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ABSTRACT

Oilfield production decline curve analysis ()
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1. Introduction

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* Corresponding author.
E-mail address: 1565@63.com (- C)
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Fig. 1. ... -t o t- t ... t

Table 1

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2.2. Experimental procedure

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$E(I) = \int_{T_1}^{T_2} I(t) dt$
 $I = [T, T]$

2.4.3. New method of MRI image processing

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$$P(I) = \frac{R_T [S(T) - S_x(T)] T}{R_T S(T) T} \quad (5)$$

$$E(I) = \frac{R_T [S(T) - S_x(T)] T}{R_T [S(T) - S_x(T)] T} \quad (5)$$

$S(T) \quad S_x(T) \quad t \quad T \quad o \quad t \quad t \quad t$
 $t \quad o \quad t \quad o \quad t \quad P(I) \quad t \quad t$
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$$f(x, a, b, c) = a \ln(x + b) + cx \quad (7)$$

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- b
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$$Q = V \cdot \phi \cdot (y_2 - y_1) / \text{number of grids} \quad (8)$$

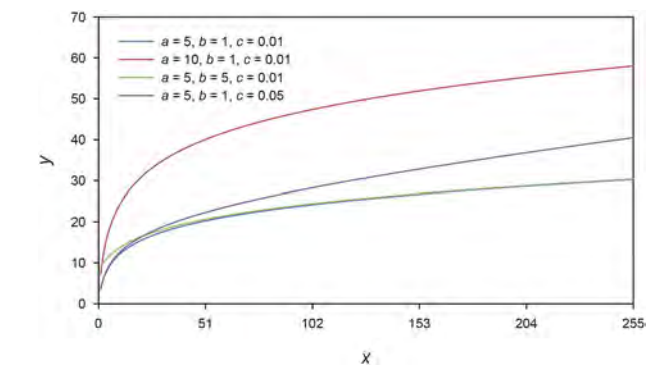


Fig. 8.

