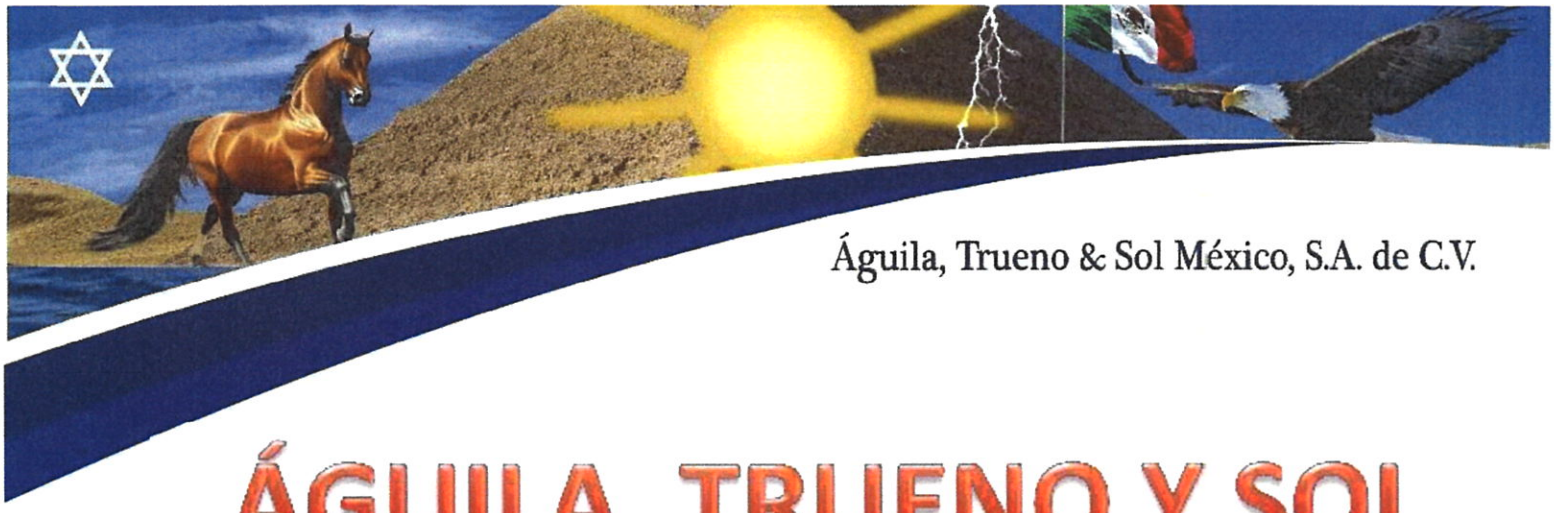

Águila, Trueno & Sol México, S.A. de C.V.

ÁGUILA, TRUENO Y SOL S.A. DE C.V.

MINE No. 5

NI 43-101 TECHNICAL REPORT ON RESOURCES AND MINERAL RESERVES

Curicaveri No. 127, Puesta del Sol, Aguascalientes, Ags., México, C.P. 20326
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Águila, Trueno & Sol México, S.A. de C.V.

NI 43-101 TECHNICAL REPORT ON MINERAL RESOURCES AND RESERVES

Águila, Trueno y Sol México S.A. DE C.V.

Mina Águila, Trueno y Sol No. 5
Emiliano Zapata, State Of Morelos.

UTM, ZONE 14N

NORTH 2038719.7299, EAST 498550.7702

HEIGHT 1023 MSNM

Gayokla Nichi John Ayala Torrez President Of The Company Águila, Trueno y Sol México S.A. DE C.V.

May Of 2017

Curicaveri No. 127, Puesta del Sol, Aguascalientes, Ags., México, C.P. 20326
Tel. 001 626 203 91 68 | 449 920 35 35
aguilatruenoysol.mexico@gmail.com

ADMINISTRATIVE COMMITTEE

QUALIFIED PERSONNEL CERTIFICATE

Gayokla Nichi John Ayala Torrez
Chief Executive Officer of Águila, Trueno y Sol México S.A. DE C.V.
Curicaveri No. 127, Puesta del Sol, Aguascalientes Ags. México.

Gayokla Nichi John Ayala Torrez.- Chief Executive Officer of Águila, Trueno y Sol México S.A. DE C.V.

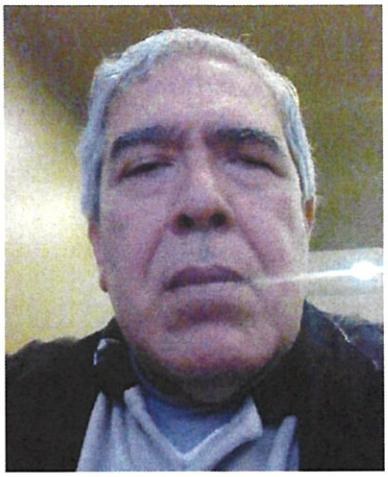
Águila, Trueno y Sol Mexico is a dynamic and innovative company, directed by Gayokla Nichi John Ayala Torrez Mexican businessman and sole director of Águila, Trueno y Sol México S.A. de C.V. Licensed in Electro-Energy Studied in the United States, with great experience in mining, he also has a firm commitment to society and the environment, qualities that strengthen each of the projects he leads. Undoubtedly a great business leader that will lead Águila, Trueno y Sol Mexico to be an important pillar within the mining company in Mexico and in the world.

Águila, Trueno y Sol Mexico S.A. de C.V. It has the appropriate norms to formalize any agreement with national and foreign companies in addition to being governed by the approved and guaranteed bylaws for a single operation in its class, these statutes give the formality and confidence that Águila, Trueno y Sol México S.A. de C.V. It is a responsible and reliable company.

ADMINISTRATIVE COMMITTEE

QUALIFIED PERSONNEL CERTIFICATE

Jorge Almeida
Águila, Trueno y Sol México S.A. DE C.V.
Curicaveri No. 127, Puesta del Sol, Aguascalientes Ags. México.



Dr. Jorge Almeida graduated from the University of Buenos Aires (UBA) specialist in commercial law - civil and environmental ... Journalist. Director of public relations area Ferrocarriles Argentinos, promoter Transandino Project -Los Andes- l974-1990 ... Underwater gas pipeline - Tierra del Fuego. Contributor In different governmental and private projects 1996-2016 Paso Internacional - Agua Negra (Chile - Argentina)

Jorge Almeida
Jorgealmeida3000@yahoo.com.ar

ADMINISTRATIVE COMMITTEE

QUALIFIED PERSONNEL CERTIFICATE

Susana Pérez Mendoza
Águila, Trueno y Sol México S.A. DE C.V.
Curicaveri No. 127, Puesta del Sol, Aguascalientes Ags. México.

