ANALYSIS OF OIL PROPERTIES CHANGES DURING FIELD DEVELOPMENT IN ORDER TO CHOOSE APPROPRIATE ENHANCED OIL RECOVERY METHOD AND IMPROVE EQUIPMENT PERFORMANCE

Background
For all the deposits of Samotlorskoe oilfield different reservoir pressure maintenance systems are used. At present the watercut is near the limit, so that additional oil production could be achieved only by enhanced oil recovery (EOR) methods. However, some EOR methods, that were already used there, changed well fluid properties and geophysical reservoir conditions, which in turn impacts on oil development. In order to choose the appropriate method of further field development it is necessary to account this changes, modify, improve or change the existing technologies to more efficient, that will increase the production rate.

Aims and Objectives
To study the properties of well fluids and to develop the new technologies for more efficient oil production.

Methods
Analytical and laboratory studies of oil samples from different deposits. Analysis of possible complications in oil development caused by changing of well fluids’ properties.

Results
Analytical and laboratory studies showed the main regularities of properties changing in different areas of oilfield and in different deposits. In order to maintain and even increase the oil recovery rate and equipment performance it was recommended to use the metatechnology and take into account the variability of oil properties.

Key words: productive reservoir, viscosity, saturation of gas, saturation pressure, the composition of oil, metotechnology

References


8. Andreev V.Ye., Dubinskii G.S., Miyassarov A.Sh., Khuzin N.I., Khuzin R.R. e.a. Analiz vozmozhnosti primeneniya metodov uvelicheniya nefteotdachi na zalezhakh yyskovogazykoi nefti Yuzhno-Tatarskogo svoda i Melekesskoi vpadiny [Analysis of the Possibility Methods of Increasing Oil Recovery in Heavy Oil Reservoirs South-Tatar Arch and Melekesskaya Depression]. Problemy sbora, podgotovki i transporta nefti i nefteproduktov – Problems of Gathering, Treatment and Transportation of Oil and Oil Products (IPTR), Ufa, 2013, Issue 1 (91), pp. 22-30. (in Russ.).


The authors

• Kanzafarov Fidrat Ya., Candidate of Technical Sciences
  Niznevartovsknipseft OAO
  Head of Laboratory
  5, Lenin str., Nizhnevartovsk, Yugra, Tyumen Region, 628616, Russian Federation
tel: (3466) 62-31-25
e-mail: nvnipi@mail.ru, postmaster@nvnipi.ru

• Andreev Vadim Ye., Corresponding Member of Academy
  of Sciences of Republic of Bashkortostan, Doctor of Technical Sciences, Professor
  Institute of Oil and Gas Technologies and New Materials of Republic
  of Bashkortostan, State Autonomous Scientific Department
  Director
  129/3, October ave., Ufa, 450075, Russian Federation
tel: (347) 235-77-19
e-mail: intnm@yandex.ru

• Dubinskiy Gennadiy S., Candidate of Technical Sciences
  Institute of Oil and Gas Technologies and New Materials of Republic of
  Bashkortostan, State Autonomous Scientific Department
  Leading Researcher
  129/3, October ave., Ufa, 450075, Russian Federation
tel: (347) 235-76-63
e-mail: intnm-gsd@yandex.ru