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THE IMPORTANCE AND APPLICATION OF SURVEYING AND MAPPING GEOGRAPHIC INFORMATION SERVICES IN MINE CONSTRUCTION

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Abstract: My country's construction industry has developed rapidly in recent years, and the number of mine construction projects has gradually increased, which has a positive impact on social and economic development and technological progress. Focusing on the construction work of mines, strengthen the application research of surveying and mapping geographic information services, and link the mine construction work with this service, which can effectively implement the entire process of resource surveying, mineral development, environmental governance, etc., and then provide safe production and The project construction quality provides favorable guarantee conditions and safeguards the economic interests of the enterprise. In this regard, this article will combine my own practical experience to carry out detailed analysis and demonstration.
Keywords: Mine construction; Geographical information services; Applied research

1 THE ROLE OF SURVEYING AND MAPPING GEOGRAPHICAL INFORMATION IN THE GEOLOGICAL ANALYSIS STAGE

Surveying and mapping geographical information work plays a fundamental supporting and guiding role in mineral construction. Generally speaking, the data information basis for mineral resource development that surveying and mapping can be based on is topographic maps. Whether it is the initial development stage of the industry or the progressive development of modern social industries, the application research of surveying and mapping geoinformation can provide support and guidance for mine construction. The integrated development of the two can further improve the quality of mineral construction and make related projects Development and environmental protection work have been implemented.

1.1 Surveying and Mapping Geographic Information Service Work Affects the Geological Conditions in the Environment

Various elements in the geological environment are marked on the topographic map used in the project. On this basis, the hydrological distribution in the environment can be deeply detected, and then the distribution topography of mineral resources can be established, as well as the possible impact of later mineral development on the surrounding areas. The impact of geological conditions [1]. Based on the practical significance of the application of topographic maps, it is necessary for staff to strengthen research on the accuracy of data information and find out the main forms and rules of the spatial distribution of elements on geological maps, so that during the development and research period, the ore bodies can be tracked as they follow. The basic trends of geological changes should be further analyzed and studied, and combined and comparative analysis and processing of surveying and mapping geographical data and geological elements should be carried out. In this way, under the influence of systematic geological data information processing conditions, later exploration can also find out the results of geological analysis and processing. The work direction of a stage goal.

1.2 Surveying and Mapping Geographic Information Services Directly Affect Geological Prospecting

For geological surveys, environmental surveys, mine surveys and other tasks, the results of surveying and mapping geographic information services will have certain differences. Generally, prospecting work based on geological conditions is carried out outdoors, so the application of topographic maps and navigation equipment during this period are very necessary [2]. For geological environment surveys in some large areas, it is necessary to locate the distribution of mineral resources, and use models to explore and analyze the geological spatial distribution of the area. Only in this way can the local mineral resource storage capacity be established, and thus establish Mine construction plans, and specifications for the technical process of mining, and the mechanical equipment and protective devices that need to be used at different locations need to be laid out and debugged in advance.

2 THE BASIC INFLUENCE OF SURVEYING AND MAPPING GEOGRAPHICAL INFORMATION ON MINE CONSTRUCTION

The essence of surveying and mapping geographic information service work in mine construction is to provide corresponding geological information. In the mining process, because technology applications often face many problems, the value of surveying and mapping geographic information services at this time can also be further reflected. It is necessary to focus on the mineral resource reserves, the direction of mine tunnels, curve settings, mining plans, etc. Focusing on the goal of surveying and mapping geographic information services, relevant business units need to focus on strengthening.

2.1 Production Plan

The plan for the mining process of mine construction needs to be based on data or graphics as a reference basis to ensure that the measurement and development work of various parts of the mine are properly processed, and to provide the mining plan with basic data information and file content of the mine and the surrounding environment in a timely manner. These basis conditions require dedicated staff to be responsible for storage and information organization before application to enhance its application value.

The objects of surveying and mapping geographic information service work during mine construction are different, and it is very common for the research objects to change based on different environmental conditions and influencing factors. Therefore, the surveying and mapping geographic information work must strengthen dynamic processing. Collect and organize data at each stage and produce reports at each stage, so that production and mining planning decisions can also obtain effective data support conditions.

2.2 Project Quality Control

Mine surveying and mapping geographic information service work can start from two aspects: quality inspection and construction stakeout to effectively guarantee the mineral development work. Underground mining mines are often affected by some spatial and water level distribution, which leads to certain difficulties in mineral transportation and inspection work and affects the quality of the project. In particular, the process settings of each link are extremely cumbersome, and the connection settings of the tunnels underground and in the mining area are also extremely complicated, and the tunnels are often not connected.

Then during transportation and mining, the support of surveying and mapping geographic information services is still needed to obtain the actual situation of the current geological environment, and the project quality can also be effectively controlled. After the enterprise unit obtains accurate data support conditions, it can establish a safety plan mechanism according to the mine construction requirements and strengthen the management and control of resource application and personnel allocation at the construction site. When there are hidden safety issues, the staff will find them promptly. Get out and establish an escape route. In this way, after facing some sudden safety accidents, the relevant leading cadres of each department can quickly carry out on-site safety rescue work according to the settings of each link of the planning method, so that the impact of safety accidents on the enterprise can be reduced. The losses are reduced to a minimum, and at the same time, it can also provide favorable guarantee conditions for the next stage of the company's development.

2.3 Safe Production

If mining companies want to gain long-term development opportunities, it is necessary to strengthen safety education and guidance for their employees. Surveying and mapping geographical information work can provide strong data support for project construction and all aspects, which greatly avoids the blindness and irrationality of mineral development. In this way, some safety hazards can be solved from the source and avoid the lives of corporate employees. Health is at risk. After the geological information and environmental characteristics related data in the construction area are obtained through surveying and mapping geographical information work, the relevant units of mining can combine the previous work experience and technical standards to solve various geological problems that may exist in mineral development from the basic links. Processing will greatly gradually ensure the safety and stability of project construction and promote sustainable development of the industry.

2.4 Technology Application Research

Surveying and mapping geographical information requires a lot of application of computer technology and Internet technology, and management technology will be integrated and applied based on various requirements such as mining technology and manual configuration. In this way, mining can deeply integrate various collection technologies, coordinate quality development and economic benefits, and gradually reveal the application value of some mining resources. In this way, relevant business units can obtain a driving force for development and construction, especially at

this stage, Gangli Information Technology can obtain first-hand information on the mineral resource reserves in the target mining location and carry out local development in accordance with national laws and regulations. Mineral development planning and design, whether in terms of safety production or geographical environmental protection, can be coordinated with the company's pursuit of economic benefits, and is conducive to the company's long-term progress and development.

2.5 Cost Input

Since the entire process of mine construction is relatively complex, both technical applications and process settings will bring work difficulties to employees in various positions. In view of cost investment control, during the construction of mines, surveying and mapping geographic information services are used to analyze the local resources, and then establish construction plans and technical application plans, which can fundamentally control the economic costs of relevant enterprises and units. Invest. After the completion of surveying and mapping, the mining scale and mining scope of the entire area can be further established. After some distributed data information is collected and integrated, the distribution status of geological formations such as sand, gravel, granite, etc. can also be established to provide information for the mining of different mineral resources. Strong guarantee conditions.

3 CONCLUSION

At present, my country's science, technology and economic level are constantly developing. The informatization and modernization of surveying and mapping geographical information service work are also concentrated manifestations of long-term development and progress. Through the reasonable application of this technology, all aspects of mining production and construction can be coordinated and controlled, and combined with projects Development requirements in management, technology application and other aspects provide a steady stream of impetus for industrial development.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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