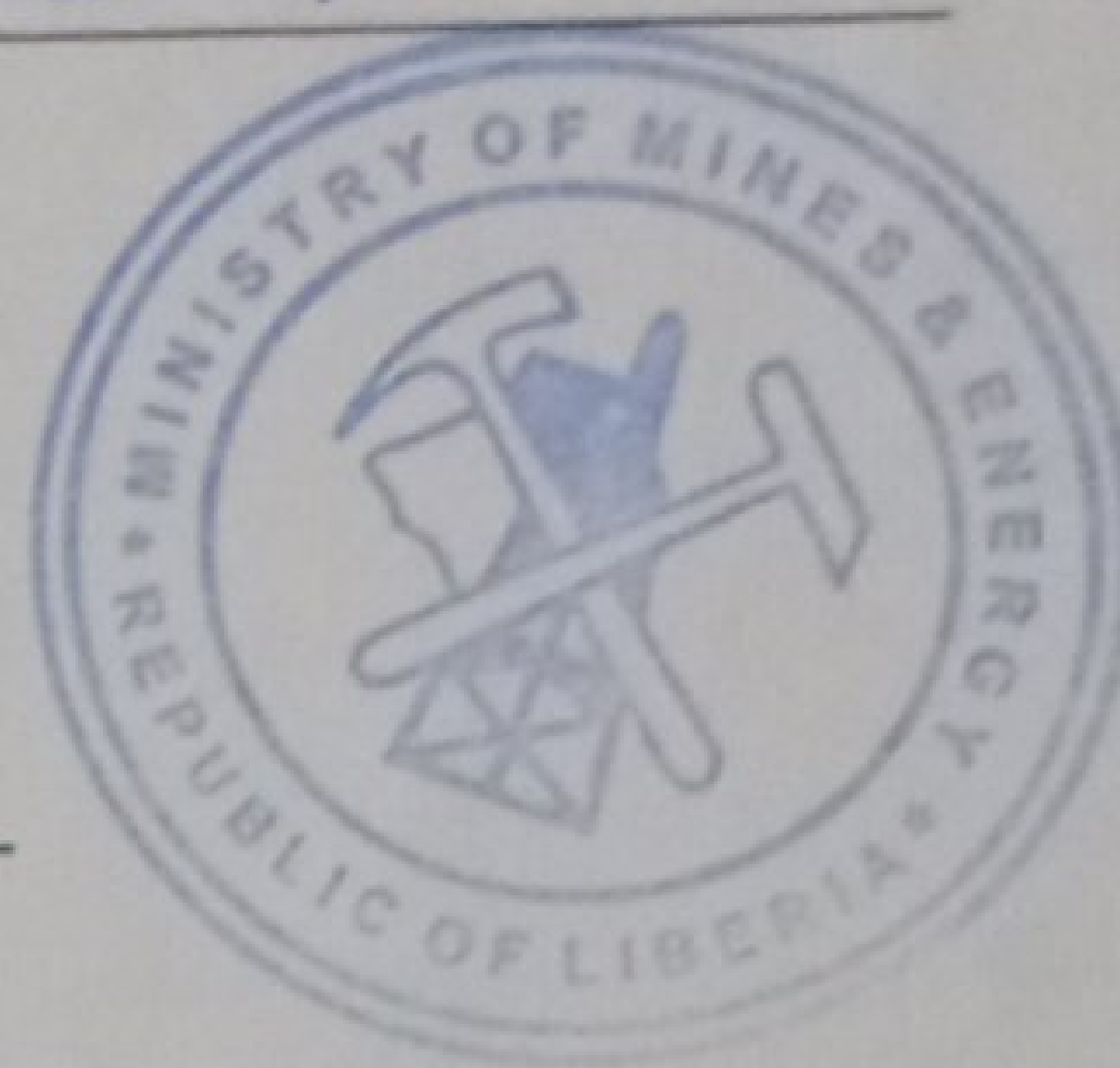
**REGULATIONS ON GROUNDWATER
EXPLORATION AND BOREHOLE
DRILLING/ OPERATION PERMIT OF
THE REPUBLIC OF LIBERIA**

