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Preliminary Study on the Management System of Mineral Resources in Peru

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Abstract: Peru is located in the western part of South America, with Ecuador and Colombia to the north, Brazil and Bolivia to the east, Chile to the south and the Pacific Ocean to the west. The Andean metallogenic belt throughout the country, has excellent ore-forming conditions and rich mineral resources. It is one of the 12th largest mineral producing countries in the world, and its total mineral resources ranks seventh in the world. Mining occupies an important position in Peru's economy. The main minerals are copper, silver, zinc, tin, gold, iron, tungsten, tantalum, lead. The reserves of copper, silver, zinc and tin are among the top in the world. In recent years, global mineral prices continued to run low, Peru's mining enterprises capital chain tight and operational difficulties, in order to get rid of the mining industry downturn, the Peruvian government has issued a series of tax policies and preferential measures, provide opportunities for foreign enterprises to enter Peru's mining market. The author collected and collated relevant data through field trips, the main research is based on Peru's mining management department, mining management system, classification and application of mining rights, land and mining taxes and fees, and a preliminary analysis of the country's mining market. Before entering the mining market in Peru, suggested companies should take advantage of our strengths, select own familiar ways of cooperation, comprehensive investigate cooperative partners, and pay attention to avoid risks.

Keywords: Mineral Resources, Mining, Companies, Peru

1. Introduction

Peru has excellent mineralization geological conditions, high degree of geological work, and rich mineral resources. Mining is the pillar industry of the national economy. For example, in 2015, exports of mineral and petrochemical products reached US$ 21 billion, accounting for about 62% of total exports. The number of people directly engaged in mining activities reached 197,000, and the mineral and energy industries contributed 13% of Peru's GDP and 23% of fiscal revenue [1, 2]. Peru is also the second-largest producer of silver, third-largest zinc, third-largest copper and sixth-largest gold in the world [1]. Foreign companies are playing an increasingly important role in the development of Peru 's mining industry. especially for non-Spanish countries are not very clear about the relevant procedures, laws, taxes, and preferential policies for investing in Peruvian mining. The research in this article integrates mining related information, which is beneficial for mining companies in these countries to invest in Peru.

2. Mineral Resources Management System in Peru

2.1. Mining Management System Executive Agency

2.1.1. Ministry of Energy and Mines (MINEM)

This is the central and governing body for the energy and mining sector, a part of the executive branch. Its purpose is to formulate and assess national policy in matters of sustainable development in mining-power activities. It is the governing authority in environment matters in reference to mining-energy activities [2, 4, 5].

MINEM has two sub-ministerial administrations, one is the General Mining Bureau and the other is the General Administration of Energy. The General Mining Bureau and the General Administration of Energy each have an independent management system and work within their

respective functions and powers [4-6].

2.1.2. Mining Council

Highest-level administrative court of last resort over all mining matters that are subject to resolutions by agencies under the MINEM [4].

2.1.3. The General Mining Bureau (DGM) and the General Administration of Energy

DGM is the MINEM Mining Line Unit responsible for ruling and promoting activities to assure the rational use of mining resources in harmony with the environment, and there isn't granting function for mining concessions [2, 5].

The General Administration of Energy is responsible for the management of production, planning, and environmental protection policies in petroleum, natural gas, electric power, geothermal, etc., and there isn't granting function of granting mining concessions, too [6].

2.1.4. Geological, Mining and Metallurgical Institute or Ingemmet

The INGEMMET is an important unit of the MINEM. and will maintain a registry of incoming application for Mining Concession in the SIDEMCAT (Mining Rights and Registry System) in order to determine priority in the presentation of the application. and issuing geo-scientific information on the national territory in order to promote investment in Peru [2, 6].

Entrusted by the MINEM, it is responsible for the issuance of mining license (excluding energy minerals) in the country. It includes the issuance of three licenses: mining concession certificate, mineral concession certificate, auxiliary engineering and mining transportation concession certificate. Mainly responsible for planning, directing and implementing all activities related to geological, mining and metallurgical research in the country, as well as the exploration, evaluation and geological data collection and management of national mineral resources. It is a national public welfare, strategic and basic geological survey. Management and execution unit. It is both an official geodetic institution and a center for national geological, mining and metallurgical research [4-6].

2.1.5. General Bureau of Mining Environmental Matters (DGAAM)

This is the technical-regulatory body responsible for proposing and assessing the Mining sector's environmental policy, proposing laws or issuing the necessary rules. It also focuses on promoting environmental protection activities in mining activities [2, 5].