$$y = 8.03 \ln(x + 1) - 6.78 \times 10^{-6}x \quad (8)$$

$$R = 0.995$$

$$S_{it} = \frac{1}{N} \sum_{i=1}^N S_i - S_i^t \quad (9)$$

$$S_{it} = \frac{1}{N} \sum_{i=1}^N S_i - S_i^t$$

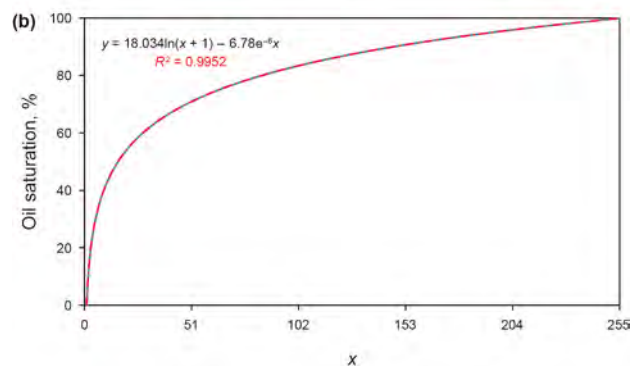
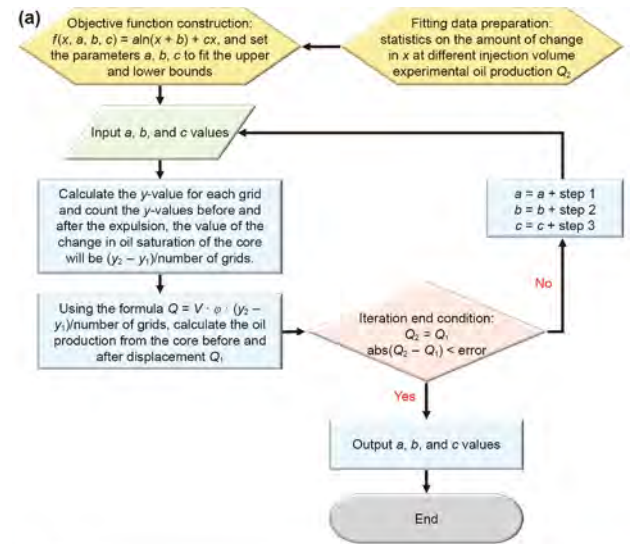
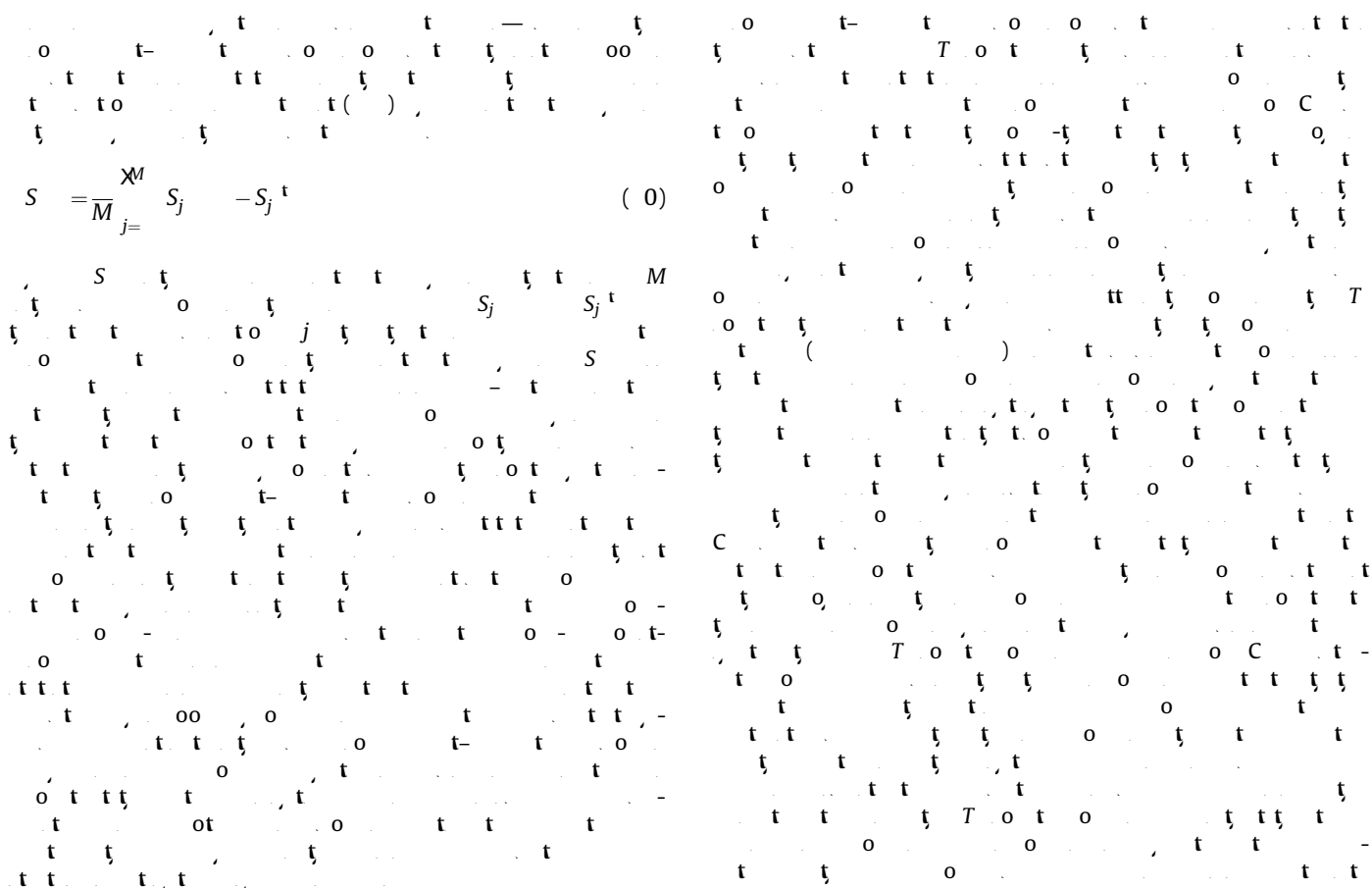


Fig. 9. (a) (b)



