

عنوان مقاله:

Improving Sand Production Control Using a New Chemical Method

محل انتشار:

کنگره ملی کاوش نفت و گاز - تولید صیانتی (سال: 1388)

تعداد صفحات اصل مقاله: 16

نویسندگان:

Abouzar Mirzaei Paiaman - *Sharif University of Technology*

Hamdan AlYami - *Saudi Aramco*

Bandar Duraya AlAnazi - *King Abdulaziz City for Science & Technology*

Mohsen Masihi - *Sharif University of Technology*

خلاصه مقاله:

Because the sand production becomes a historical issue in oil and gas wells, the petroleum engineers tried to find methods to reduce the sand production. So there are many methods to reduce sand production by using mechanical methods, chemical methods or combination of these two types. Some methods are controlling the sand production very well, some reducing it partially and some methods fail to control the sand production. The objective of this study is to investigate the potential use of a new chemical method to minimize sand production from oil and gas wells. This study address is the use of new chemical method to minimize sand production by bonding grains of the formation sand and adding small strength for the formation. Due to the effect of injected polymer on effective permeability of reservoir hydrocarbon, the sand pack model was prepared and the relation between the effective permeability of oil and water due to gel injection was studied. Two cases were tested, injection of the 0.25 and 0.5 PV of polymer gel. Injecting 0.25 PV of polymer gel reduced oil effective permeability from 4201.35 mD to 3429.67 mD which means 22.5 % reduction in oil effective permeability (which is not a bad result), while injecting 0.5 PV of polymer gel reduced oil effective permeability from to 4419.64 mD to 267.83 mD which is 93.94 % reduction in oil effective permeability. Therefore first case (injection of 0.25 PV of polymer) gave better results since oil effective permeability was not seriously altered.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/60685>