CERTIFIED PUBLIC ACCOUNTANT

Graduated from the Autonomous University of the State of Guerrero

PERSONAL INFORMATION

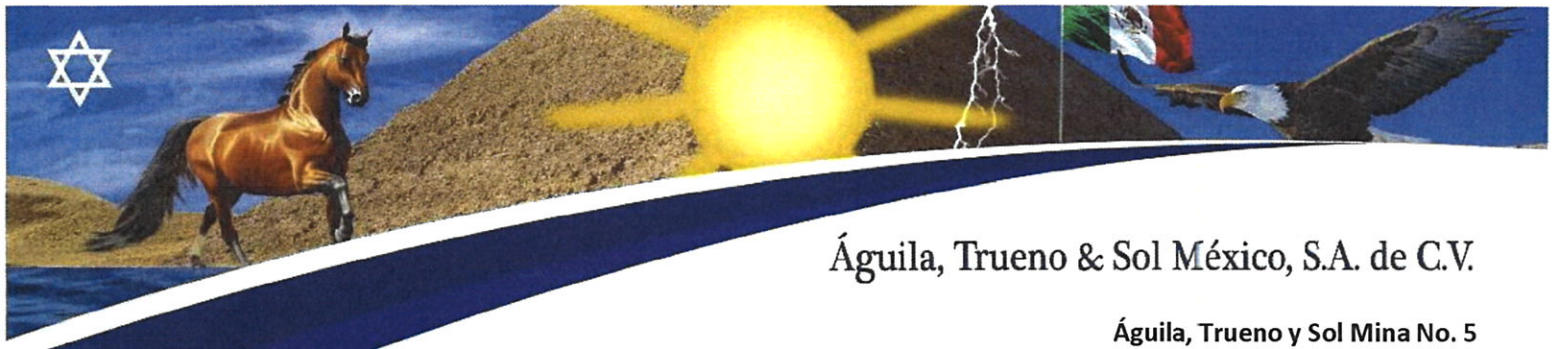
NAME: SUSANA PEREZ MENDOZA
AGE: 38 YEARS
PLACE OF BIRTH: IGUALA GUERRERO
DATE OF BIRTH: DECEMBER 14, 1978
SEX: FEMALE
CURRENT ADDRESS: INDEPENDENCE STREET XOCHITEPEC MORELOS No. 16 CHICONCUAC MPIO. OF XOCHITEPEC MORELOS.
MARITAL STATUS: MARRIED
PROFESSION: PUBLIC ACCOUNTANT, ESP. IN HUMAN RESOURCES.
Professional ID: 4912764

SEMINARS: FROM AUDIT TO PUBLIC ACCOUNTS, SCHOOL OF PUBLIC ACCOUNTANTS OF MORELOS, AC CUERNAVACA, MOR. VALIDITY 20 EPC POINTS

WORKEXPERIENCE

PERIOD	JOB
JUNE 2005	SOCIAL SERVICE, Municipal council of Xochitepec, Mor. Dept. Of syndication and comptroller's office.
2005 - 2006	Residence professional, Municipal council of Xochitepec, Mor., Apartment. Of Municipal Treasury
2008 - 2009	Director of Human Resources, Municipal council of Xochitepec, Mor.
2008 – 2009	Treasurer Municipal, Municipal council of Xochitepec, Mor.
2008 - 2009	Administrative Assistant, Municipal council of Xochitepec, Mor.
2010 – 2011	Administrative Assistant Municipal council Xochitepec Mor. Vehicle Park Dept
2012 – 2015	Municipal Treasurer Municipal council of Xochitepec Mor
2015 – 2016	Administrative Assistant Municipal council of Xochitepec, Mor.

Willing to collaborate and contribute all my experience acquired over the years to the company Águila Trueno y sol México SA de CV



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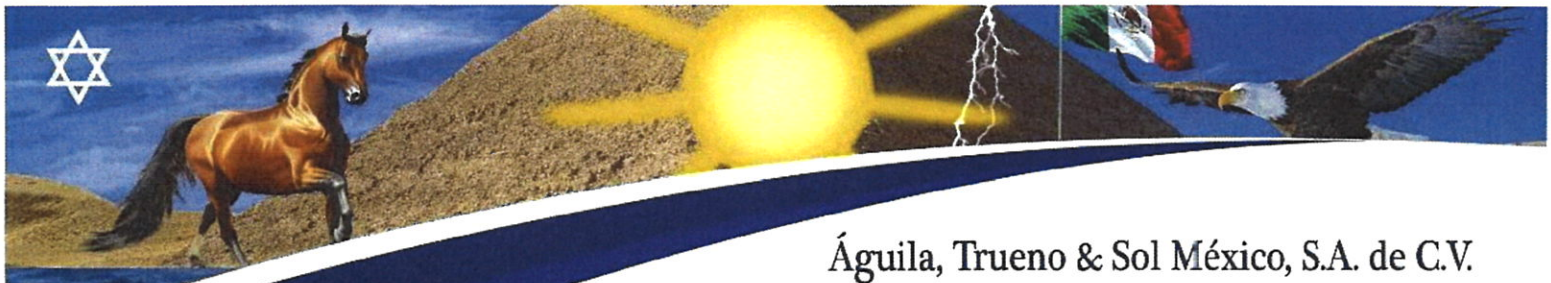


Índice de ilustraciones

1. SUMMARY

Águila, Trueno Y Sol Mexico was registered in 2016 in the country of Mexico. It is a company dedicated to the exploration, exploration, prospecting of natural mineral resources, precious stones or metals as a base for the various sectors of mining and metal industry and international trade, import and export.

Águila, Trueno y Sol Mexico has set itself the goal of creating a strong capital base for the establishment of a mineral resource.

Vision

Águila, Trueno y Sol Mexico has as its vision to be a leader in the exploration and exploration of minerals based always on responsible practices that allow us to grow and achieve the fixed objectives of our company, satisfying the needs of each of the shareholders and personnel working in the same.

Mission

Growing day-to-day exploration and mining under strict respect for the environment and seeking the progress and development of our people, and thus achieve high levels of production with an effective and efficient work plan that allows us to achieve our goals.

Águila Trueno y Sol México Variable Capital Joint Stock Company was registered in October 2016 in the United Mexican States, prior to requesting the permits to the Secretary of Economy where the name of Águila, Trueno and Sol México was authorized under The unique key of document A201609131444332443 and counting with the title of Corresponding Mining Concession. Being a company dedicated to the mining production in metals and precious stones.

Mena Águila Trueno y Sol No. 5

1. Name of applicant: GAYOKLA NICHI JOHN AYALA TORREZ
2. The batch name: Aguila Trueno y Sol N° 5
3. Number of file: 106/0128
4. Area: 600,000 hectares.
5. Agency: Cuernavaca, Mor.
6. Municipality and state: Emiliano Zapata, Mor.

Coordinates in UTM projection, zone 14N

North 2038719.7299

East 498550.7702

Height 1023 masl

The path starts on the basis of the Tezoyuca cruise-road mor-14, continue in the direction of Tetecalita and travel 5 km along the paved road through the cement company Moctezuma and by Tepetzingo, continue 1890 meters by sidewalk with direction to until you reach the P.ɔ. located in Sierra de Monte Negro.

To determine the geographical location of the LLP was applied the method of location through readings of satellites to effect of establishing the geographical coordinates of the starting point, using for this, a GPS receiver L1, brand spectra precision, model 10 series sp3947 epoch with air antenna as remote station and as control point active fixed stations from INEGI called INEG, COL2 AND TOL2 located in the cities of Aguascalientes, Colima, and Toluca respectively.

2. INTRODUCTION

The mine Águila, Trueno y Sol No.5 is a mine owned by the company Águila, Trueno y Sol Mexico S.A. de C.V. , Águila Trueno y Sol México Sociedad Anónima de Capital Variable was registered under the unique key of document A201609131444332443 - counting on Mining Concession titles. Being a company dedicated to the mining production in metals and precious stones.

Águila Trueno y Sol - México - is supplier of base metals for the different sectors of the metallurgical industry Worldwide.

That is why we are a company of international stature, we have mines in Argentina, Paraguay, Chile and Mexico, mines of minerals such as antimony, aluminum, gold, silver, copper, lead and graphite.

Águila Trueno y Sol - Mexico - incursion in the food item for it has fish farms in charge of the care, reproduction of fish and their sale.

