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SELECTION AND BASED ON MODE PARAMETERS IN SLOPE DRILLING

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ANNOTATION
In this article, the selection of the drilling mode and the justification of the main physical parameters of the mode through mathematical formulas and its interaction
Key words: rock type, drilling speed, productive layer, well, mode, layer fluids , coefficient, fragmentation, mestorojdenia, debit.

INTRODUCTION

In the process of well construction, the opening of productive layers is of great importance, which is one of the main issues in the construction of production, production and driving wells: to ensure the planned extraction of fluids from the productive layer of the accumulation of oil and gas fields at the stage of use.

The quality of the opening of productive layers depends in many cases on the condition of the bottom zone of the well, that is, the flow is called from the layer and the formation fluids (oil, gas) enter when the wells are developed. Thus, the opening of productive layers plays an important role in the development of wells, their commissioning and the achievement of the planned design documents in the production of oil and gas deposits.

MAIN PART

The mode of drilling wells is based on the mechanical properties of rocks and the technical equipment of the drilling enterprise. Technological processes should match the speed of mechanical drilling with the efficiency of volume breaking of rocks.

1. The effective load applied to the drill is determined from Yu.F. Potapov's formula.

$$P_b = \alpha' r_{sh} F_к \qquad (1)$$

where: α' – the coefficient that takes into account the conditions of the bottom of the well affecting the suppression of the stamp; r $_{sh}$ – hardness of the rock according to the stamp; F $_k$ is the contact surface of the drill bit with the rock.

2. Optimal drilling speed

$$V_{atm} = \frac{0.06 \cdot \beta.h.n.\gamma \cdot D_{narx}}{\pi \cdot D_{o'r}} \qquad (2)$$

where: β and γ - empirical coefficients taking into account the conditions of the bottom of the well; h-the depth of the fragmentation zone; n - rotation frequency of the drill, ay/min; z is the number of teeth in the selected vanes; Д $_{par\ ч}$ is the diameter of the fragmentation zone; D $_{is}$ the average diameter of the venus.

3. Speed of mechanical drilling

$$\upsilon_{м} = aP_{\partial}^{\alpha 1} n^{\beta 1} \qquad (19.3)$$

where: a λ_1, β_1 - empirical coefficients that take into account a number of factors.

If $\alpha = \beta = 1$(3) the connection is linear, then the speed of mechanical drilling in the region of the surface of rock fragmentation is proportional to the axial load applied to the drill and the frequency of rotation

4. Durability of the drill

$$T_{\partial} = \frac{в \cdot P_{\partial}^{\alpha_2}}{e^{fP_{\partial}} \cdot n^{\beta_2}}$$

where: α_2 and β_2 are empirical coefficients: f is the friction coefficient.

5. Excavation of the drill

$$H_{\partial} = \frac{c \cdot P_{\partial}^{\alpha_1 + \alpha_2} \cdot n^{\beta_1 - \beta_2}}{e^{fP_g}} \qquad (4)$$

where S is the empirical coefficient

6. Drilling flight speed

$$\upsilon_p = \frac{H_{ä}}{T_m + T_T} \qquad (5)$$

where: T $_{m}$ is the time spent on mechanical drilling speed; T $_{t}$ is the time spent on lowering and lifting operation and on changing the drill and preparatory work.

7. The cost of digging one meter

$$C = \frac{D + k(T_M + T_T)}{H} \qquad (6)$$

where D is the price of the drill: k is the cost of 1 hour of work of the drilling rig.

The drilling mode can be designed in two ways: based on the static analysis of mining materials in different modes;

On the basis of reliable verified information, the drill is based on general legal work.

Based on the analysis of the data on the operation of the drill, determining the most convenient downhole engine and drill attachment and their operation mode during one flight.

Conclusions

of the well leads to a reduction in the complications of well drilling and the long-term operation of the technologies used, as well as a reduction in the costs of completing the well.

References:

1. Author's certificate No. 78747. Zayavleno 1.04.1949. Published on February 28, 1950. The method of expansion of the prizaboynoy zone of the well and the productive layer. Author - A.M. Grigoryan, V.A. Bragin, K.A. Tsarevich
2. Aliev Z.S., Somov B.E., Chekushin V.F. Obsnovanie konstruktsii horizontalnykh and multi-stovvolno-horizontalnykh skvazin dlya svoeniya neftyanykh mestorojdeni. - M.: Izd-vo "Technika". OOO " Tuma group", 2001. - 192 p .
3 . Baluev A.A. Methodological instructions for the discipline "Opening and dismantling of productive plastics" for laboratory work special 130504.65 - "Burning oil and gas wells" all forms of training / A.A. Baluev, A.F. Semenenko , T.M. Semenenko - Tyumen; TGNGU, 2013g - 32s.
4 . Baluev A.A. Burenie produktivnyx plastovvusloviyax ravnovesiya (depressii) v system skvajina-plast. Neftyanoe Khozaystvo. 2001. No. 9. p. 38-39.
5 . Baluev A. A., Lushpeeva O. A., Usachev E. A., Grosheva T.V. Effectiveness of the application of biopolymeric drilling solutions in the drilling of lateral stems with horizontal sections. - Neftyanoe Khozaystvo, 2001, No. 9. p. 35-37.