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SUMMARY OF EVALUATION AND IMPACT OF UNCONVENTIONAL NATURAL GAS EXPLORATION AND DEVELOPMENT

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Abstract: Although the exploration and development of unconventional natural gas is of certain significance, the geological characteristics and remaining resources of unconventional natural gas cannot yet be determined. Sources and economic impact, especially outside North America. The exploration and development of unconventional natural gas is different from the exploration and development of conventional natural gas. Development, because the geology and distribution of unconventional natural gas exploration and development have certain characteristics, and mining is difficult and the workload is relatively large. It is large and there are many uncertain factors; besides, the technology for surveying is not very mature yet. Evaluation and impact of unconventional natural gas exploration and development analyze.
Keywords: Unconventional natural gas; Exploration and development; Evaluation; Impact

1. UNCONVENTIONAL NATURAL GAS

When evaluating unconventional natural gas development, it is necessary to fully combine The environment and social economy in which it is located must also have an impact on resources, technology, and growth. This should be given full consideration. Due to unconventional natural gas exploration and development Socioeconomic impact and environmental impact are relatively simple to conduct research on. A relatively complete research method and system has not yet been formed, so it is necessary to mention High research effectiveness and make full use of the room for growth.

Natural gas is an indispensable energy source in our lives. It has the characteristics of high quality and cleanliness. With the continuous increase of my country's population and the Our waste of natural gas has continuously reduced natural gas resources. irregular Natural gas is a supplement to conventional natural gas, and people's technical level has improved Certain progress has been made in the development and utilization of non-natural gas, which has certain influence, adjusting the overall structure of global energy, and also effectively controlling the global greenhouse effect. With the development of horizontal well and fracturing technology, the United States The shale gas revolution was carried out. After this revolution, the shale gas production in the United States volume has increased significantly, by nearly 10 times, due to the considerable impact of the global economy The characteristics of interconnection not only affect the US economy, but also have a certain impact on the global economy. As the United States opens its chapter on unconventional natural gas, And it has achieved certain results, and countries have paid attention to it. Although the development of unconventional natural gas in the United States has achieved certain results, the geology and environment of each country are different. Whether exploration and testing methods can be carried out in other countries remains to be studied. Due to the understanding of unconventional natural gas. Different perspectives lead to different understandings of concepts, so for unconventional Natural gas resource scale, economic availability, and environmental effects have been evaluated differently, so this article provides a review of the evaluation and impact of unconventional natural gas exploration and development.

2. RESEARCH ON EVALUATION OF UNCONVENTIONAL NATURAL GAS EXPLORATION AND DEVELOPMENT

When studying the exploration and development stage of unconventional natural gas, it is necessary to conduct certain research on the geological characteristics and formation conditions of unconventional natural gas. consider, At the same time, the distribution of resources and the remaining amount of resources must also be analyzed. develop The future development prospects must be analyzed to a certain extent, and unconventional natural gas technology must also be studied. Research on unconventional natural gas exploration and development evaluation can be Divided into three types: Research on the geological characteristics and formation conditions of unconventional natural gas resources; Research on resource evaluation perspective; Research from the perspective of economic and technical feasibility.

2.1 Research on the Geological Characteristics and Formation Conditions of Unconventional Natural Gas Resources

Research on the geological characteristics and formation conditions of unconventional natural gas resources is mainly to study the physical conditions, chemical conditions and formation conditions of unconventional natural gas resources. It

can compare unconventional natural gas with conventional oil and gas. than research. A study was conducted on a mining site in New Mexico, USA. It was found that the shale base at the location where the study was conducted and surrounding locations was not Ripe; By comparing coalbed methane and conventional natural gas, the two have certain characteristics. certain differences: Coalbed methane is mainly stored in the micropores and passages of coal rock in an adsorbed state. The surface of the crossing hole and the coalbed methane reservoir have experienced the late uplift process and the late preservation process. The quality of storage conditions is the key to whether reservoirs can be formed. There are certain differences between unconventional oil and gas, conventional oil and gas, and other energy resources. Unconventional oil and gas resources of the same type distributed in different regions also have certain differences. Careful analysis is required. Detailed research and analysis cannot be treated equally.