This Technical Report was prepared by Águila Trueno and Sol México S.A. de C.V. Taking into account the disclosure of NI 43-101 to disseminate technical information on the Águila, Trueno y Sol Mine No. 5, its current operating conditions, and updated estimates of Mineral Resources and Reserves.

For the purposes of the Technical Report, all information, data and figures contained or their integration have been provided by Águila Trueno y sol México S.A. de C.V., unless otherwise noted. Portions of the general information and geological descriptions of previous reports were adequate for the report. Likewise, the company described above obtained and supervised the data of the reserves estimates for all the areas prepared.

This Technical Report has been prepared by the employees of Águila, Trueno y Sol México S.A. de C.V. Under the supervision of

Ing. Oscar Ocampo Ramírez
General Manager in Mexico and is responsible of the supervision of the 13 areas within Águila Trueno y Sol Mexico S.A. DE C.V. And is directly responsible for 251 people who make up the human group Águila, Trueno y Sol México S.A. DE C.V. .

Ing. Fernando Zepeda Mendoza
responsible of the area of services of integral exploration and technical services having its position 23 persons Who are the responsible for selecting the equipment suitable for the exploration or machinery and maintenance of the same and realization of studies to diamantine.

Ing. Víctor Manuel Porcayo Avicena
Responsible for the development of environmental geology, he has a staff of thirty-six people, is responsible for environmental preservation programs, assessment studies and geological risks.

Ing. Eladio Figueroa Valle
He is the person responsible of the logistics, is in charge and responsible of all the information opportunely in support to the activities of planning and development of the cartographic projects, geological studies of greater detail or scientists and it is in charge to forty eight people.

Ing. José Parra Bustos
He is the person responsible of the area of exploitation. They also have the mission to elaborate the Atlas of natural hazards and risks. He is also in charge of the vehicle park of Águi a, Trueno y Sol México S.A. de C.V. His work within the company is the most important is the extraction of ore export to the collection center and has 60 people in charge among them engineers truck drivers 8 cubic meters heavy machinery operators and truck operators.

Ing. Jesús Giles Memije
It is responsible for laboratory services and equipment of remote sensing as well as technical assistance on mineral resources having in charge to 28 people including the team of craftsmen

Ing. Alfredo Martínez Díaz
Auxiliary in environmental geology and is in charge of 5 areas within the company such as geotechnical environmental impact environmental demonstration and ecological zoning and territorial land use in charge having a staff of 22 people

Lic. Ramiro Carreto Godínez
Manager and head of the Legal Department and administrative is responsible for request to the Government premises permits alignments and the direct link between the company Águila, Trueno y Sol Mexico S.A. DE C.V. And the Secretary of mining regulation as well as the legal issues having charged 15 people are law graduates 5 public accountants and 4 Secretaries.

Ing. Héctor Vázquez Torres
It is responsible for the digitization and data bank as well as the technical system of Águila, Trueno y Sol Mexico S.A. DE C.V. with the general management and is responsible for a team of 8 technicians.
It was constantly made monitoring visits to corroborate and verify the works of sampling and drilling which are described and presented later in this document.

3. DEPENDENCE ON OTHER EXPERTS

Ing. Oscar Ocampo Ramírez With an experience of 14 years services provided

1 .- Cartography
Is the core of activities, since the geological charts are the basis for interpreting and understanding the dynamics of the Earth's crust, mapping allows the generation and analysis of geological data in field, arising once referenced in forms of specialized in digital and print format letters, are also produced mining and environmental geochemical geophysical letters

2.- Technical assistance on mineral resources
Consists of advice and guidance to small and medium mining and large mining companies of the social sector in the development of projects of exploitation of mineral resources which are provided through the specialized staff of the institution qualified firms or consultants are registered services Federal processing And business services where application formats are also available

A) Geological assessment studies
B) Contracts for comprehensive exploration services or professional technical services
C) Certification of reservations located by individuals
D) Laboratory services
E) Exploration Support Program

3.-ENVIRONMENTAL GEOLOGY
As part of the commitment to the preservation of the environment, studies are carried out to evaluate geological hazards phenomena. Also, at the request of government agencies and research institutions, collaboration agreements are carried out to carry out studies and work on:

A) natural protected areas
B) Atlas of natural hazards and risk
C) Geotechnics
D) Environmental impact
E) Environmental Impact Statement (MIA)
F) Ecological territorial organization (OET)
G) Natural hazards
H) Land use

4.- GEOHYDROLOGY STUDIES

It consists of updating the knowledge about groundwater in the different national hydrogeological basins to deal with the problems of scarcity and overexploitation of aquifers by studying the relationship of groundwater with the geological environment, the laws governing water circulation, The physicochemical characteristics of groundwater and their evolution, exploration and exploitation.

Hydrogeological valuation studies are
A) Water resources
B) Water quality
C) Watersheds

5.- STUDIES OF ENERGY MINERALS

Through the gas project associated with mineral coal deposits, it assesses the gas potential of the Mexican Republic, considering the geological characteristics that allow to delimit areas in the diverse sedimentary basins of the country to contain commercial gas deposits and to bid the areas that represent interest for Prospecting and exploration of this energy.

6.- DIGITAL INFORMATION SYSTEMS GEOCIENCIA

We offer timely information in support of planning activities and development of new projects such as that requested by the company Aguila, Trueno y Sol Mexico S.A de C.V consists from the beginning of cartographic projects geological studies of greater detail scientists and those related to the Earth sciences
Through the following means, scientific knowledge is administered and organized for the interested public

A) Digitization
B) Edition
C) Data Bank
D) Remote Sensors
E) Applications Developed Using Geographic Information Systems
F) Computer Systems
He was always in direct contact with the work done, giving his approval and showing at all times his approval for the realization of the studies, and the samples of the minerals found in the mine Águila, Trueno y Sol Mina No. 5.

4. DESCRIPTION OF THE PROPERTY AND LOCATION

To reach the Águila, Trueno y Sol Mexico Mine # 5, will have to be condition, a dirt road of 1890 meters, with the help of heavy machinery, for opening this road to be used for the removal of the ORE.
It is important to mention that for this mine must have the manifestation of environmental impact. Calculation made by ING. Oscar Ramirez Ocampo, based on his experience in employment at the Energy Secretariat and geologist as an evaluator of mines and mining projects.

Background Águila, Trueno y Sol Mina No. 5

The ground Mixtec (Campa and Caney, 1983) has as basement to Acatlan metamorphic complex of the Early Paleozoic (Ortega, 1978 and Mújica, 1981). However have been obtained ages of 1008 Ma.(Yñez, 1991) for rocks of the Complex Acatlán. In this study was recognized four units of ·complex: Metandesita and quartzite, pizarraz metatobas; and filitas intensely deformed; plutons deformed are known as granitoids hope; which developed a deformation of much lower intensity.

Overlies on the Complex acatlán emerges the FM. Patlanoaya (Vázquez, 1985) constituted by conglomerate, limestone, shale and marga of Permian age. Correlates with the FM. (Flowers and Uitrón Olinal, 1983).

The Mesozoic Era is represented by the Middle Jurassic Teconcoyunca Group (Erben, 1956) consists of a conglomerate of quartz, siltstones and shales. This covers it overlies the unit formed of conglomerates, sandstones and siltstones with limestone lenses with fauna of the Lower Cretaceous. was defined as FM. (Tarango Atzompa, 1968) Nexapa (Zozaya, 1970) and Group Cicapa (Quezada, 1971).