2.2. Mining Environmental Management System Executive Agency

2.2.1. Ministry of the Environmental (MINAM)

An entity that reports to the Executive Branch of Government and is mainly responsible for designing, establishing, implementing and overseeing the national and sectorial environmental policy, being specifically in charge of enforcing compliance with said policy. It must preserve the environment, fostering and securing the sustainable, responsible, rational and ethical use of natural resources and the surrounding environment in order to contribute to the comprehensive social, economic and cultural development of the human being, in keeping with its surrounding environment, there by guaranteeing current and future generations the right to live in a balanced environment suitable for the development of life [4, 6].

2.2.2. General Bureau of Environmental Health (DIGESA)

This is the technical-regulatory body in aspects related to basic sanitation, occupational health, hygienic food, zoonosis and environmental protection. It issues regulations and assesses environmental health processes in the sector. It is an entity under the Ministry of Health [5].

2.3. Characteristics of Mineral Resources Management System

The Peruvian Constitution stipulates that any natural resources (including underground and terrestrial) are owned by the state. If you want to exploration and development activities for mineral resources, a mining license issued by the competent government authority must be obtained [2, 5].

The General Mining Law (1992) is a general regulation of all activities related to mining activities. At the same time, Peru also implements classified management and classification legislation for natural resources, such as the Mining License Law for solid minerals (1994), the Hydrocarbon Law (1997) for oil and gas and the Energy Law for unconventional energy sources (excluding oil and gas).

The Mining License Law is a national law that includes 15 articles, 54 chapters, 226 pieces, 16 temporary provisions, 8 final rules, and interim regulations. The law was officially implemented in 1992, and after a major revision in 2008, it was revised in 2015. The main contents include: mineral exploration and mining, mining concessions, processing concessions, general work and mining transport concessions; foreign investment and legal stability guarantee; main tax regulations and other charges; main environmental factors applicable to mining activities, Labor, major contractual models, public relations regulations, safety regulations, etc.

2.3.1. Mining Concession Classification

In 2015, Peruvian government amended the Mining License Law to optimize the original licensing system for separate exploration and mining and implement a licensing system for exploration and mining, to combine the original four types into three types: mining concessions, processing concessions, general work and mining transport concessions. According to the Law, mining activities have the following items: general survey, exploration, auxiliary engineering, mineral processing, sales and mining transportation. Except for general survey, exploration and sales, other activities need to be carried out under the mining concession system. Censuses and surveys can be carried out freely on the land, but they must not be carried out in the national prohibited area and in the mining concession boundaries that have been applied for approval, unless written permission is obtained [5-8].

2.3.2. Application Mining Concession

The mining concession application adopts the principle of "first come, first served" and grants its holder the right to explore and exploit unlimited depth of mineral resources. It is a kind of real estate, but does not include the above-ground subsidiary parts.

The acquisition of mining concession certificates is registered, transferred, tendered, auctioned, inherited, etc.

i. An applicant subject to the general regime must present its application for a mining concession in Reception Desk of the INGEMMET or the competent Regional Government in the case of PPM (Small-Scale Mining Producers) or PMA (Artisan Mining Producers). Applicants are required to submit a notarized mining contract, feasibility study report, relevant survey report (including relevant geological maps, geographic coordinates), mining permit report, EIA report, and related personal and company licenses [2, 4].
ii. NGEMMET and Regional Governments give discussions within 15 working days of receiving the application. If the application is approved, it will be announced in the EI Peruano or local official newspaper (if there is no local official newspaper, it should be posted in INGEMMET or public places in the Regional Government office), notice period 30 working days [4, 5].
iii. Within 60 days from the date of publication of the announcement, the applicant must submit all the materials (documents), then which will be discussed by the Mining Council. If there is no objection, MINEM will issue the license within 15 working days [4-6].
iv. The basic surface measurement unit for mining concessions is equivalent to a minimum expanse of 100 hectares and a maximum of 1,000 hectares.
v. Concession are irrevocable, as long as the holder meets the obligation that the mining law demands for maintaining them in force. Among these obligations is the payment of an annual Mining Good Standing Fee (equal to 10% of one UIT* [5], starting from the year in which the claim was filed and as long as concession remains in effect. The fee amounts to US $3.00 per year hectare (except for PPM US $1.00 and PPA US $0.50). This payment must be made before June 30th of every year [5, 6].