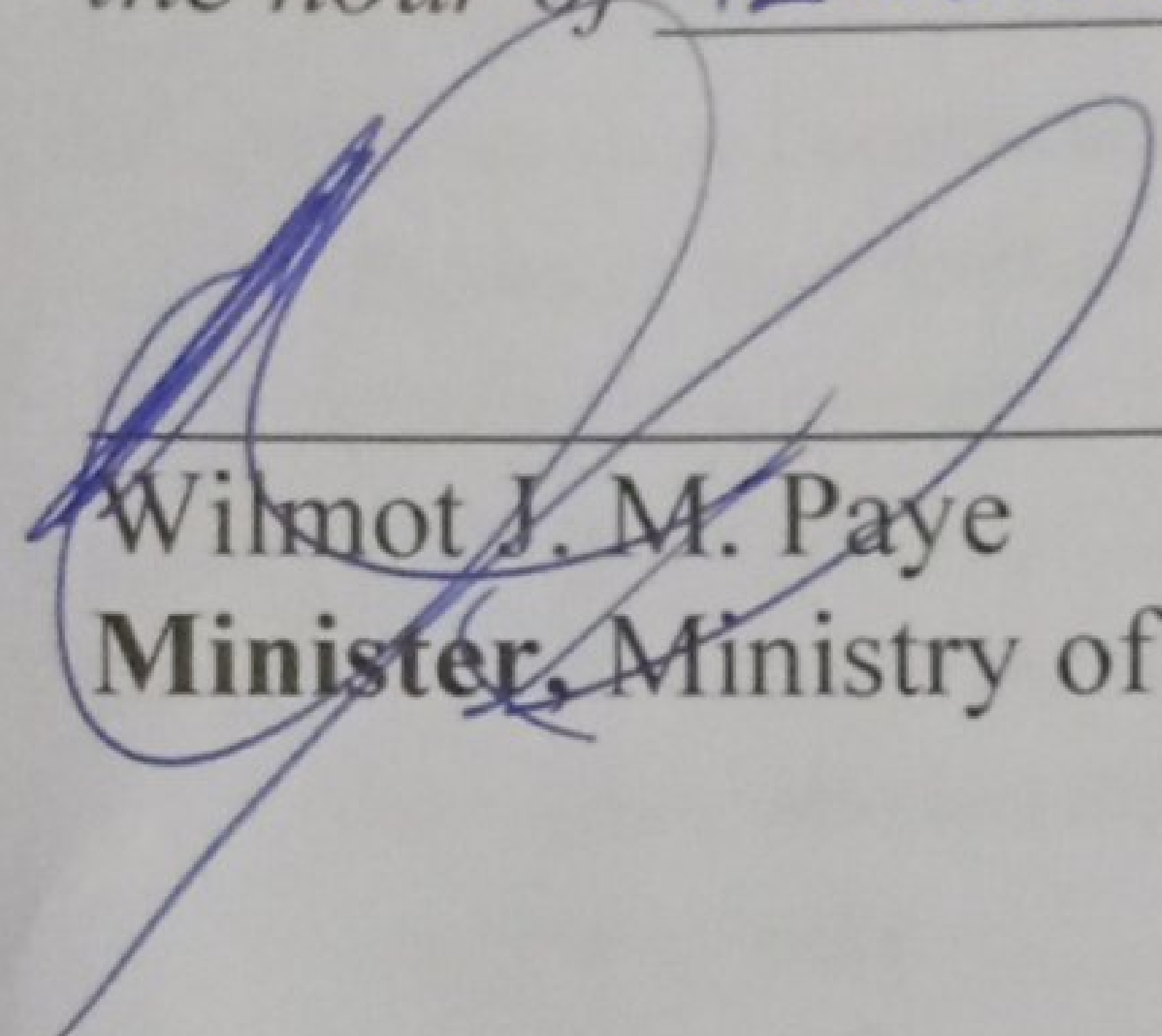


**MINISTRY OF MINES AND ENERGY
CAPITOL HILL, MONROVIA
LIBERIA**

2025

IN EXERCISE of the powers conferred on the Minister by sections 21.1, 21.2, and 21.3 of the Minerals and Mining Law of Liberia 2000, (PART 1, TITLE 23, LIBERIAN CODE OF LAWS REVISED), These Regulations become effective on this 9th Day of OCTOBER A.D. 2025, at the hour of 12:00 Noon

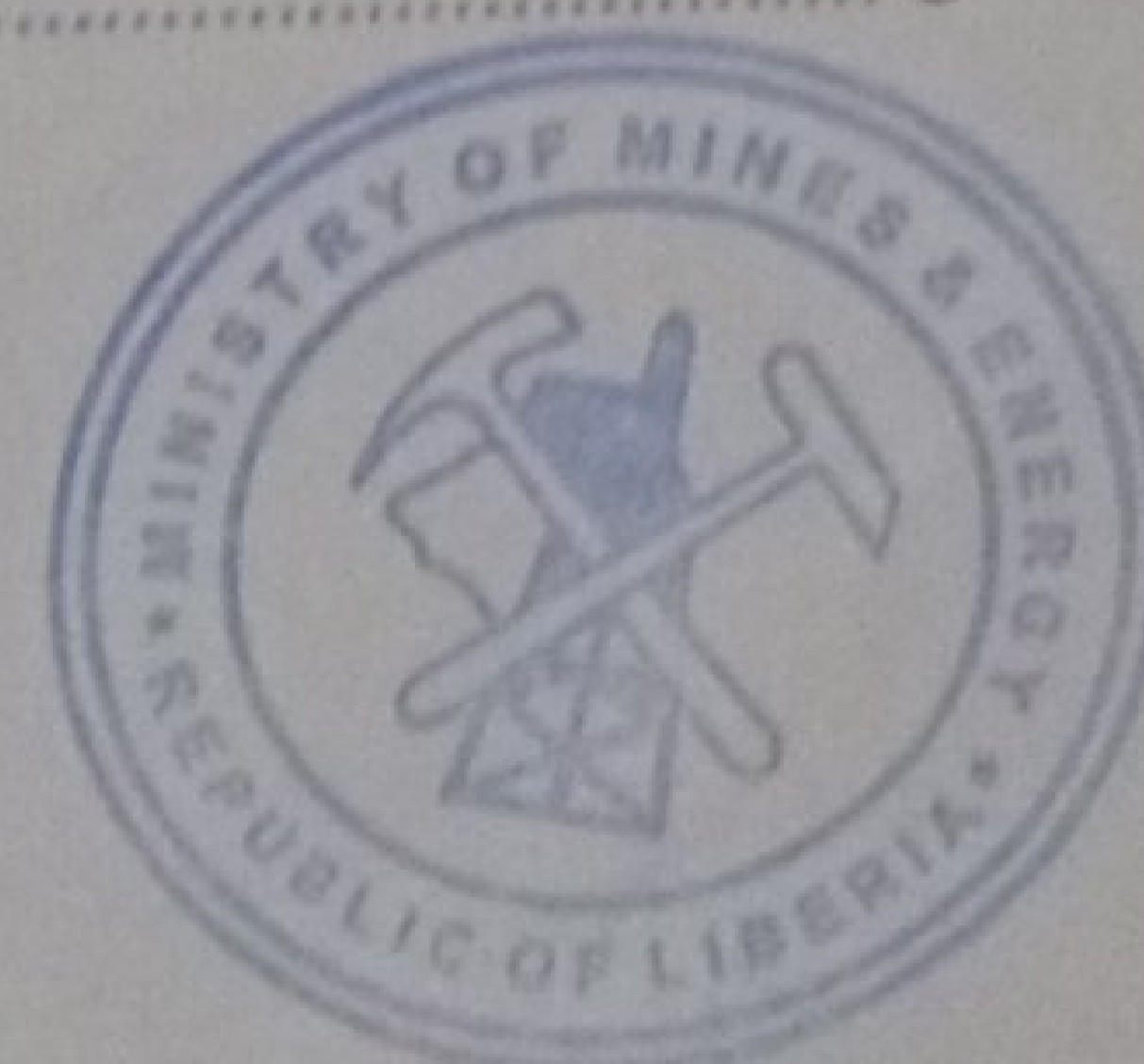



Wilmot J. M. Paye

Minister, Ministry of Mines and Energy

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Foreword

Water is a fundamental resource that supports life, health, and economic development, making the protection and sustainable management of groundwater crucial for Liberia's well-being. As our population grows and demands on water resources intensify, it becomes essential to establish clear guidelines that ensure groundwater is explored and developed responsibly.