The center of the letter will disconformably the anhydrite Huitzuco (Cserna, et al., 1983) consisting of anhydrite and gypsum. In the greater part of the letter will underlies accordingly and transitional formations of the Lower Cretaceous calcareous. To the west of the Charter emerges the FM. Chilacachapa (Campa, et. The., 1977) as a series of marl and limestone clay. The carbonated series of the Lower Cretaceous which emerges in the central part of the Charter is included as FM. Morelos (Fries, 1960) The Albiano-Cenomaniano; with limestone of thin strata with collations of bands and nodules of flint, followed by powerful layers of limestone fosilíferas. The FM. The Turoniano Maestrichtiano Mexcala (Fries, 1960); it is a calcareous flysch sequence that disconformably transicionalmente to the FM. Morelos and infrayace overlies to conglomerates of the fm. Rafts and Tertiary volcanic rocks.

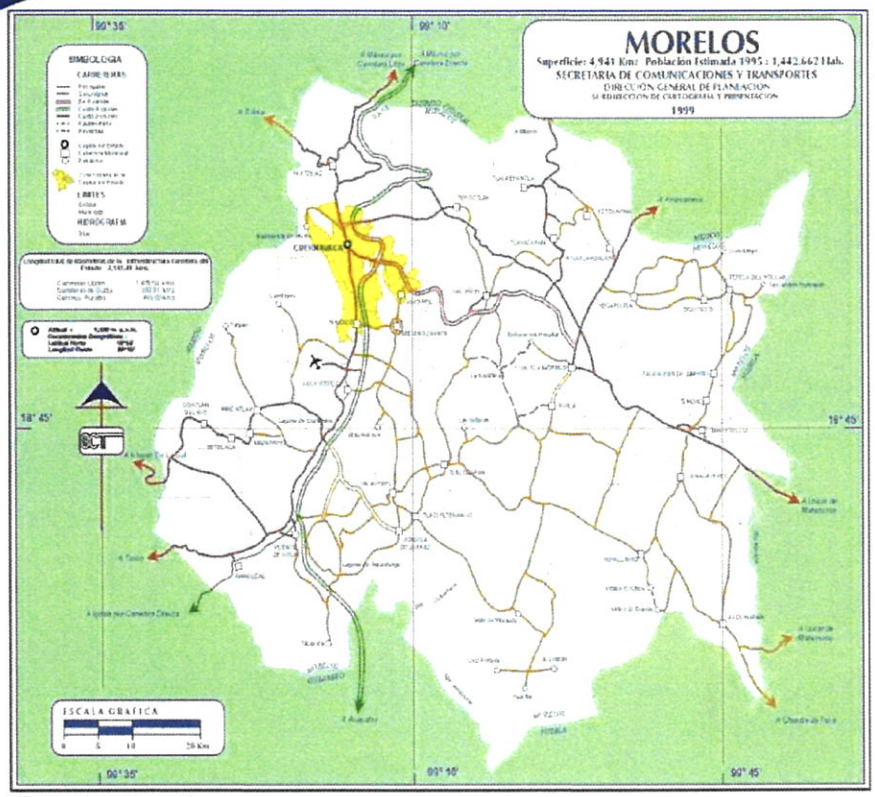


Illustration 1 Location

The two areas are covered by the following formations:

Fm. Rafts of Eoceno-Oligoceno (Fries, 1960) are calcareous conglomerates, sandstones and siltstones with gypsum; Tilzapotla tobáceas (Fries, 1960) the Oligocene, are volcanic rocks of composition riolítica partly covered by the formations Tepoztlan and Buenavista (Fries, 1960) that are contemporary events andesíticos. Filling basins are endorreicas Coayuca formations and Oapan, constituted by clay, calcareous horizons and plaster Mioceno-Plioceno. The Cuaternary is represented by lahars of the fm. Cuernavaca (Fries, 1960) covered by basaltic effusion and lahars recent FM. Chichinautzin (Fries, 1960).

The intrusives are Tertiary: composition granodiorítica are of 66.1 +/- 1.5 Ma (K -ar, Damon, et. The., 1982) in rafts; 55 +/- 6, in PiedraParada, Coaxcatlán of 50+/- 10, Tlayca of 30+/- 3. San Miguel del Oligocene, as well as a series of porphyry riolíticos and andesíticos Tertiary (Néoger o).

COLUMNA GEOLÓGICA

REGIONAL

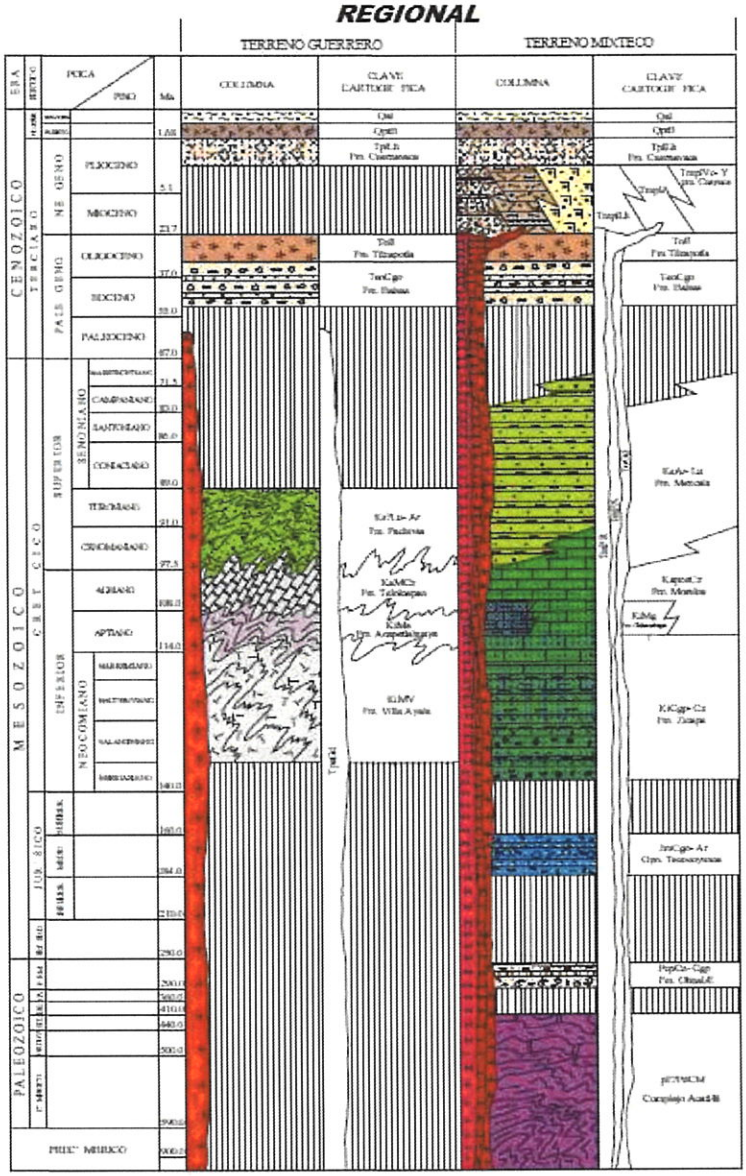


Illustration 2 Regional Stratigraphic Column

5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

Emiliano Zapata is one of the 33 municipalities of the state of Morelos, it is located geographically to the north 18º52 ', to the south 18º44' of north latitude; To the east 99º09 ', to the west 99º13' of length.

It borders to the north with the municipalities of Temixco and Jiutepec; To the east with Jiutepec, Yautepec and Tlaltizapán; To the south with Tlaltizapán and Xochitepec; To the west with Xochitepec and Temixco.