*A reference value used in several legal rules and updated once a year, for 2019, one Tax Unit (UIT) is equivalent to Three Thousand eight Hundred fifty nuevos Soles (S/. 3850), that is, approximately US$ 1247 (exchange rate: S/. 3.086).

2.3.3. Application Processing Concessions

One applying for a processing concession must present a request to the DGM of the MINEM.

i. Applicants also need to provide for basic information on the company and the project, enclosing proof of having presented the DGAAM with a copy of the EIA, a Water Use Authorization, a Sworn Statement of Prior Commitment, agreements evidencing having the surface rights for the project area and proofs of payment of the Mining Good Standing Fee corresponding to the first year and the Proceeding Fee, which is equivalent to 20% of one UIT [2, 5, 6].
ii. The applicant will pay an amount for Mining Good Standing Fee computed according to the following scale table 1:

Table 1. *Mining Good Standing Fee standard.*

RANGE	Amount of the Mining Good Standing Fee
Up to 350MT/day	0.0014 of one UIT for each MT
350 to 1,000MT/day	1 UIT
1,000 to 5,000MT/day	1.5UIT
Each additional 5,000MT/day	2UIT

iii. DGM give discussions within 15 working days of receiving the application. If the application is approved, it will be announced in the EI Peruano or local official newspaper (if there is no local official newspaper, it should be posted in INGEMMET office), notice period 30 working days. The applicant must submit all the documents within 7 working days, During the publicity period, in addition to no objection, t MINEM will also conduct an assessment of safety, health, mining welfare and environmental impact standards, but no more than 30 working days [5-8].
iv. If there is no objection, MINEM (INGEMMET) will issue a processing concession within 60 working days.

2.3.4. Application General Work and Mining Transport Concession

One applying for a general work and mining transport concession, must present a request to the DGM of the MINEM. And also provide basic information on the company and a copy of the proofs of payment foe the Mining Good Standing Fee corresponding to the first year and the Proceedings Fee, which is equivalent to 15% of one UIT and upon applying for the concession, the applicant will pay a Mining Good Standing Fee equivalent to 0.003% of one UIT linear meter of work projected.

Next, the MINEM will organize a special meeting to discuss the relevant situation. The special meeting will be held in two phases. The first phase will be held within 15 days from the date of the announcement, and the second phase will be discussed for a maximum of 30 working days. The special meeting mainly discusses related terms and agreements. If two special discussions are passed, the MINEM (INGEMMET) will issue a license [4-8].

2.4. Mining License Revoked

i. If the corresponding taxes and fees are not paid to the

relevant departments in a timely manner, holders will be revoked the mining licenses.

ii. Regardless of the consequences, neglect of regulations, improper mining of minerals, repeated violations of environmental, health, safety and other mining commitments, any holder of a number of substantive non-compliance with administrative and financial obligations constitutes a serious violation of the law [6].

iii. The mining license holder did not immediately remedy the notice after receiving the notice of violation.

iv. The mining license holders manage violations or dereliction of duty continuously or multiple times, after the management ordered the rectification several times, it still did not meet the standards stipulated by the law [7].

v. For national reasons, the need to recover mining licenses.

2.5. Mine Closure

The legislation on Mine Closure has the objective of preventing, minimizing and controlling the risks to and effects on health, personal safety, the environment and property that could derive from the closing of a mining unit's operations [6].

This Plan must be presented to the MINEM for its approval within a maximum term of one year starting from the approval of the EIA. These plans must be prepared for each unit by an entity that is enrolled in the "Registry of Entities Authorized to Conduct Environmental Impact Assessments in the Energy and Mining Sector" maintained by the MINEM [7, 8]

There is also the obligation to establish environmental guarantees in favor of the MINEM to cover the estimated cost of the rehabilitation measures contained in the Mine Closure Plan [7-9].

2.6. Water Use with Mining Purposes

The highest technical authority of the National System of Water Resources is the National Water Authority within the organizational structure of this entity, among others, there is a Water Dispute Resolution Court, water Administrative Authorities and the Local Water Authorities [5].

The use of water resources is subject to its availability, being that the productive use of water, such as mining usage, is related to its use in production processes or prior to them, and is executed through use rights granted by the National Water Authority.

The mining rights holder must obtain one of three different types of water rights as required by law: i) Water use license, ii) Water use permission, and iii) Water use authorization [5-8].