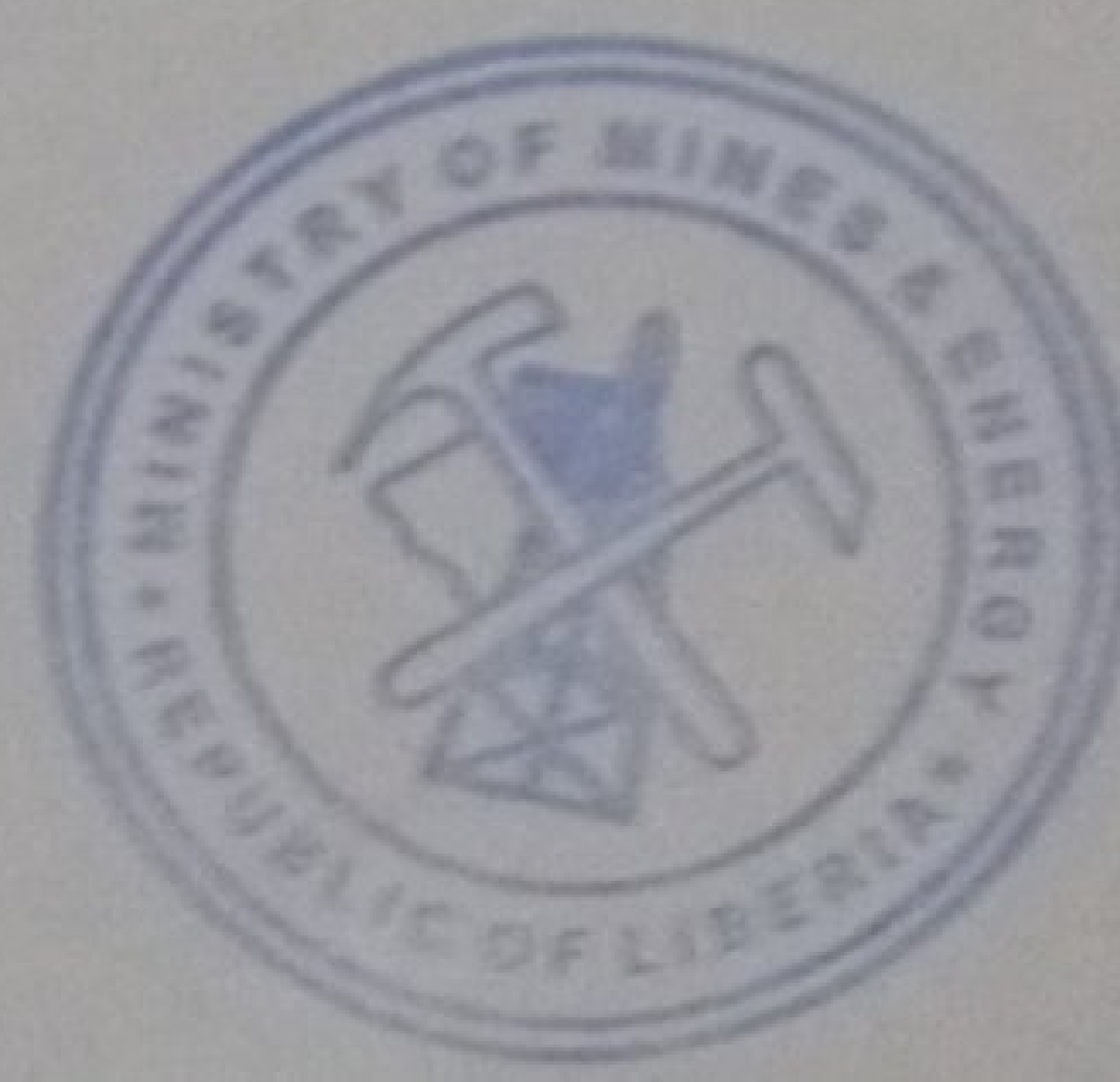
In keeping with section 2200 of the Liberia Consolidated Revenue Code of 2021 as amended, the minister shall make policy regulations prescribing anything which is to be prescribed under and generally for carrying out the provision of this code and the sections 21.1, 21.2 and 21.3 of the Minerals and Mining law of Liberia, 2000, these regulations are made.

These regulations represent a significant step toward managing Liberia's groundwater resources to meet present needs while safeguarding these reserves for future generations. By setting out structured procedures for permitting, borehole development, and resource monitoring, this regulatory framework provides a balanced approach that respects both environmental integrity and community welfare. It aims to prevent resource depletion and promote fair access to water for all users.

Developed by the Ministry of Mines and Energy, this document outlines specific requirements for individuals, companies and institutions engaged in exploration and drilling operations across the country. It sets forth the technical standards, safety protocols, and compliance obligations necessary for responsible groundwater exploration and drilling, as well as the rights and responsibilities of permit holders. These regulations also prioritize community engagement and environmental safeguards, recognizing the interconnected nature of groundwater, ecosystems, and human communities.

The Ministry of Mines and Energy expresses its gratitude to all stakeholders whose valuable contributions have shaped this regulatory framework. We encourage cooperation and adherence from all parties as we collectively strive to protect Liberia's groundwater resources for a sustainable future.

Wilmot J. M. Paye
Minister



Chapter 1

: Preliminary

1.1 Purpose

To regulate the exploration and drilling of groundwater resource in Liberia, ensuring sustainable access, protecting public health, and maintaining environmental standards.

1.2 Scope

These regulations apply to all individuals, companies, and institutions seeking to explore for groundwater and drill boreholes for commercial, agricultural, industrial, or public use in Liberia.

1.3 Short title and commencement

These regulations shall be called the Groundwater Exploration and Borehole Drilling/ Operation Permit Regulation of the Republic of Liberia.

This regulation shall come into force on the date of its publication in the Official Gazette of the Republic of Liberia.

1.4 Definitions of Interpretations

1.4.1 Definitions:

“Abandoned Borehole” shall mean a borehole no longer in use or deemed unproductive and permanently sealed to prevent contamination of groundwater.

“Applicant” shall mean any individual, organization, or entity applying for a groundwater drilling permit under these regulations.