The total area of the territory is 68.37 km2, occupying the number 29 of the municipalities of the state in order of territorial area. Representing 1.4% of the total territory of Morelos.

Mountain ranges: the municipality is located between two hills; On the east side the hill of Montenegro and on the west side the hill of the Texcal.

The main elevation is known as Cerro Cueva del Aire with an altitude of 1,650 meters (meters above sea level).

Peaks and hills: Sierra Madre del Sur: altitude above sea level: 1,240 msnm.

Rivers

From north to south, the Río de Las Fuentes and a branch of the Apatlaco River pass through the municipal head. In addition to the Agua Salada River and the Yautepec River, there are also the springs of Palo Escrito and La Sanguijuela.

Streams

Las Fuentes, Palo Blanco, Canal de Agua Dulce, Salado, La Rosa and Roque. As well as the causes of the ravines of Tetecalita and San Vicente that cross the municipal head.

Large wells or other similar

For the water supply, the following wells are available:

Las Cajitas, located in Col. Modesto Rangel.
Planchuelas, located in Col. El Tomatal.
Valle Zapata, located on the old San Felipe road.
Las Cumbres, located in Col. Las Cumbres.
Los Sauces, located in Tezoyuca.

1 and 2, located in Tezoyuca and used for agricultural irrigation.

Also with three deposits, the one of the Calvary, the one of Martyrs of Chinameca and the one of Las Torres.

There are two types of climates that occupy the highest percentage: warm sub-humid with rainfall in summer, lower humidity with 98.72% and sub-humid with summer rains, with an average humidity of 1.28% of the municipal area.

Average annual temperature: 21ºC.

Rainfall: 800-1,000 mm (average annual rainfall of 894 millimeters).

Vegetation

Low deciduous forest with secondary vegetation of warm climate; Fig tree, black filly, guaje, jarilla, nopal and carriage.

Flora

Jacaranda, tabachin, cazahuate, ceiba y buganvilia.

Fauna

Zorrillo, rabbit, hare, cacomiztle, tlacuache, bat, flag bird, chachalaca, urraca copetona, zopilote, auras, crow, owl, badjer, armadillo y coyote, The three last ones are in danger of extinction, and they are in danger of extinction.

6. HISTORY

The Águila Trueno and Sol mine No. 5 is a completely virgin mine, the only previous exploitation is transferred to the exploitation of the cement Moctezuma, which was inaugurated in 1997 and has a production capacity of 2.5 million tons per year, Currently the cement company has a production reserve of 100 years a plant of great importance as it distributes its products to 8 states of the Mexican Republic, within the findings that this company has had large amounts of gold mantles, where according to The studies performed the largest mantos are located within 600 Has. It comprises the terrain the Águila, Trueno y Sol No. 5. So the studies performed gave excellent results in this mineral.

7. GEOLOGICAL ENVIRONMENT AND MINERALIZATION

Local Geology Águila Trueno Y Sol No. 5

In the area under study mining AGUILA TREUNO Y SOL MEXICO MINA No. 5 the rocks of greater interest to this study are the carbonated series of the Cretaceous, encompasses such as FM. Morelos (Fries, 1960) of Albian-ceomaniano; with limestones of thin strata with collations of bands and nodules of flint, followed by powerful layers of limestone fosilíferas. As well as the intrusive rocks porphyry hipabisales riolítico sandesíticos (TmPR and vsats) of age and Miocene and that intruded, affect and mineralize to limestones with gold and silver.

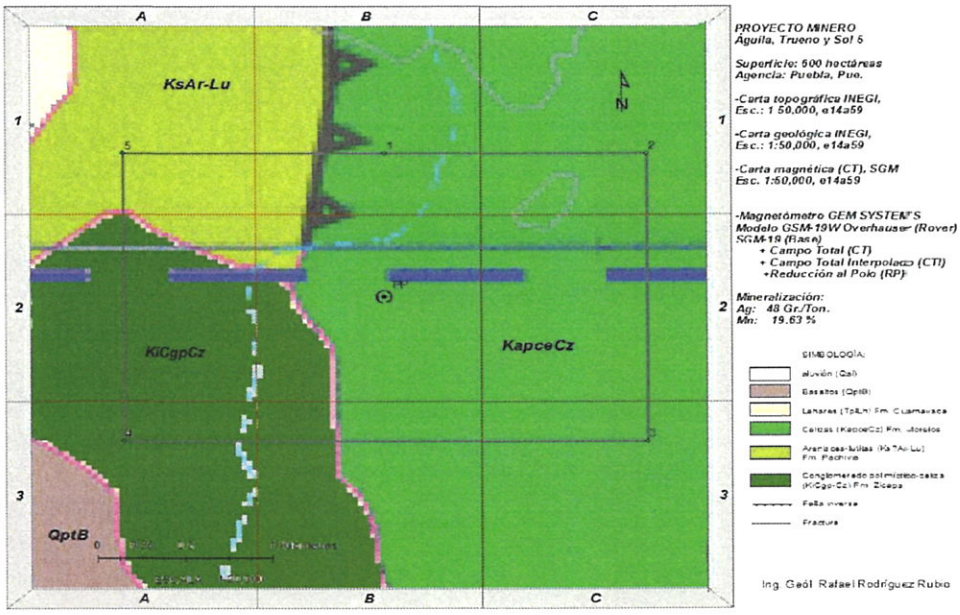


Illustration 3 Geological location

Litological Units, Mining Lot Águila, Trueno y Sol Mina No. 5

Lithological unit No 1 (KapceCz_Fm Morelos). The carbonate series of the lower Cretaceous appearing in the central part of the chart is included as Fm. Morelos (Fríes, 1960) of the Albian-Cenomanian; With limestones of thin strata with intercalations of bands and flint nodules, followed by potent layers of fossiliferous limestones.

Lithological unit No. 2 (KCgp-Cz). Underlying to the lithological Unit No 1 are rocks of a Polícictico-Limestone Conglomerate of the Fm. Zicapa. Lithological unit No 3. Tertiary intrusive rocks: Granodioritic rocks are 66.1 +/- 1.5 Ma (K-Ar, Damon, et al., 1982) in rafts; Of 55 +/- 6, in Piedra Parada, Coaxcatlán of 50 +/- 10, Tlayca of 30 +/- 3. San Miguel of the Oligocene, as well as a series of rhyolitic and andesitic porphyries of the Terciary (Neogene). That they intrude and affect the limestones of the Fm. Morelos, mineralizing them with Gold and silver.

