

Application and the remote sensing geological exploration technology

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Abstract: In recent years, with the continuous progress of social economy and the continuous of science and TE Chnology, there is a low degree of standardization in remote sensing geological exploration. The application of remote sensing technology is relatively high. The role of remote sensing geological exploration technology is outstanding. Based on the factors that affect remote sensing geological exploration, this technology paper how to analyzes onalized application.

Keywords: Remote sensing technology geological exploration; application Advantages

Remote Sensing geological prospecting techniques refer to an in-depth analysis of landmarks and features , After effective application of team technology , to learn more about geologic features and geology information . Depending on the electromagnetic technology and the specific application of the spectrum technology , , on Follow- upanalysis phase to scan and identify in advance , ensure data authenticity and stability . High-end remote sensors can scientifically calculate geological profiles , Modern high-end The Rationalization of computer technology and electromagnetic technology after the , to ensure the true geological prospecting solid and integrity .

1. Factors Affecting remote Sensing geological prospecting technology

Remote Sensing geological prospecting technology has a significant advantage in practical applications , in the application work , starting from the actual situation ,doing technical analysis , As required .

1.1 Technical Manager's operational capabilities

based on the practical application and management of professional knowledge , Remote sensing technology Subsequent applications play an important role in work . with regional natural geography features cases , to take into account remote sensing and other methods , must do reconnaissance selection work . If you need to change The method, To select a more highly available technology , to achieve the best effect .

1.2 Reconnaissance program

Remote Sensing geological prospecting technology has been widely applied to mineral resource management workers as in , according to actual conditions and survey procedures . , Remote sensing technology requires advance to line positioning with . first , zone check is critical , second , hr , material and financial Force factor effect is larger . due to more factors , need to survey program and the requirements of the administrative mechanism , Advance improvement , Promote feasibility .

1.3 Implement persistent detection

After years of development , The advantages of remote sensing technology are increasingly obvious , Remote Sensing geology

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tion : Coal

Geological Survey and evaluation .

Exploration Technology has been able to achieve geological prospecting and rationalization process . in geological disaster harm detection and Evaluation field , Remote sensing technology is also becoming mature , during parsing , to apply sensor technology reasonably , start with technical observations , guaranteed to recognize system rationality [1].

2. basis for remote sensing geological prospecting technology 2.1 Object Spectrum

geological bodies have different requirements for light absorption and application , to reverse fire , The composite effects of projections and scattering as prerequisites ,to do the in the drawing process Technical analysis work .

last century Since the age of , imaging spectroscopy is widely applied , and - Portable spectrometer promotion after , Rock mineral spectrometry work got attention and hair show , take into account the scope and overview of usage , in the determination phase need to do the promotion work , Select the appropriate scenario .

2.2 Processing of remote sensing diagrams

with the development of computer technology , implements processing of images already The is the focus of the study .

Remote Sensing geological prospecting technology can not only achieve direct image processing , can also To Achieve the goal of lifting image resolution by doing corrective and analytical work , , . and also enables extraction of image features , image categories, and so on , these The work can be done with the full use of optical information .

2.3 Remote Sensing exception information extraction

During data analysis , Remote Sensing information If an exception is found , to determine Quality Survey area information . such information is widely applied to the quantization phase , Take image information as an example , to do image integration analysis work . color space change switch to Key, leverages feature bands to enable enhanced processing . Remote Sensing information technology "" can be widely used in different regional and geological contexts , An ordered application of is the prerequisite for doing a good job of analyzing information ..

Green Energy reen Energy

2.4 effective way to use tailings

(1) reclamation of elements in tailings . last in recent years , due to technical understanding continuously Perfect , + level of thought increasing , The recovery rate of mineral processing in China is increasing. , mine Comprehensive utilization of production resources has also improved somewhat . For example , in Hebei someplaceInvestigation of some magnetite tailings in the ultra-poor magnetite mine the discovery , the vanadium in tailings etc. all kinds of valuable metals and their compounds have higher content , Technical department can benefit with re-election , Magnetic , , and other methods to recycle , These resources can be reclaimed by to apply to other fields[3] . and , Overall process of element recycling in tailings is also constantly improving , recycling facilities for elements such as phosphorus are also increasing , These everyAnnual benefits for the enterprise are in tens of millions of dollars above .

(2) tailings can be used as filling materials in the construction industry . in our country very Multi mines tailings handling , mostly applies to building materials , to RiverNorth Super Lean Magnetite mine as an example . through research to show that ,, tailings have a harder features , can be applied to construction of concrete structure , as concrete knot Aggregates in construction , Their quality standards can be reached 200 #. at the same time , Strong magnetic tailings Coarse-grained tailings compositions are alumina and silica , Its ingredients are even , free of sulfate , harmful impurities such as mica and other sulphides , use it for coagulation the production of soil mortar , to effectively increase the compressive resistance of concrete structures , anti-fold Ability . at this stage , China tailings as concrete aggregate uses mainly have

construction project, Railway Works and road works, With a large amount, Low economic cost. also apply new technology, New method of developing insulation, new wall material and people with sound insulation decorative stone, etc.

(3) tailings can be used as an improved soil. usually, in tailings containing
(Connect page)

2.5 hyperspectral Remote Sensing

to base the recognition system on, hyperspectral Remote sensing technology after years of development is maturing. But compared to common remote sensing technology, also have lower resolution disadvantage, to promote overall resolution, to do the light segment analysis work, avoid constraint [1] [2] [3] [4] gas

3. Specific application of remote sensing geological prospecting techniques in geological exploration

The advantages of remote sensing geological prospecting technology are obvious, to understand the exploration during the Operation Check highlights and difficulties, according to actual requirements, requires in subsequent analysis strictly follow the main points. is as follows:

3.1 Obtain geological construction information

geological constructs have an unusual phenomenon, can be based on site changes and anomalies, How to do plate evaluation become focus. the takes into account the internal construction of the plate the case of, can make full use of remote sensing geological prospecting in the subsequent analysis phase mastering Geological Information. The spatial information collected by the remote sensor can be clearly displayed when the plate structure the is created. Use of remote sensing technology to provide geological markers information after, to complete the measurement of the monitoring area.

3.2 for technical recognition

Remote Sensing geological prospecting technology has important theoretical significance, with multispectral technology and hyperspectral Technology for the premise, by how to extract multispectral information, to implement the Physical and chemical operation. General, multispectral resolution is lower, if do not know the details, No geological information survey. with continuous light spectral information as the basis of, requires intuitive analysis and mastery of geologic types, avoid appears to be out of action. have zinc, mn, copper, Iron Trace Metals, These metals are planted in the soil. The trace elements necessary for the growth of the object. so, the metals in the tailings as fertilizer for improved soil, very valuable tailings utilization path. with, the trace elements in the tailings should be extracted by scientific means, using magnetization method, make tailings magnetic agglomeration reaction, to use in the soil, Improve the geological environment of the soil. current, related departments have developed magnetized tailings Compound fertilizer, and apply it to crop growth, works better.

4. Epilogue

through the discussion in this article, analyzes the current improvement of the geological environment and the addition of tailings The need to take advantage of a path, effective exploitation and utilization of mineral resources is to protect our country The foundation of Economic and social construction, for the existing mine geological environment is destroyed issues, The research idea of systematic engineering should be adopted, Compare ultra-poor magnetite with The more typical mining geological environment for governance, and evolve to my State A similar situation in a mine geological environment, to completely solve mine ring boundary issues and resource waste. summary, Hope Mining Enterprises in the mineral resources Source mining at the same time, to avoid environmental damage, raise capital Source Utilization, further promote enterprise sustainability. solid

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