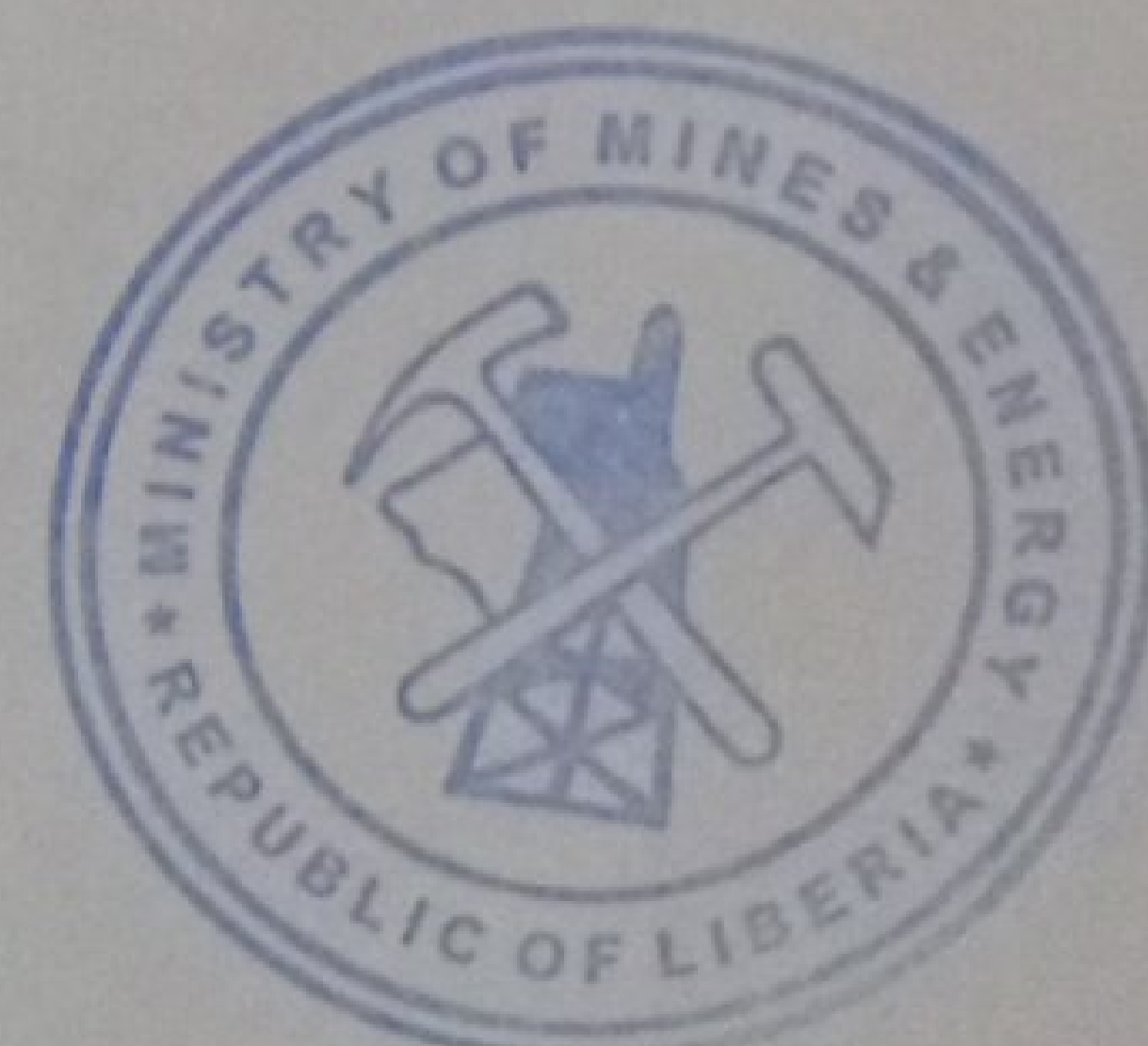
“Borehole” shall mean a drilled or excavated hole in the ground designed for extracting groundwater or conducting geological surveys.

“Groundwater Exploration and Borehole Drilling Permit” shall mean an official authorization issued by the Ministry of Mines and Energy (MME) allowing the exploration of groundwater and drilling of borehole for water extraction, subject to compliance with specific technical standards.

“Community Engagement” shall mean a process by which individuals, organizations, and communities are informed and consulted about activities related to groundwater exploration and borehole development that may impact their environment and resources.

“Contamination” Shall mean introduction of harmful substances, microorganisms, or pollutants into groundwater, which may render it unsafe for its intended use.

“Environmental Impact Assessment (EIA)” shall mean a study evaluating the potential environmental impacts of proposed groundwater exploration or borehole development, including effects on ecosystems and public health.



“Exploration” shall mean the process of investigating and identifying groundwater sources through geophysical surveys, and other scientific methods.

“Drilling” shall mean the process of creating a borehole or well to access water stored underground in aquifers.

“Groundwater” shall mean water located beneath the earth's surface in soil pore spaces and fractures of rock formations, often accessed for public, agricultural, industrial, or commercial use.

“Hydrogeologist” shall mean a professional trained in hydrogeology who specializes in the study of groundwater movement, distribution, and quality.

“Liberia Hydrological Service (LHS)” shall mean the bureau within the Department of Mineral Exploration and Environmental at the Ministry of Mines & Energy, the government agency responsible for managing, regulating, and monitoring groundwater resources and overseeing the issuance of related licenses and permits.

“Permit” shall mean a formal permission granted by the Ministry of Mines & Energy (MME) to an applicant for groundwater exploration and borehole drilling, subject to compliance with specific requirements.

“Monitoring” shall mean the regular observation, and assessment of borehole sites, groundwater extraction rates to ensure compliance with regulations and protection of water resources.

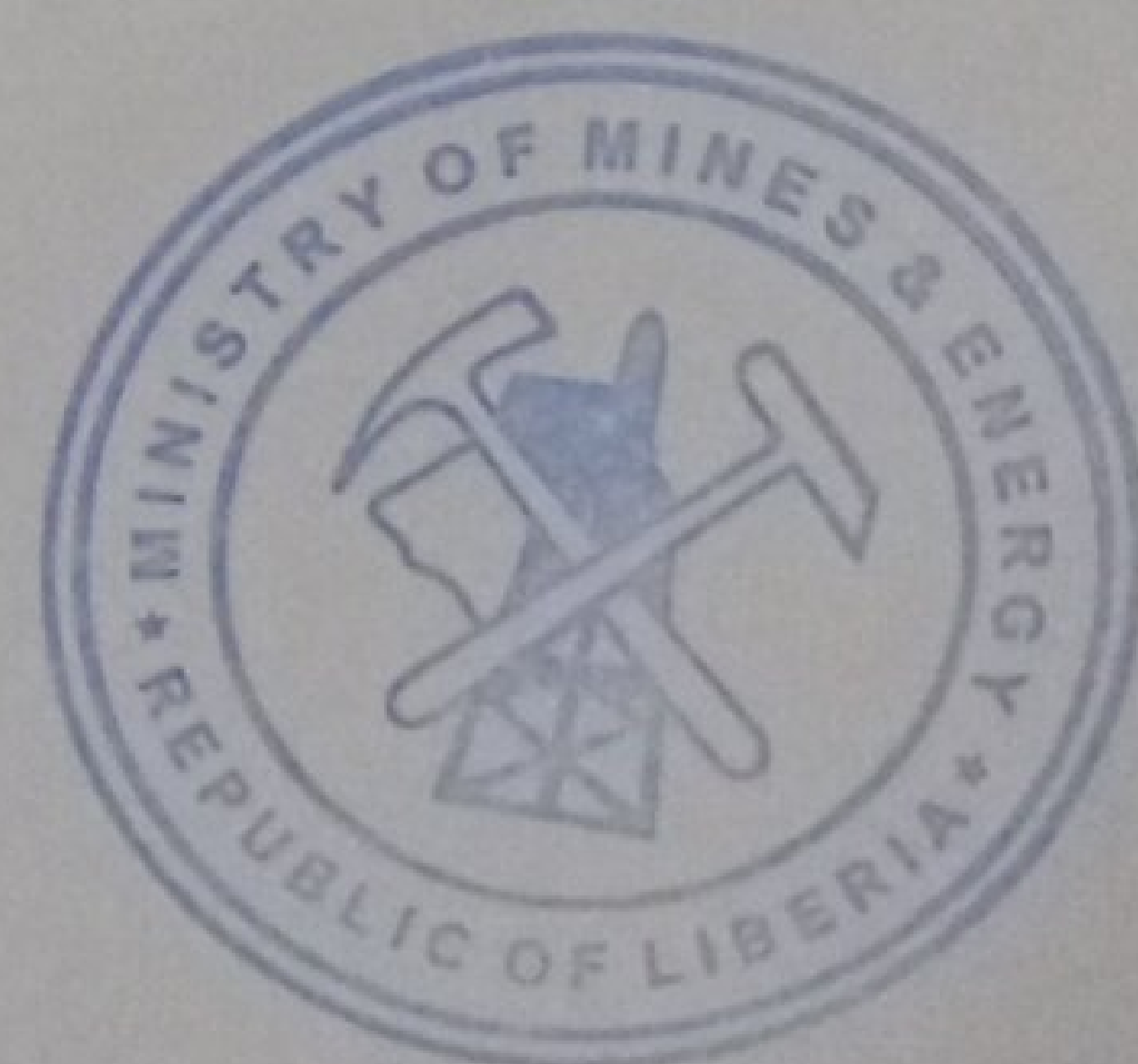
“Permit Holder” shall mean the individual or organization that has been granted a groundwater exploration and drilling permit by the Ministry of Mines and Energy.