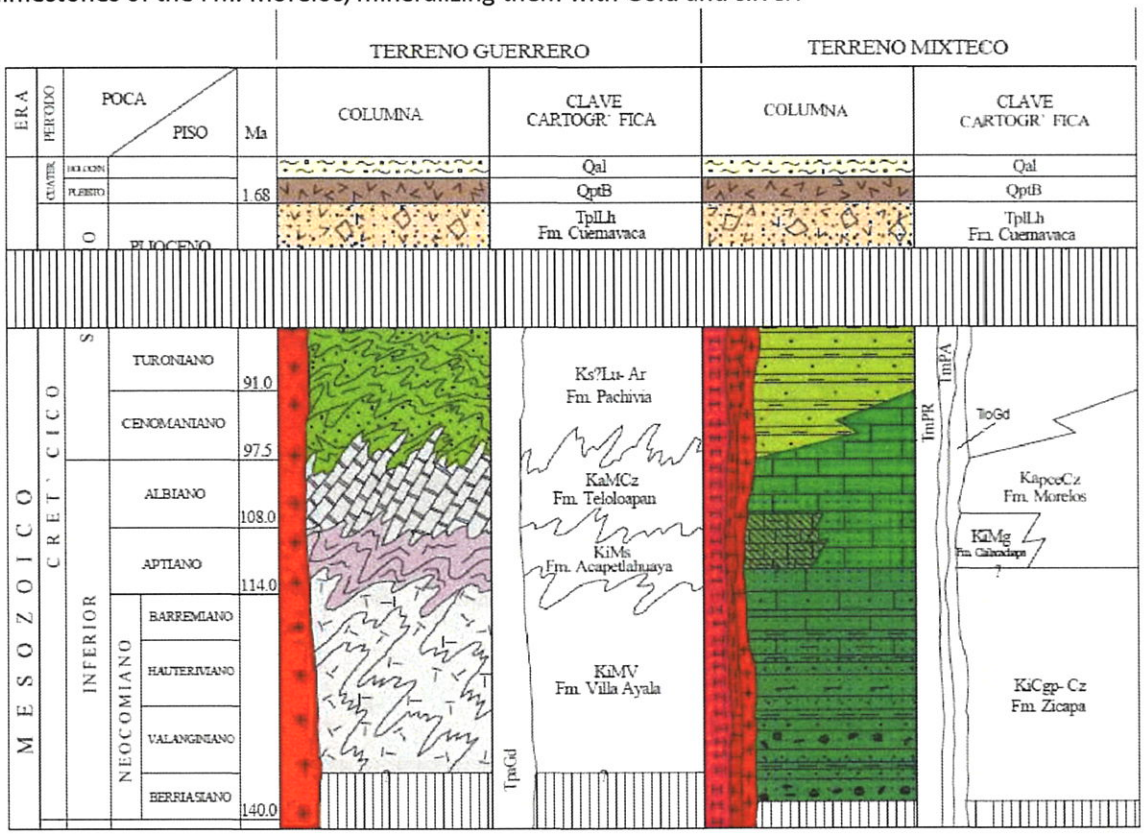


Illustration 4 Local stratigraphic column

Gem System's magnetometer was modeled GSM-19W, Over Hauser, as a mobile station or Rover, taking nT magnetometry data along with precision geographic coordinate data in decimal degrees. Following geological structures previously located in the field (Fractures, faults and / or geological structures of intrusive rocks in the form of dikes.) Each reading was taken every 0.2 seconds to give greater precision of interpretation to the magnetic data already configured and georeferenced. Magnetometer as a fixed station or base Gem System's model GSM-19, taking readings every 3 seconds, in order to make daytime correction.

In making the magnetic magnetometer survey, surface rock sampling was performed where the magnetometer indicated probable mineralization.

The samples of rock were packaged and labeled, which were sent to test for silver and gold to the testing laboratory of the School of Mines, Metallurgy and Geology, UAZ based Zacatecas city Zac.

The transformation of the geographic coordinate data, Datum wgs84, to UTM zone 14N, WGS '84 coordinates was done.

Thus, even with the data of magnetometry (nT), the respective diurnal correction was made.

Although the magnetometer was a preliminary exploration route, since it is most advisable to make a grid run every 10 or 15 meters, when observing the interpretation of the magnetic data CT, CTI and RP, there is a direct relationship of The geological structures fractures, and structures in the form of dike of mineralized hippiscal intrusive rocks with values of Gold and Silver in the form of Camote or crestones present in geological fractures of parallel mineralized rhyolitic mineralized porphyries and oriented in a general way with NW-SE heading, the Which contain mineralization with Gold and Silver values.

Also in the magnetic chart (SG), SGM e14a59 of the study area, it is observed as the greater magnetism Concentrates in the rhyolitic rocks that in turn are those that probably contain the greater concentration of mineralization, giving us an estimated probable potential area Of mineralization with Manganese and silver of approximately 100 hectares equivalent to 1'000.000 m2 +/- 30%. And an estimated mineralized area Potential with Au and Silver of 45 hectares, equivalent to 450,000 m2 +/- 10%.

Although in this magnetic chart there is no marked contrast between geological structures such as fractures and / or intrusive hippiscal rocks, if it agrees with the fact that these structures are not observed on the surface either, however with the help of the data of Magnetism taken with the Gem System's magnetometer if it was possible to determine the Au and Ag mineralizations and their relation with said Geological Structures.

8. TYPES OF DEPOSIT

MENA.

The lithological units W 3 corresponding to intrusive rocks of the Tertiary: those of granodiorítica composition those of 66.1 +/- 1. Ma (K-Ar, Damon, et. Of SS +/- 6, in Piedra Parada, Coaxcatlan of SO +/- 10, Tlayca of 30 +/- 3. San Miguel of the Oligocene, as well as a series of rhyolitic and andesitic porphyries of the Tertiary (Neogene). That they intrude and affect the limestones of the Fm. Morelos, mineralizing them with Gold and silver. Observed in the area of study and whose laws result of the tests done in the Laboratory of the School of Mines,

Metallurgy and Geology, UAZ located in the city of Zacatecas, Zac., Obtaining the following laws:
Gold: 0.50 Gr./Ton.l9.63%
Silver: 70 Gr / Ton.

The lithological unit No.1 Constituted of the carbonate series of the inferior Cretácico that appears in the central-eastern part of the mining lot Aguila, Trueno y Sol Mina No. 5 is included like Fm. Morelos (Fríes, 1960) of Albian-Cenomanian; With limestones limestone with intercalations of bands and flint nodules, followed by potent layers of fossiliferous limestones and are intruded, affected and mineralized by the intrusive rocks of the lithological Unit No. 3 with Au and Ag values.

Data sheet

Technical sheet: Silver and Gold
Águila, Trueno y Sol mine # 5 Name of the rock: Granodioritico
Type: Basic
Group: Metallic
Group: 6
Structure: cube.

The tectonic formation is found in the western portion of the letter E14-5, where the calcareous sediments are deposited in two fascias, as the limestone is thin with carbonaceous and they influence in the tobacea horizons, and in the other one appears a calcareous sub-recital, Aptiano - Albiano (FM miahuantepec or Pachivia, its age can be from the base of the albeano to the Upper Cretaceous, in the region of Chautla de Tapia (from the letter ei4-5 emerges a similar sequence Cascalote arch, sabanero a, correlatable with the Teloloapan arch.

The boundary between the Guerrero and Mixtec lands is an N-S oriented beast where the Mixtec soil limestone is being assembled by Guerrero land units. The soil is composed of basalt and andesites in continuous cast and pad, automatic gaps and tuffs.

9. EXPLORATION

The exploration work carried out at the Águila, Trueno y Sol mine No. 5 for 3 years is based on the diamond drilling study where the results obtained are the basis for updating and calculating the estimated reserves as well as the financial situation of This mine, studies will be carried out with specialized machinery detailed in point number 10 of this document.

Illustration 5 Location

The Águila Trueno Y Sol mine No. 5 reflects a great economic capital since the results obtained from the exploration made give us enough reserve to work for 120 years, with an estimated reserve of 187 million tons of mineral ..

10. DRILLING

THE DIAMOND DRILLING IN THE GEOTECHNICAL EXPLORATION OF ROCKY MASSIFS

The need to know the geological conditions inside the mine No. 5 have motivated the development of different technologies; thus we have that, among the indirect methods, the seismic refraction lets you map the speeds of the seismic waves that cross the rocky massif with its degree of conservation and fracturing, with a certain degree of reliability at a low cost and with short-term work; but not allows to know objectively the constituent features of the massif, contrary, galleries of exploration are constituted in geotechnical exploration procedure that allows the observation to the interior of rocky massif with maximum detail: however the high costs that mean for the perforations diamantinas as a procedure for obtaining undisturbed samples of rock to be analyzed and/or tested in the laboratory.