2.7. Main Environment Institutions That Govern Mining Activities

2.7.1. Basic Environmental Regulations

The environmental regulations for mineral exploration in Peru are mainly based on the Natural Resources and Environmental Protection Law and the Environmental Regulations for Mineral Exploration Activities [4]. According to the degree of environmental impact of mineral exploration activities, the "Regulations on Environmental Issues in Mineral Exploration Activities" classify mineral exploration activities into two categories (Category I, II). Any mineral exploration activity (geological, geophysical, and geochemical studies, or topographic surveys, or collection of small rock and surface ore samples) that does not have or have a small impact on the ground does not require any environmental access prior to the exploration and exploration activities [5, 6]. The approval of the assessment; however, the mineral exploration activities must meet the conditions for the use of only portable instruments or equipment, and there is no other impact than the impact of normal transportation of the personnel. The above description does not include Category I.

Category I requires environmental impact assessment filing. Unless it is a special situation, the environmental impact assessment report for reporting is approved by the competent authority. Environmental impact assessments need to be evaluated and approved in advance. These special conditions include mining operations in sensitive or fragile environments (such as near rivers, oceans, glaciers, forests in conservation areas or virgin forests, and areas with environmental responsibility). Among other things, environmental impact assessments include: information related to mineral exploration activities, an explanation of the environmental and social conditions of the mineral exploration activity area, and restoration and remediation plans for environmental impacts. The detailed environmental impact assessment of mining activities was approved by the ministerial resolution, and the mineral rights holder may request the "Environmental Impact Assessment Automatic Approval Certificate" to be issued in the environmental impact assessment [5-9].

Category II mining activities require a detailed Environmental Impact Assessment (EIA) for filing. A detailed environmental impact assessment must be approved by the General Committee on Mining Environmental Issues (DGAAM) prior to the start of any activity. Among other things, this assessment should include a detailed description of the mining activities, a description of the environmental and social conditions of the mining site, project information and work to be carried out, and how to control and mitigate environmental damage.

2.7.2. Environmental Impact Assessment (EIA)

The project before the prospecting or mining exploration, or the prospecting right to expand the exploration, is required to submit an EIA report to the MINEM.

EIA must be carried out prior to all mining, mineral processing, auxiliary engineering and mining operations. The EIA includes the assessment and description of the physical, biological, socio-economic and cultural impacts of the above activities on the areas within the project's sphere of influence [6]. EIA identify existing environmental conditions and conditions, analyze the nature, extent, impact and consequences of mining activities, and then take preventive and control measures to balance mining activities with the

environment [7]. The EIA report can only be completed by the DGAAM "Environmental Evaluator's Register of Environmental Impact Assessments for Energy and Mining Industry". In preparing the EIA report, it must be based on and must comply with Appendix 2 of the Environmental Regulations of Chapter 15 of the Mining Permit Law, and should refer to the Energy Impact Assessment Guide of the MINEM [7-9]. The time to apply for an EIA often depends on the quality of the EIA report and the efficiency of the administration. DGAAM will review the submitted environmental impact assessment for up to 45 days. If no announcement or review is received after 45 days, the EIA has not been passed. However, some mining project environmental assessments need to be submitted to the MINEM for approval [8, 9]. Due to the limited number of professionals in the Ministry, a large number of projects have a backlog of EIA reports, which may not be approved within two or three years [9].

2.8. Land Approve

According to the Land Law, Peru's land is divided into private and state-owned forms. After obtaining approval from relevant departments, individuals can own land and build houses and other facilities. Land controlled by the state is state-owned land, generally used for agricultural production, public infrastructure construction, military use, etc [2, 5, 6]. When the government passes a resolution to determine that the occupation of certain private land will impede public interest, or that the public use of the land is much more meaningful than private use, the government has the right to levy the land and give the private owner certain compensation. In addition to certain restrictions on the sale and development of land on the national border, privately owned land in Peru is available for sale and transfer and can be used for various general project developments. Land owned by the state needs to undergo a series of administrative examinations before it can be developed accordingly [6, 7]. Since 1992, Peru has granted land use rights only to foreign companies or foreigners. Foreign-funded enterprises or foreigners obtain land use rights from the date of signing the contract with the landowner for a maximum period of 30 years. However, if a foreign-funded enterprise obtains a local residence permit if it is a local registered company or a foreigner, it is regarded as a domestic enterprise or a national, and can purchase land [5-8].

Enterprises or individuals with mining concessions have acquired underground mineral resources, but at the same time they have not access to the right to use surface land, and the concessionaire also needs to purchase land and building land use rights. According to the General Law of Mining, the enterprise or individual that obtains the concession certificate needs to check with the local land administration for the property of the land within the scope of the concession certificate (private, state), and then purchase the land on the surface of the concession certificate to avoid valuable discovery due to underground. Mineral resources cause unnecessary trouble [8, 9].