“Public Water Source” shall mean anybody of groundwater or surface water used or accessible by the public for drinking, agricultural, or industrial purposes.

“Sensitive Ecosystem” shall mean an area of environmental significance that requires special management practices to protect biodiversity, water quality, and ecosystem health.

“Technical Standards” shall mean specific criteria established to guide the safe and sustainable construction and development of boreholes to prevent over-extraction and contamination.

“Yield” shall mean the volume of water a borehole can sustainably produce over a specific time, typically measured in liters per second (L/s) or gallons per minute (GPM).



Chapter 2: Permit for Groundwater Exploration

2.1 Permit Application Requirements:

- 2.1.1 Application shall be made to the Minister of Mines and Energy and in the form specified in the GROUNDWATER EXPLORATION AND BOREHOLE DRILLING/ OPERATION PERMIT APPLICATION FORM provided in annex 2.1 of these regulations.
- 2.1.2 The application shall contain the following information:
 - a. A detailed project proposal, including the purpose, scope, location, and estimated depth of exploration for existing companies.
 - b. A list of available drilling rig(s) and other equipment indicating description, trademark, age and state of repair.
 - c. Information on drilling activities conducted during previous years; indicating the year and place each activity was undertaken, field reports showing the basic geophysical and hydrogeological conditions of the site and all other information that may be required by the Ministry.
 - d. An Environmental Impact Assessment (EIA) reports, where required, should be attached.
 - e. A proof of technical qualifications of all field personnels conducting the exploration, which include:
 - i. List of staff
 - ii. Qualifications of staff at least one of whom must be able to communicate effectively in the English language (specifically for foreign companies),
 - iii. At least one qualified driller,
 - iv. At least one qualified hydro-geophysicist, hydrogeologist, hydrologist, geologist, water resources engineer or an experienced geological technician.
 - f. The company's business registration and article of incorporation.
 - g. All information mentioned above must be accompanied with the appropriate administrative and processing fees (referred to as application fee), as specified in the GROUNDWATER BOREHOLE DRILLING/ OPERATIONS PERMIT APPLICATION'S FEES SCHEDULE provided in annex 2.2 of these regulations.

2.2 Permit Processing and Issuance

- a. The Minister shall
 - i. Acknowledge receipt of the application within one month of receipt of the application for a groundwater exploration and drilling permit, and
 - ii. Inform the applicant in writing of the decision of the Ministry within two months after the receipt of the application.
- b. Where
 - i. An applicant fails to pay the stipulated administrative and processing fee within the time specified or
 - ii. There is an error in the application, or the applicant falls short of some of the requirements as mentioned in section 2.1, the application will be deemed denied without cost to the government nor any cause for the Minister to notify the applicant.



- c. The Minister will assess the application and issue a Groundwater Exploration and Borehole Drilling/ Operation Permit if all criteria are met.
- d. Permit is valid for one (1) year, with provisions for renewal based on compliance with the terms and conditions.

2.3 Permit Conditions:

- a. Permit holders must provide quarterly Groundwater Exploration and Borehole Drilling report and samples(where notified) to the Ministry of Mines & Energy through the Liberian Hydrological Service (LHS).
- b. Groundwater Exploration and borehole drilling must not be conducted near designated protected areas, sensitive ecosystems, or public water sources without prior approval from relevant authority.

2.4 Permit Fees

Applicant who qualifies for the permit shall pay a permit fee in accordance with the category specified in the **GROUNDWATER BOREHOLE DRILLING/ OPERATIONS PERMIT APPLICATION'S FEES SCHEDULE.**

Chapter 3: Borehole Construction Standard

3.1 Technical Specifications:

- a. A borehole must be constructed by following the detailed technical specification provided by the Liberian Hydrological Service (LHS).

3.2 Testing Requirements:

- a. Periodic flow tests should be conducted to confirm borehole yield and sustainability of extraction rates.

3.3 Sealing and Capping:

- a. Unproductive or abandoned boreholes must be properly sealed and capped to prevent contamination. A maximum depth of 1.5 meter must be achieved during the sealing and the borehole should be capped with cement.

Chapter 4: Monitoring and Reporting

4.1 Data Submission and Public Reporting:

- a. Permit holders for commercial and noncommercial boreholes must submit periodic reports to the Ministry of Mines & Energy through the Liberian Hydrological Service (LHS).



- b. All borehole data, including location, yield, extraction rate and water quality, must be made available by companies and subsequently logged into the Liberia Hydrological Service's database and published on the website of the Ministry of Mines and Energy. Information such as low-yield, abandoned and defective boreholes must also be recorded and submitted.

4.2 Monitoring Visits:

The Ministry reserves the right to conduct site visits for inspection and monitoring purposes to ensure compliance. Such compliance would require having access to,

- i. the borehole site,
- ii. help log the borehole by examining the materials that are being excavated,
- iii. take drilling cuttings and samples of water abstracted from the well and
- iv. request records of borehole being drilled and those previously drilled.

Chapter 5: Environmental and Community Considerations

5.1 Environmental Safeguards:

- a. Groundwater exploration and borehole drilling and construction should not negatively impact local ecosystems, streams, or other surface water bodies.
- b. Borehole construction must prevent groundwater contamination.
- c. Hand-pump boreholes should be at least 50 meters from known contaminants.
- d. Boreholes must be sited at least 100 meters from septic tanks or other contamination sources.
- e. A sanitary seal of at least 2 meters of concrete grouting below the surface is required.
- f. Well casings must extend at least 0.5 meters above the ground or pump house floor to prevent surface water inflow.
- g. The well casing must be securely closed with a tight cap immediately after construction.
- h. Wells must be sealed with a proper well-head.