For obtaining samples, due to the needs of the project, during the execution of the surveys were implemented IN-SITU tests, such as seismic carotage (down Hole, Up Hole, and Cross Hole), hydraulic fracturing of the rock to determine the addresses of the main efforts N-SITU and evidence of water absorption type lugeon.

So also practiced drills can be exploited to the instrumentation; piezámetros, inclinámetros etc.
The IN-SITU tests mentioned, the test of water absorption is the more frequent practice in our environment, so that in the present work, presents the aspects of greatest interest for your application,
The diamond drilling of geotechnical exploration of rocky massifs, Aguila Trueno y Sol Mexico mina No. 5 located in TETECALITA Municipality of Emiliano Zapata Morelos, Mexico with geological coordinates

Latitude N. 2038719.7299
Length W.G. 498550.7702
1023 MSMM Height

Description The Drilling Equipment

It is conformed by a tunnel boring machine Boart Longyear if-90d, is practically the same puncher used at the mine No. 5, the difference is its lightness for the transfer of equipment due to the geography of the place with a motor that drives a transmission system of rotation to the head of the machine; and this in turn to the drill pipe, to whose end is located the crown Diamantina, the header has an autonomy of 360° rotation in a vertical plane, which allows drilling with the tilt that you choose. The advance is activated by a hydraulic system, through pistons that are located in the head of the machine, with careers of 0.60 m generally.

The main accessories the drilling equipment is made up of a tripod that holds a pulley, where is passed a steel cable, about 30 m of length, that goes by winding a winche, which generally is integrated to the perforating machine: this entire system to facilitate the maneuvers to insert or remove the drill pipes for drilling and coating, the reamer, that engages immediately behind the drill, aims to maintain evenly the diameter of the drill, however that the external diameter of the ring gear is lower for the cooling of the drill and the removal of the detritus product of the drilling, it introduced water to drill through the inside The drill pipe. (normal circulation), driven by a pump, the water that is employment is clean, without suspended solids, with the purpose of avoiding contamination of the fill of the fractures; and in addition even when performing tests of water absorption, since in the plugging of fractures by the fine in suspension will lead to incorrect results, it is recommended that the pump for the supply of water has a capacity of not less than 100 l/min at a pressure of 35 km/cm2.

In massifs intensely fractured and/or meteorizados how is the characteristic feature of the mine number 6, it is necessary the use of metal sheaths or coatings, that are entered.

In the hole to control landslides in the walls the diameters of these are intimately linked with the drills with a diameter of 3".

The crowns diamantinas and those sampled are of prime importance in the diamond drilling.

The exploration of massifs in the mine number 5

3 perforations diamantinas were carried out in the civil engineering project to the company Aguila, Trueno y Sol Mexico S.A. de C.V., detailing the prediction of the behavior of a rocky massif to solicitations of loads; with an estimate of the magnitude of the distention of the rock mass due to excavations in the interior of a rocky formation, has the necessity of information of the physical and mechanical characteristics of the massifs of interest to the works to be projected.

The quality of information that was obtained during the scan of the rocky massifs with geotechnical purposes, have as a condition the recovery of rock samples with the following characteristics; Inalterability (intact) and representativeness of the tranches pierced, the that is achieved with a high percentage of recovery, so that allow us to identify the constituent features of the rock and its discontinuities, drilling properly executed we returned a result of samples with such characteristics.

2.0 team of diamond drilling

The diamond drilling, which correspond to the perforations made are of the rotary type, and receive such designation because to the exit drilling of the rock is used with crowns (drills for section override) of steel with integrated industrial diamonds to an array of tungsten carbide.

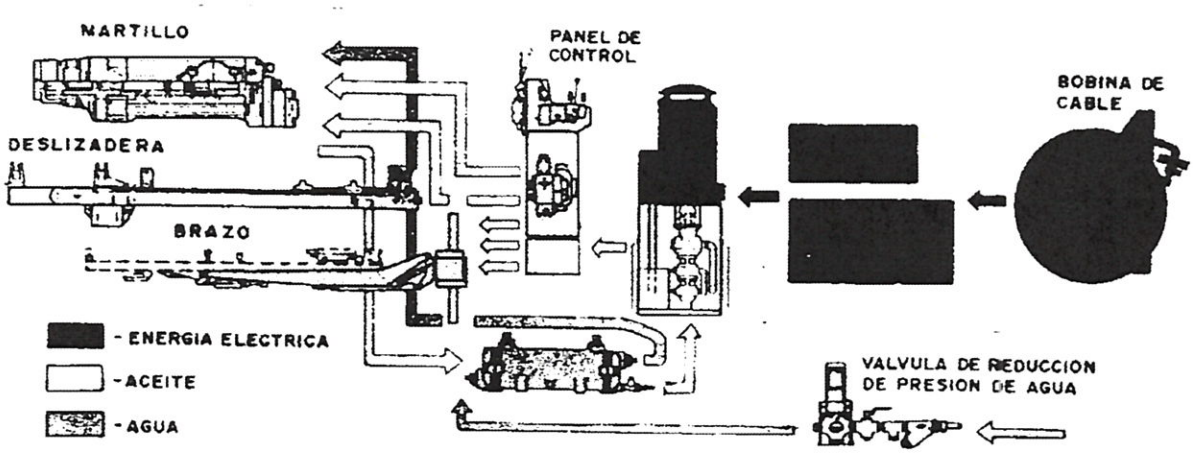


Illustration 6 Drilling equipment

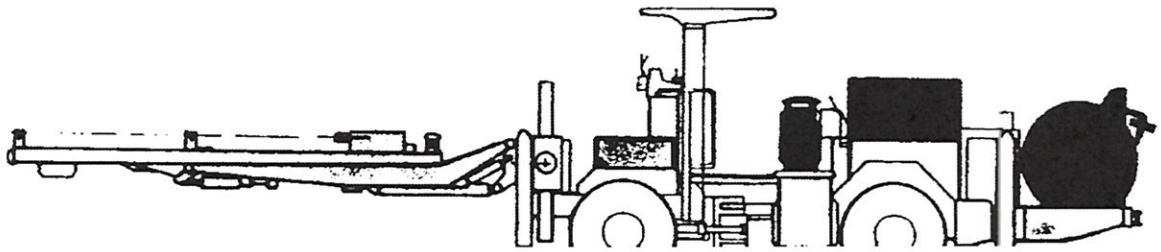


Illustration 7 Drilling machine

The crowns were built with different diameters, which allowed the drilling of holes staggered, with the aim of reducing the vibration of the drill pipe, and in their fractured rocks avoid strangulation of the perforation line by the depletion of the lining, because of friction with the walls of the hole.