2.9. Investment Incentives for Mining

The Peruvian government offers mining investors two agreements, one is a legal stability agreement (for all investors) and the other is a stabilization agreement under the protection of the Mining Law (for mining investors). The law allows both agreements to coexist, as long as the investor applies [5-9].

i. 10-year Stability Contracts: in the case of the holders of mining activities beginning or conducting operations greater than 350MT/day up to 5,000MT/day, or presenting investment programs equivalent to US $ 2 million, they will be guaranteed tax and administrative stability for a term of 10 years counted starting from the period in which they accredit execution of the investment.
ii. 12-year Stability Contracts: the holders of mining activities that will undertake mining projects or expansions with an initial capacity no less than 5,000MT/day or than 5,000 MT/day in extensions, or that present investment programs of no less than US $ 100 million for beginning any mining activity or that present investment of no less than US $ 250 million for investment in already-existing mining companies, may execute a contract with State that will guarantee them stability for a term of 12 years.
iii. 15-year Stability Contracts: the holders of mining activities that will undertake mining projects or expansions with an initial capacity no less than 15,000MT/day or than 20,000 MT/day in extensions, or that present investment programs of US $ 500 million for beginning any mining activity (investment period of no more than eight consecutive years).

2.10. Tax Management and Adjustment System

2.10.1. Tax Management

Implements a territorial tax law system in Peru, mining is subject to the same taxes that burden the economic activities of all other sectors, however, the principal taxes covering mining activity are: the Income Tax (IR), the Value Added Tax （IGV）, and Mining royalties [6-9].

i. IR: Peruvian IR is a tax covering the income (earnings or profits) obtained by taxpayers considered as domiciled in this county, without regard to the nationality of individuals, the place of the legal entity's in corporation or the location of the source producing the income.
ii. IGV: the IGV is a tax on consumption declared monthly, which burdens the value added in each transaction carried out during the different stages of the economic cycle.
iii. Mining Royalties: are the economic consideration that the holders of mining concessions pay to the State for the exploitation of metal or non-metal mineral resources.

2.10.2. Tax Adjustment

In December 2014, the Peruvian parliament passed a second round of voting and finally passed a bill to reduce income tax for individuals and companies. The bill was implemented in January 2015. Among them, the personal income tax is changed from the 4 grades before the adjustment to the 6 grades (table 2) [6, 9].

Table 2. *Tax rate before and after adjustment of personal income tax.*

No.	Annual income (New soar)	before	after
1	No less than 26,600	0	0
2	26,600-45,600	15%	8%
3	45,600-102,600		14%
4	102,600-159,600	21%	17%
5	159,600-197,600		20%
6	Above 197,600	30%	30%

Corporate income tax will be implemented in a step-by-step manner, and corporate profit tax will be gradually increased (table 3) [6, 9].

Table 3. *Tax rate before and after corporate income tax adjustment.*

No.	Tax	Pre-adjustment tax rate	Adjusted tax rate			
			2016	2017	2018	After 2019
1	Corporate income tax	30%	28%	27%	27%	26%
2	Corporate profit tax	4.1%	6.8%	8%	9.3%	9.3%

3. Conclusion

Thanks to its abundant mining potential and great mineral wealth, Peru is among the world's most attractive destinations for mining investment [10, 11]. In recent years, the Peruvian government has established coherent and stable regulations in its public and investment policies. Peru is becoming a big country in Latin America to attract foreign investment [9-12]. This article focuses on the field of Peruvian mining investment, from the mining management sector, classification of mining rights and application procedures, land access, taxation, environmental protection, etc., to provide a reference and guidance for mining companies wanting to invest in Peru [13, 14]. However, there are also some risks in the process of investing in Peruvian mining. For example, the exchange rate system, Peru implements its own foreign exchange countries, and exchange rate fluctuations have a greater impact on the import and export of mineral products. Prior consultation system [14]. In 2012, Peru implemented the Prior Consultation Law, which stipulates that companies must reach an agreement with the local community before developing a project; the law also requires all possible measures to protect the survival, dignity and development of indigenous groups, etc. Many rights and improve their quality of life [15]. Therefore, before mining companies invest in Peru, they should fully study local laws and regulations, hire third parties, conduct due diligence, and establish risk prevention and control measures [16].

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