FOUNTAIN PREVENTION IS BETTER THAN ELIMINATION

Background
Gas fountains have the negative effect on the country’s economics and could become even a natural disaster. For example, a blowout or gas griffons are the explosion and fire hazards. Powerful oil and gas fountains pollute the environment and ponds, causing the great harm to wildlife. Moreover, the blowout – emergency fountain – is an uncontrollable release of reservoir fluids, which cannot be stopped immediately. Blowouts tend to occur under the influence of variable reasons. The primary cause is the decrease of the downhole pressure, causing oil and gas showings. Modern technologies and blowout preventers ensure the elimination of fountains at the early stages of their development, so that the accidental blowout is a consequence of safety rules violation. Compliance with safety regulations is a strict requirement of well operation. In other words, it is easier to prevent the fountain than to eliminate it afterwards.

Aims and Objectives
To ensure the fire and fountain safety during the construction and operation of wells.

Methods
The study of the causes of gas shows, the possible measures to prevent them, the further development of an open gas blowout and fire.

Results
1. As per the field data, the main reasons for the oil and gas shows transition in accidental blowouts are: absence or improper installation of blowout prevention equipment; incorrect or late reaction of team members to seal the wellhead in an emergency case; well leakage caused by casing failure or by design mismatch to geological conditions.
2. The modern trend of oil and gas wells construction is to save costs as much as it is possible controlling only the equipment operation.
3. On the basis of available technologies of gas blowout elimination the optimal method well recovery could be chosen, without killing the well.
4. According to the analysis of ways and places of oil and gas shows the composition of the sealant is determined, such as «Saipan», «Mikrodur» or GranTSEM, another with similar characteristics, which is best for this situation.
5. Despite the existing experience of the gas blowouts and fires elimination there are still remain some unresolved issues, such as to eliminate the annular gas transfer especially at remote wells.
6. It is necessary to create special departments in the development enterprises to monitor the compliance with the rules of safe operation of downhole equipment and surface connections.
7. It is necessary to comply with the requirements of manufacturers to do the preventive works for the production and maintenance equipment.

Key words: oil and gas well, open gas blowout, fire, liquidation, warning, field, the Far North

References


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