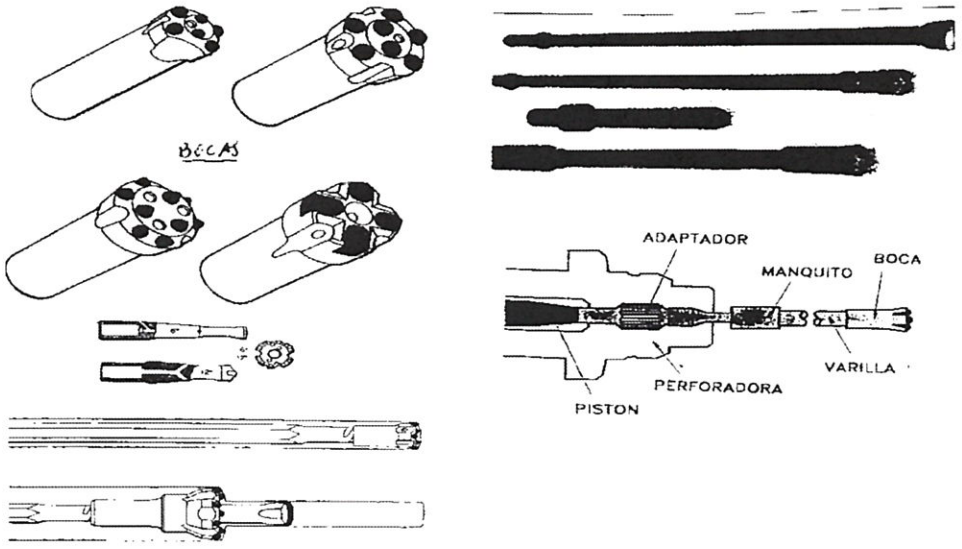


Illustration 8 Crow

The following table shows the main diameters of the crowns used in this exploration geotechnical, it is appropriate to indicate that crowns BX and BQ recommended exceptionally since the optimal end diameter is NX or NQ, and diameters minors are (AX, EX), and lead to the fragmentation of the samples.

Table 1 SELECTION OF DIAMOND CROWN.

Standard System			System wire line		
Designation	Diameter of displays (MM)	Drill diameter (MM)	Designation	Diameter of displays (MM)	Drill diameter (MM)
WG-BWM NWG-NWM HWG	42.0 54.7 76.2	59.9 75.7 90.0	BQ NQ HQ	36.5 47.6 61.3	60.0 75.8 95.0

Table 2 Crown diameters

Rock		Marga	Limeston	Dolomite	Whitebo	Shale	Calcareous	Arenista cuartica	Marble	Gneiss	Quartzite	Granite
Diamond Quality	Extra							✓			✓	
	First			✓	✓	✓	✓		✓			
	Second		✓									
Size of the diamonds (stones/carats)	10-15		✓									
	15-20		✓		✓		✓					
	20-30		✓	✓		✓					✓	✓
	30-40							✓			✓	
	40-60									✓	✓	✓
Array	Normal			✓	✓							
	Lasts					✓	✓					
	Extradora							✓		✓	✓	✓

CROWNS DIAMANTINAS

The crowns are diamantinas drills for section override, so that under advanced drilling has carved cylindrical samples who stayed in a sampler (or split-warning) immediately behind the crown.

The diamonds used in the manufacture of the crowns varied in quality and size and the array that supports were built with different hardnesses, the choice of the anger was in function of the hardness, abrásavibilidad, degree of fracturing and type of rock to be drilled.

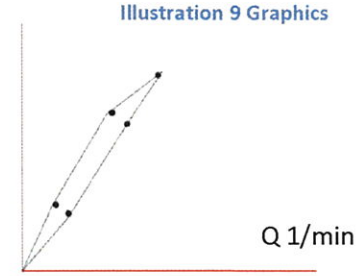
Samplers

The samplers are kegs of steel, that are located between the crown diamantina and the drill pipe with its general lengths of 0.60 m to 3.00 m and the diameters of 3 inches that correspond to the diameter of the coronas employed.

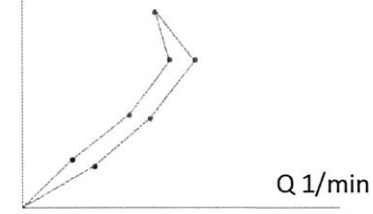
The particularity of this accessory stayed to samples for their recovery, consisting of an inner tube and the outside, concentric, with a space between them that allowed the passage of water of movement, so that the sample taken outside preserved of dampening continued and erosion, was with a bearing system that allowed the rotation of the outer tube, while the interior remained static, avoiding the breakage of the sample by torsion.

The samplers used the system wire line are similar in their benefits to the series "M" of the standard system, with the additional advantage of a secure system that allowed the removal of the mostreador from the surface using a fisherman joined to a steel cable without the need to remove the drill pipe.

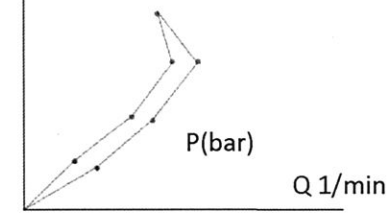
Illustration 9 Graphics



FINE FRACTURES



Heterogeneous fractures in thickness



Dilation: dilation of temporary fracture or understanding the fill by the pressure of the water.

The interpretation of the absorption curves-effective pressure on the Graph number 3 indicates the absorption-effective pressure of an essay Lugeón.

Laminar Flow- The values of the absorption and effective pressures show us that saved a linear relationship; that is to say that the absorption is proportional to the pressure effective this fact we precise that the fractures are thin and the fill-in will understand what is granular, and consequently, consumption by fractures is equal, is normally associated with values lower than in 3Lugeón UL.

Its turbulent flow- absorption corresponding to the maximum pressure is relatively smaller than the minimum and intermediate pressures and responds to the fact that the fractures are of different thickness and usually is associated with values greater than Lugeón 4UL.

Approach of the exploration GEOTECNICA with perforations DIAMANTINAS

Programming of the Probes

There are three variables that are of prime importance for the elaboration of this program of surveys for investigations Geonosticas diamantinos of this project of engineering: number and location of polling, depth and orientation.

Number and location of probes

The number and location of the probes are based on the prior knowledge of the geological conditions of the site, obtained by indirect methods and geological surface, paying special attention to the anomalies that were recorded in the place, the number of probes also determined the level of the study (pre-feasibility study), and the characteristics and functions of the proposed work.

For example; in the sites of dam projects, if the local geology is homogeneous, in a first phase are programd investigations with probes every 100 m or 150 m for areas of medium length, locating the initials in the callipers and the following toward the center, If geological conditions are erratic, determined by geological studies prior to the basis of the results of the first surveys the distance between them should be reduced.

Depth of the Probes

The depth depends on the functions and the type of projected work, and geological conditions underground studied area.

So we have to, when investigating a slippage, the survey reached a depth such that exceeded some meters from the surface of Default fails.

The purpose of the investigation was the behavior of the rocky material before the stresses of load. The perforation was made to reach a depth a t media time, the width of the loaded surface, the depth in which the normal stress induced net are of the order of the tenth of the overhead imposed, the surface of load irregular, and it was necessary to determine the distribution of the increases in the vertical loads induced by the overhead along a vertical passing through center of the area charged.

The objective of investigating the apparent permeability of the rocky massif, the drilling reached depths in that the value LUGEON was enough under 95UL.

Probe Orientation

The orientation of the probes were defined by the direction and tilt of the drilling, the inclination was referring to a horizontal plane, the choice of the direction of the probes depended on the objectives that led to the geotechnical exploration, and was decisive for the economy in metrados and consequently a reduction in costs.

The purpose was to investigate a rocky massif in the that were executed injections of waterproofing and/or "consolidation" was useful to determine the guidance elements of the systems of discontinuities that affect it, through statistical evaluations with the data obtained from surface, in this way were scheduled probes perpendicular to the main systems of discontinuities, achieving in this way to intercept the largest number of cracks by drilling length. It was also planned to investigate trouble oriented probes to the depth that was determined, with the lowest metrado of drilling.