

Risk-opportunity-reserve analysis and production peak forecasting on world conventional oil and gas perspectives

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High oil price, oil and gas peak analysis, different data and reports about oil and gas reserves and production brought increasing concerns to the world. In this paper, we examined the importantly influencing factors of global oil and gas: discovery histories, proved reserves, production, consumption and oil price. By analyzing these factors and data from different organizations, we found all the factors can be attributed to risk and opportunity categories, and then we used the multi-Hubbert model and build a data model to forecast the production peak time of oil and gas. These two models were suitable for static environments and historical data to forecast the production, and the risk-opportunity-reserve analysis framework could be used in dynamic environments for strategic evaluation. Our model results showed that the world would reach the oil production peak almost 2015, and gas production peak was around 2030. Oil peak was coming and gas peak was on the way. The integrated risk-opportunity-reserve analysis provided a global vision and framework about conventional oil and gas situations, which was valuable to seek opportunities and reduce risks. This analysis can lead decision makers to quantify their risks with unrealistic levels of precision, to manage risks and to expose opportunities being underestimated. The main purpose of this paper was to tell people the truth of conventional resources and gave people enough time to prepare effective mitigation.

Biography

Jian Zhang has completed his Ph.D. at the age of 27 years from China University of Petroleum and also a joint Ph.D. & visiting scholar from Earth Resources Laboratory of Massachusetts Institute of Technology (MIT). Recently, he is the representative in Abu Dhabi and senior Executive in Middle East of China National Oil & Gas Exploration and Development Corporation (CNODC), a subsidiary of China National Petroleum Corporation (CNPC) which charged all the overseas business. He has published and presented more than 15 papers & presentations in reputed journals & meeting and serving as a reviewer of Energy Policy in 2011.

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