3. Results and discussion

3.1. Oil–water transport mechanisms of cores with different injection strategies

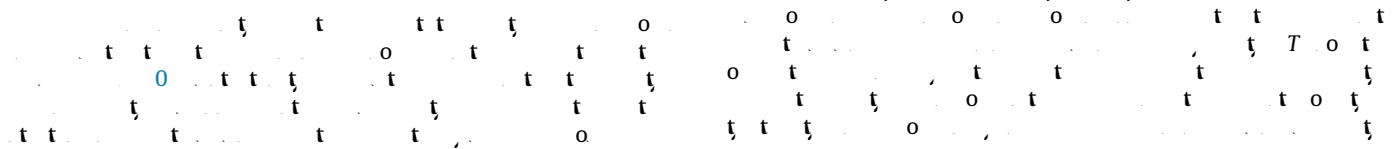


Fig. 10. ...

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Fig. 17. ...

3.3. Influencing factors for displacement–imbibition coupling production

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3.3.1. Effect of lithology

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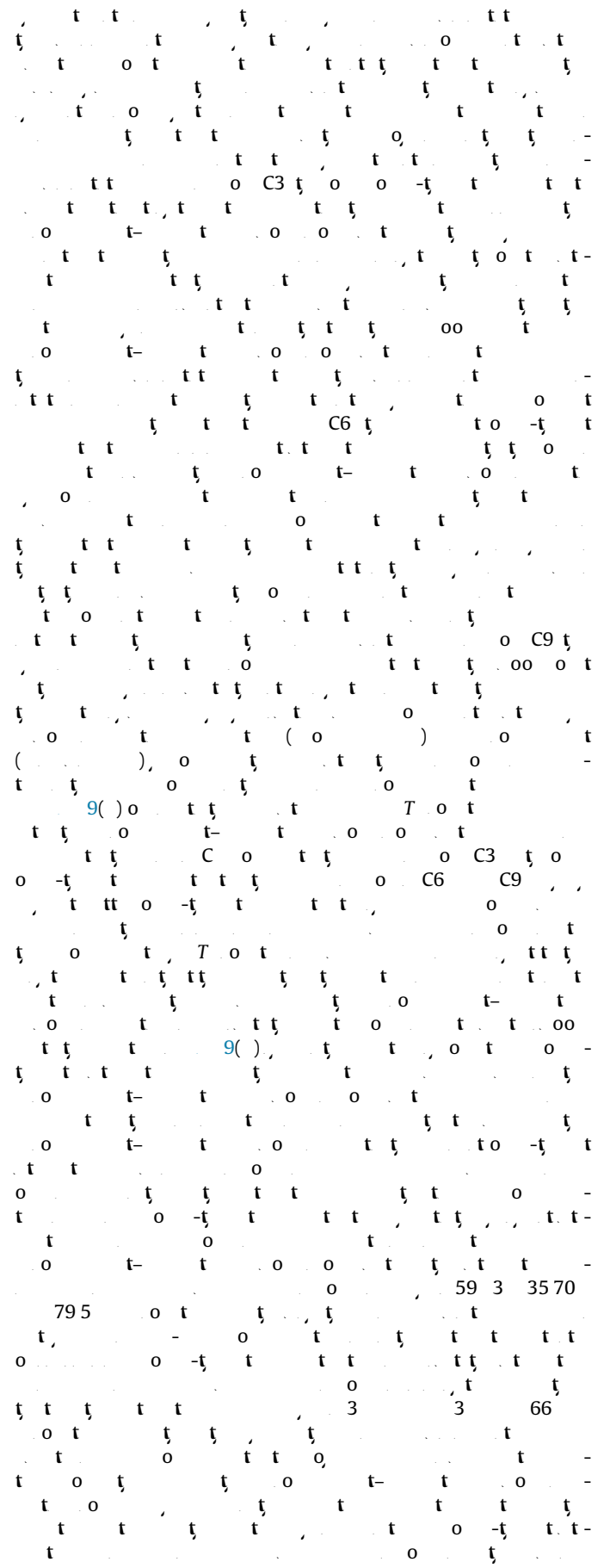
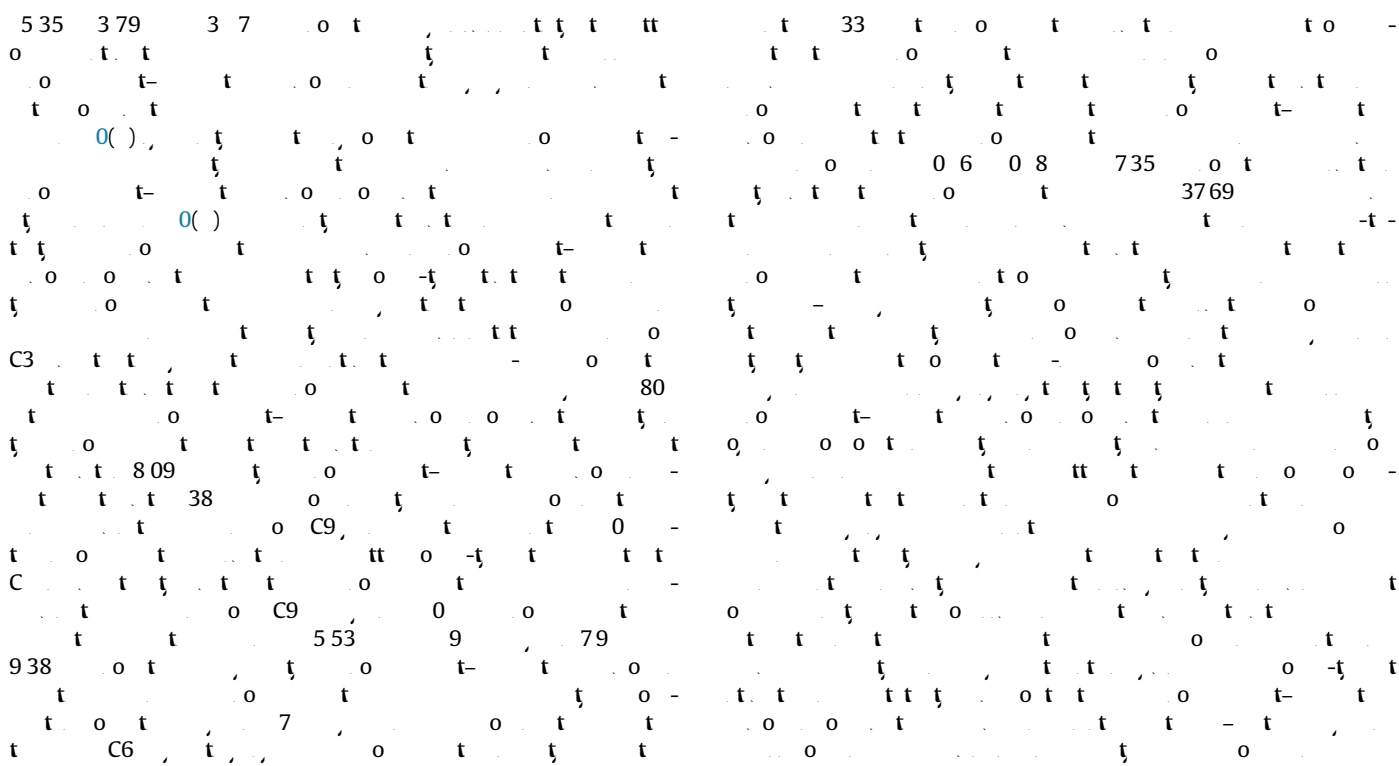


Fig. 18. C_{10} and C_{11} isomers in the C_{10} and C_{11} fractions of the shale oil.

Fig. 19. (a) Total ion chromatograms of the C_{10} and C_{11} fractions of the shale oil, and (b) mass spectra of the C_{10} and C_{11} fractions of the shale oil.



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Xin-Yi Zheng: t t Lin-Song
Cheng: t t Jiang-Peng Hu: t -
Zhi-Hao Jia: t t t
Wen-Hao Duan: t t Hassan Hassanzadeh: t -
& t

Declaration of competing interest

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Acknowledgments

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References

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