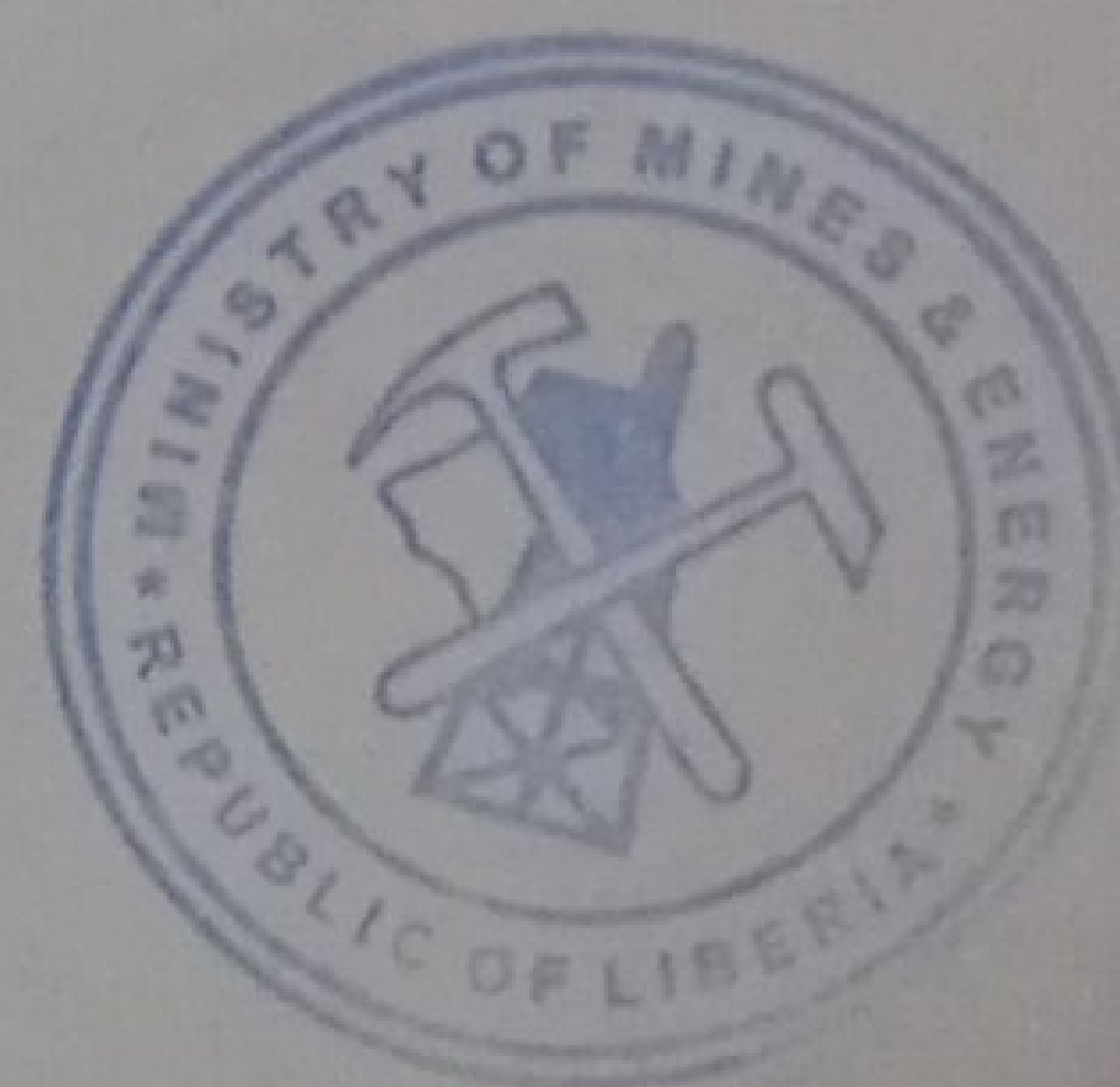
5.2 Community Engagement:

- a. Permit holders must inform local communities about borehole development activities, especially if conducted in shared or communal lands.
- b. Efforts should be made to ensure fair access to water resources for local communities.

Chapter 6: Fees and Penalties:

6.1 Permit Fees:

- a. Fees for groundwater exploration and Borehole Drilling Permits will be set by the Ministry of Mines and Energy and the Ministry of Finance and Development Planning.



6.2 Penalties for Non-Compliance:

- a. A company/ institution who fails to renew a Borehole Drilling Permit issued by the Minister, or whose application for renewal is rejected/denied by the Minister shall not drill nor begin to construct a well for the extraction of groundwater and the monitoring of, or research into groundwater.
- b. Unauthorized groundwater exploration, drilling, borehole construction and non-reporting of required data may result in fines, permit revocation, or other penalties.

Chapter 7: Revocation of Permits

7.1 Grounds for Revocation:

- a. The Ministry of Mines and Energy reserves the right to revoke permits in cases of environmental violations, data falsification, or significant non-compliance with terms and conditions.

7.2 Hearing and Appeal

- a. Permit holders may appeal revocation decisions by submitting a formal request, following which an independent review will be conducted.
- b. Upon receipt of notice requesting a hearing, the Minister must cause a hearing to be held in compliance with the Administrative Procedure Act, to commence not more than 45 days following the date of such notice. The permit holder must be given at least 20 days' notice of the date such hearing is scheduled to commence. The notice must comply with the requirements of Section 82.4 governing the content of a notice of hearing given by an agency of the Government. Thereafter the hearing schedule will be established by the hearing officer in consultation with the Ministry and the Licensee, the hearing will be conducted in accordance with Section 82.4, and a determination will be reached in accordance with Section 82.5. The Ministry will seek in good faith to expedite in accordance with Section 82.6 all hearings under this Section 18.
- c. If the determination is favorable to the permit holder, the hearing officer will order appropriate relief consistent with the terms of the Mining Law and this regulation. If the determination is adverse to the permit holder, the permit holder has the right of appeal to a court of competent jurisdiction provided in Section 82.8. Review by a court is subject to the limitations contained in clause 7 of Section 82.8.
- d. Any determination favorable to a Licensee shall take into account delays suffered by the permit holder in the commencement or conduct of its Exploration program and in the conduct of the proceedings contemplated by this Section 18 and shall include an appropriate adjustment to the Initial Term or the Extended Term, as the case may be.

Chapter 8: Amendment and Review of Regulations

- a. This regulation shall be reviewed and amended as needed by the Ministry of Mines and Energy to reflect best practices, emerging technologies, and national groundwater exploration goals.



Chapter 9: ANNEXES

ANNEX 1: LEGAL PROVISION OF MINERALS AND MINING LAW OF LIBERIA, 2000

CHAPTER 14. EXPLORATION AND DEVELOPMENT OF UNDERGROUND WATERS AND GEOTHERMAL DEPOSITS.

