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EFFECTS OF WAVES ON DIFFERENT LAYERS

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ABSTRACT

The mine was launched in 1935 and consists of 4 productive layers (horizons I, II, III, IV). . Futhermore a small amount of gas flow was obtained from the Upper Cretaceous Xenon layers from well No. 3. Drilling was carried out in the mine to determine the presence of oil and gas in Cretaceous and Jurassic period. In spite of the complex mining-geological structure of the region (AVPD), the attempts from the upper Cretaceous deposits, starting from the Turan Plateau, were unsuccessful. Nowadays, the mine is being used in the last stage. The depth of productive layers is 110-200 m.

KEYWORDS

Introduction

Khovdak oil field is located in Sutkhandarya region of the territory Zharkhurgan district. The mine is located 55 km north-west of the city of Termiz and 18 km north-west of the city of Zharkurgan. The connection of transport of the mine with the cities of Zharkurgan and Termiz is carried out by roads and railways passing through the center of the Surkhan oasis. In 1931, N. P. Toraev determined the mining uplift structure in the Khovdak field with the help of geological imaging. In 1932, based on his recommendation, it was planned to drill an exploration well in the part of the mine dome. Exploration well No. 1 was placed in the southern part of the southern elevation of the field, and in February 1934, during drilling, when the depth reached 158 m, an oil well was obtained from the I-horizon of the Bukhara layer of the Paleogene period, 140 tons of oil were produced per day.

The feature of collector's layer

The I-horizon is located in the upper part of the Bukhara layer of the Paleogene period and consists of dolomitized, porous, oil-saturated limestones. The total thickness of the layer is 8.0 m, useful thickness is 3.0 m, porosity is 20.0%. Initial layer pressure 30.0 kgs/cm^2, current layer pressure 9.30 kgs/cm^2, layer temperature 280C, conductivity 4.053-4.278 μm^2. . The II-horizon is located in the upper part of the Bukhara layer of the Paleogene period and consists of porous, oil-saturated limestones. The total thickness of the layer is 17.0 m, useful thickness is 6.0 m, porosity is 18.0%. Initial layer pressure is 30.0 kgs/cm2, current layer pressure is 9.3 kgs/cm2, layer temperature is 280C, permeability is 2.157-2.305 μm^2. III-horizon is located in the middle part of the Bukhara layer of the Paleogene period and consists of dolomitized, porous, oil-saturated limestones. The total thickness of the layer is 8.0 m,

useful thickness is 3.0 m, porosity is 18.0%. Initial layer pressure is 30.0 kgs/cm2, current layer pressure is 9.30 kgs/cm^2, layer temperature is 34.60C, permeability is 1.944 μm2. The IV-horizon is located in the middle part of the Bukhara layer of Paleogene period and consists of fissured, oil-saturated dolomites. The total thickness of the layer is 7.0 m, useful thickness is 3.0 m, porosity is 10.0%. Initial layer pressure is 30.0 kgs/cm2, current layer pressure is 9.30 kgs/cm2, layer temperature is 36.10C, is 1.087μm2 respectively. The specific gravity of oil in the Khovdak oil field is 0.945 g/cm3. . The dynamic viscosity of oil in formation conditions is 363-440 sPz. Which contains

- Asphaltenes - 6-8%;
- Selicogel resins - 14-19%;
- Paraffins - 3.5 - 4%;
- Sulfur - 2.8 - 3%;
- Coke - 3.6%;

Gasoline fractions in oil are on average 4.4%, and kerosene fractions are 6.075%. According to the composition of Khovdak field oil, it is considered a good raw material for obtaining technical bitumen. The average amount of dissolved gas in oil is 2.5 m3/t. The density is 0.963, it contains carbon dioxide gas - 1.762%, methane - 56.250%, gas condensate - 34.0 g/m3, sulfur - 1.5%.

Method

Propagation of sound frequency hydraulic shock waves in a porous medium and the mechanism of their influence on oil reservoirs are not well understood and are great theoretical and practical interest. It is mainly importance to find a solution to the problems of the effect of pressure fluctuations on the process of filtering liquids in a porous permeable medium**.** Research data on the effect of waves through a porous medium such as an oil reservoir on liquid filtration are not available. However, there is some information about processes that occur in conditions close to this state, for example, in experiments on textile dyeing of fabrics by Brauer, he showed an acceleration of his dyeing at frequencies of 22 and 175 kG. Also, coloring at a frequency of 100 Hz was accelerated, but the efficiency was much lower. In other such conditions, vibration has been shown to increase the speed of the dye solution through the fabric.

Solutions

The process of fluid filtration under the influence of variable pressure created by a vibrator is of great interest for the vibration-percussion method of impacting the well bottom zone. In this case, it is important to determine which zone is actually covered by the vibration treatment and its size, depending on the vibration frequency and other parameters. we estimate the size of the zone of significant influence

Conclusion

These days several new types of vibration impact devices are appearing. Therefore, there are important issues such as determining the area of influence of vibration on the bottom of the well and the depth of its penetration. Any scientific innovation is created on the basis of several interrelated technical, technological and mining geological data. Therefore, having complete and accurate information about

the geological and physical structure of each well bottom region indicates that 50% of the work is done correctly.

References

1. Bekjonov R.S. Methods of Extracting Oil from Mechanical Mixtures
2. Bekjonov R.S. History of Oil Extraction Process in High Viscosity Deposits
3. Bekjonov R.S. Assessment of the Effectiveness of the Implemented Operating System And GeologicalTechnical Activities in Oil and Oil-Gas Fields Analysis Methods
4. Эрматов Н.Х., Мустафаев А.С., Мухаммадиев Х.М., Жураев Э.И. Результаты гидродинамических исследований скважин, добывающих высоковязкие нефти // Инновацион технологиялар. –Карши: 2020. –№3. –С.14-17.
5. Камбаров Г.С., Алмамедов Д.Г., Махмудова Т.Ю. К определению начального извлекаемого запаса нефтяного месторождения // Азарбайджанское нефтяное хозяйство. –Баку: 1974. –№3. –С.22-23.