

© O. Shustov

SUBSTANTIATION OF SURFACE MINING ECONOMIC EFFICIENCY OF NOVO-DMITROVSKY DEPOSIT

© О.О. Шустов

ОБГРУНТУВАННЯ ЕКОНОМІЧНОЇ ЕФЕКТИВНОСТІ ВІДКРИТОЇ РОЗРОБКИ НОВО-ДМИТРІВСЬКОГО РОДОВИЩА БУРОГО ВУГІЛЛЯ

Purpose. To substantiate the practical possibility of mining ...

Research methods lies in establishing of mining costs

Findings. The performed technical and economic analysis.....

Scientific novelty. New dependencies and regularities have been established ...

Practical value. The research results allow to develop.....

Key words: brown coal, financial and economic analysis, extraction and loading equipment, regime of mining operations, mining profitability

Introduction As of the 2017 Ukraine has very limited capabilities of coal mining to ensure its independence in the heavy industry development. It especially concerns the brown coal. Oleksandriya brown coal region doesn't have a long-term prospective to support its productivity. Other perspective deposits are not developed, some of them are at prospecting and detail exploration stage [1].....

Research relevancy. Novo-Dmytrivskyy brown coal deposit differs from Oleksandriya region deposits not only by significant reserves of various minerals, but also by complicated bedding conditions: considerable depth and large water inflows, what can significantly affect the economic feasibility of mining raw materials [2]

... basing on the performed researches it has been built the Chart of sensitivity of financial and mathematic averaged costs (Fig. 1)

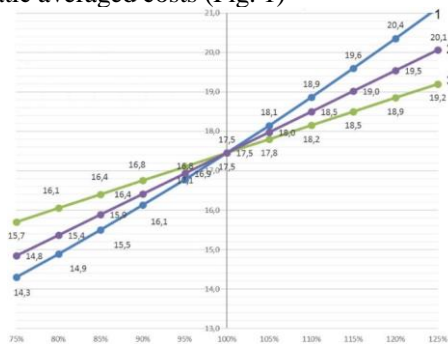


Fig. 1. Sensitivity analysis of FMAC of fuel price, USD/ton: 1 – change of interest rate %; 2 – change of investment amount; 3 – change of production operation costs

The sensitivity analysis allowed to perform financial assessment (Table 1)...

Добавлено примечание ([C1]): All margins are 2 cm

Добавлено примечание ([C2]): Times New Roman, 14, printed, half-bold font, central alignment

Добавлено примечание ([C3]): See position 2

Добавлено примечание ([A4]): indentation in abstract – 0,7 cm, spacing – 1. The following elements are given in Abstract in three languages: purpose, methods, findings, research scientific and practical value and key words. Each of them should contain not less than 1800 printed characters without blanks

Добавлено примечание ([A5]): Times New Roman, 12, half-bold

Добавлено примечание ([A6]): Times New Roman, 12

Добавлено примечание ([A7]): Times New Roman, 12, half-bold, italic font

Добавлено примечание ([A8]): Times New Roman, 12, italic font

Добавлено примечание ([A9]): Main text TNR -14, indentation – 1 cm, spacing – 1.

Добавлено примечание ([A10]): If the text of the article is in Russian, the first version of abstract should be given in Russian, if the article text is in English, English language abstract should be the first, respectively.

Добавлено примечание ([A11]): Central alignment, 14, no DOT in the end!

Table 1
Financial assessment of Novo-Dmytrivskyy open mine exploitation

Indicator	UM	Costs for mining of 1 ton of ordinary coal	Costs for production of 1 ton of conditional fuel
Capital costs	USD/ton	10.5	29.0
Operational costs	USD/ton	7.0	19.4
Total costs	USD/ton	17.5	48.3

Conclusions...

References

1. Дриженко, А.Ю. (1994). *Вскрытие глубоких горизонтов карьеров*. Москва: Недра.
2. Дриженко, А.Ю. (2011). *Карьерные горнотранспортные системы*. Днепропетровск: НГУ.
3. Rakishev, B., Moldabaev, S., & Kuldeev, E. (2015). Effective technology of stripping operations in deep coal opencasts with railway and auto truck transport. *Theoretical and Practical Solutions of Mineral Resources Mining*, 145-152. <http://dx.doi.org/10.1201/b19901-27>
4. Gumenik, I., Lozhnikov, A., & Maevskiy, A. (2012). Methodological principles of negative opencast mining influence increasing due to steady development. *Geomechanical Processes during Underground Mining: School of Underground Mining 2012*, 45-49. <http://dx.doi.org/10.1201/b13157-9>

АНОТАЦІЯ

Мета. Обґрунтувати практичну можливість видобутку...

Методика дослідження полягає у встановленні витрат на видобуток...

Результати дослідження. Виконаний техніко-економічний аналіз...

Наукова новизна. Встановлено нові залежності та закономірності...

Практичне значення. Результати досліджень дозволяють розробити...

Ключові слова: *буре вугілля, фінансово-економічний аналіз, виймально-навантажувальне обладнання, режим гірничих робіт, рентабельність гірничого виробництва.*

АННОТАЦИЯ

Цель. Обосновать практическую возможность добычи...

Методика исследований состоит в установлении затрат на добычу...

Результаты исследования. Выполнен технико-экономический анализ...

Научная новизна. Установлены новые зависимости и закономерности...

Практическое значение. Результаты исследований позволяют...

Ключевые слова: *бурый уголь, финансово-экономический анализ, выемочно-погрузочное оборудование, режим горных работ, рентабельность горного производства.*

Добавлено примечание ([A12]): Central alignment

Добавлено примечание ([C13]): The reference list in style: APA (American Psychological Association), 12, TNR. Is given after conclusions

Добавлено примечание ([C14]): Each raw indentation is 0.5 cm

Добавлено примечание ([C15]): If the article has the DOI (Digital Object Identification), it is mandatory to indicate it!

Добавлено примечание ([C16]): TNR-12 pt, printed, half-bold

Добавлено примечание ([C17]): Iline spacing – 12, font of abstracts – TNR 12.

Добавлено примечание ([C18]): Times New Roman, 12, напівжирний

Добавлено примечание ([C19]): See ukrainian version of abstract