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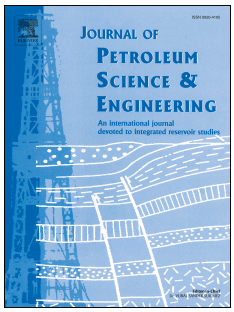

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Selection of Overseas Oil and Gas Projects under Low Oil Price

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Abstract

In order to actively resist the risk of falling oil prices, the international oil companies need to adjust the business strategy in time. Investment efficiency can be enhanced through effective allocation of funds. This work constructs a set of analytical ideas and methods for the re-optimization of the oil project portfolio under the constraints of budget and production capacity. Based on the quadratic programming model and the preference theory, the optimal portfolio decision is made. The case study concludes that the flexibility of contract terms improves the optimization efficiency, that is, reduces the portfolio investment risk, optimizes the budget allocation, and expands the range of alternative projects. In terms of decision-making, net present value should not be the only criterion for project selection. However, the portfolio optimization presented in this article, which considers the multiple constraints and inter-projects relationships, can achieve the compromise between risk and return.

Key words: overseas oil project, portfolio, investment, optimization, risk tolerance

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