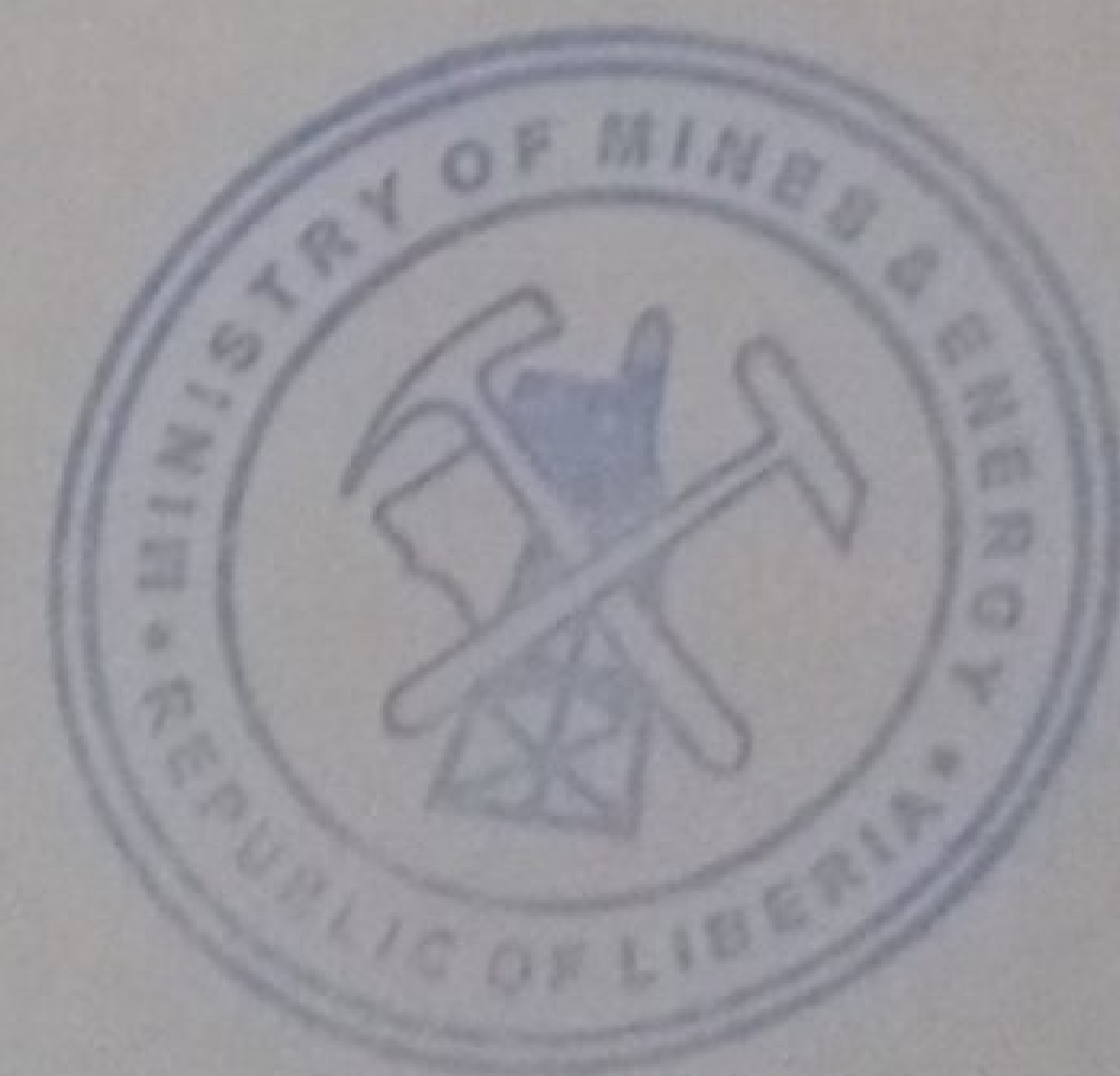
Section 14.1 Prospecting/Exploration and Mining Rights. No one shall explore for or develop underground waters or geothermal deposits in the territory of the Republic without a license authorized by this Chapter.

Section 14.2 Exploration Licenses for Underground Waters or Geothermal Deposits. Exploration License for underground waters or geothermal Deposits may either designate the perimeter within which drilling may be carried out or specify the site for such drilling.

Section 14.4 Specific Condition. In addition, Operation Permits for the operation of underground water and Geothermal Deposits shall control, regulate or provide the following:

- a. The calorific content of whatever is extracted;
- b. The extraction, use and reinsertion of heat-conveying fluids and products contained therein so as to preserve the products as much as possible;
- c. A definition of the perimeter of operations and the maximum output of production;
- d. The volume limit beyond which the Holder may not extract underground water in order to allow the water to regenerate; and
- e. Limitation on the volume of underground water that can be extracted by true-depths.

Section 14.5 Perimeter of Prospecting/Exploration Permits. The perimeter contained and set forth in an Operation Permit for underground waters or Geothermal Deposits issued pursuant to a Prospecting/Exploration License shall include all drilling to be undertaken for the purposes of such Exploration to enable the Holder to reach underground waters with developable qualities.



ANNEX 2: TEMPLATE OF THE GROUNDWATER BOREHOLE DRILLING/ OPERATIONS PERMIT APPLICATION FORM, FEES SCHEDULE AND BOREHOLE DEVELOPMENT PERMIT

2.1: GROUNDWATER EXPLORATION AND BORWEHOLE DRILLING PERMIT APPLICATION FORM



REPUBLIC OF LIBERIA
Ministry of Mines & Energy
P. O. Box 10-9024
1000 Monrovia 10 Liberia



GROUNDWATER BOREHOLE DRILLING/ OPERATIONS PERMIT APPLICATION FORM

*Name of Person/ Company (Applicant):

FOR OFFICIAL USE ONLY

Received By: _____

Application Date: _____

Application Number: _____

*Street:

P.O. Box:

*City:

*County:

*Phone Number (WhatsApp #):

*Email Address:

*Business Registration Number:

*TIN:

List of Equipment

Name & Description:

Status (trademark, age & state of repair):

List of Key Personnel

Name

Qualification

Employment Status



*Application fee is nonrefundable.