2.2 Research on Resource Evaluation Perspective

The content of research from the perspective of resource evaluation is mainly to select a country or areas, conduct research on their unconventional natural gas resources, and at the same time develop Analyze the current situation and future prospects. on unconventional natural gas resources When evaluating source quantities, the main focus is on the geological resource quantity and technical feasibility. Assessment of mining resources.

2.3 Research on the Economic and Technical Feasibility Perspective

The content of the research from the perspective of economic and technical feasibility is mainly about relative Conduct research on evaluation methods and models related to economic technology and analyze unconventional weather conditions The cost of exploration and development of natural gas resources. Comparison of production experience gained in North America Abundant, and the extraction technology is relatively advanced, unconventional natural gas resources and The economic feasibility study results of the project are mainly concentrated in North America. His research field is the technical and economic evaluation of shale gas development projects. Domestic unconventional The technical and economic evaluation of natural gas is mainly aimed at coalbed methane mining projects. Pass A series of studies have shown that the price and economics of China's coalbed methane To a certain extent, the coalbed methane policies adopted by China have a certain impact on the development of the coalbed methane industry. Certain stimulation cannot be performed.

3. Overview of the impact of unconventional natural gas exploration and development

American research institutions and scholars have paid attention to the benefits of unconventional natural gas development. used in various aspects. Especially socio-economic and environmental aspects.

3.1 Research on Sociology-Economic Impact

There are relatively few documents documenting the impact of shale gas development on social economy, and the information recorded is generally in research reports by institutions and consulting companies. There has been discussion about how to test the short-term prospects of shale gas drilling and production. economic impact and long-term economic development impact. Employment opportunities, jobs and costs are all short-term economic impacts, and people's living standards and economic conditions All of them belong to long-term economic development. After research, the development of shale gas resources in the United States has had certain socioeconomic impacts. China's exploration and development of shale gas is in its infancy and is not yet mature. The development and utilization of unconventional natural gas has relatively little socioeconomic impact.. In the past six years, we have made a certain summary of the impact of China's exploration practice on the social economy and found that China's shale gas resource potential is uncertain. The development of shale gas cannot effectively change the structure of China’s energy consumption. good, and did not establish long-term profit goals in the exploration and development process. The socio-economic impact has a certain impact on the demand for natural gas development in the south. It also promotes the development of related industries, establishes and improves the management mechanism for mineral rights, and controls greenhouse gas emissions.

3.2 Research on Environmental Impact

At the same time, people have begun to pay attention to the environmental problems caused by the exploration and development of unconventional natural gas. A certain amount of attention. Summarize the existing literature, It can be found that research in this area mainly focuses on the exploration and development process and the comprehensive utilization process. When studying environmental impacts, we can conduct research on these aspects, including the use of groundwater resources, air pollution, and land pollution. By summarizing certain experience from the development of shale gas in the United States, the development and utilization of unconventional natural gas has promoted local social and economic development. However, there are no good methods and models in the academic community on how to quantify this promotion effect. At the same time, there are still very few quantitative analysis studies on the impact of unconventional natural gas development on the future economy, and there is also a relative lack of quantitative analysis on the impact of

. The extent of the impact on the environment and economy requires further research.

4. Conclusion

The article provides a certain introduction to unconventional natural gas and also introduces Introduces the evaluation and development of unconventional natural gas exploration and development impact, the impact is carried out in terms of socio-economic impact and environmental impact Research. In this study, certain conclusions were drawn that unconventional natural gas It is somewhat different from conventional natural gas and is distributed very differently in different regions. Conventional oil and gas resources also have certain differences, so when dealing with unconventional natural When conducting research, do not make blind equivalences.

COMPETING INTERESTS

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

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