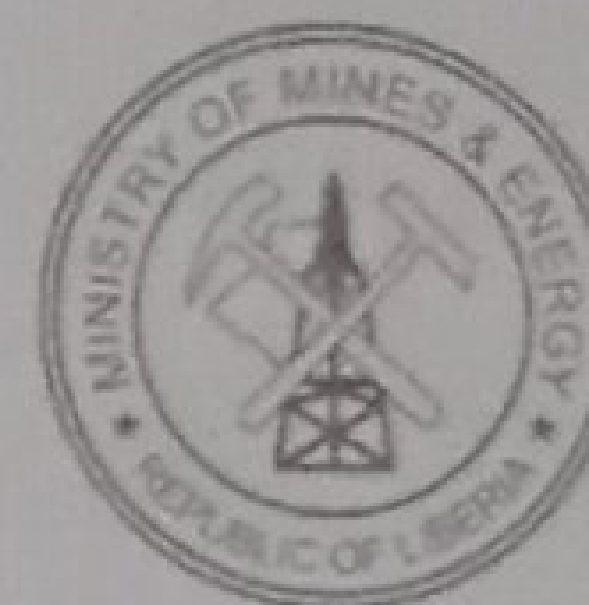
Signature: _____ Date: _____



2.2: GROUNDWATER BOREHOLE DRILLING/ OPERATIONS PERMIT APPLICATION AND FEES SCHEDULE

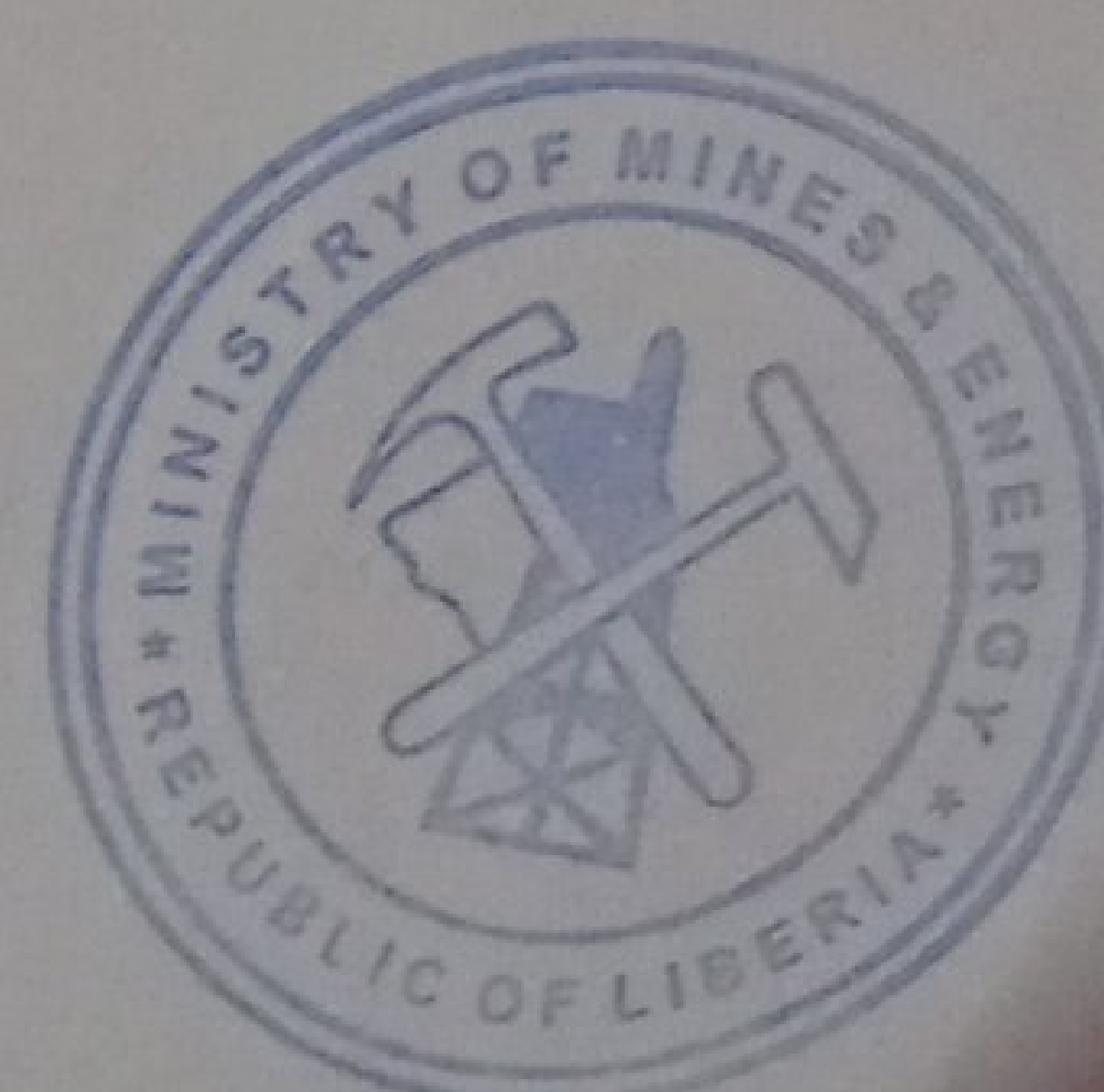


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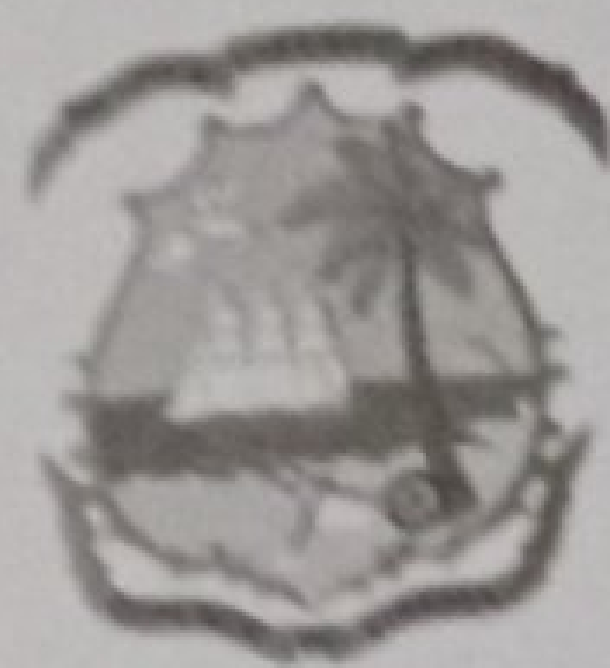


PERMIT FEE STRUCTURE	
APPLICATION FEES	
\$50.00	
LICENSE FEES	
Groundwater Borehole Drilling/ Operations Permit (Liberian & Foreign Owned)	\$15,000.00
Groundwater Borehole Drilling/ Operations Permit (100% Liberian Owned)	\$5,000.00

*Application fee also referred to as a nonrefundable administrative and processing fee.



2.3: FORMAT OF THE BOREHOLE DEVELOPMENT NOTICE



REPUBLIC OF LIBERIA
Ministry of Mines & Energy
P. O. Box 10-9024
1000 Monrovia 10 Liberia



BOREHOLE DEVELOPMENT NOTICE

Name of Person/ Company:	
Address:	
P.O. BOX	
Phone Number:	Email Address:
Number of Wells:	Location of Proposed Drilling Site:
Drilling period:	Purpose of Well: domestic, industrial/mining, agriculture
Pump To Be Installed:	Yield:
Signature:	Date:

