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## Division of Reservoir Flow Units and Its Application to Fuyu Oilfield

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( F P Q I Z T J D B M % F Q B S U N F O U \$ I J O B O J M G J F M E O 4 F S W J D F T - J N J U F E 5 J B O K J O \$ P M M F H F P G ( F P T D J F O D F \$ I J O B 6 O J W F S T J O Z P G 1 F U S P M F V N # F J K J O H

**Abstract** 5 I J T Q B Q F S B Q Q M J F T D M V T U F S B O B M Z T J T N F U I P E U P Q S J N B S Z D P O U S P M G B D D I P S T P S F M E F U G M R X V E Q B U H D O M B T V O J U T # Z V T J O H U I F D P S S F T Q P O E F O D F B O B M Z T J T N F U I P E U I F Q B Q F S T U V E J F T U I F T Q B U T B N Q M F T P O U I F Q M B O F H S B Q I J O P S E F S U P N B L F H F P M P H J D B M J O U F S Q S J F U B U J J P O B O E J O S F M B U F E U P T F E J N F O U B U J P O J T U I F Q S J N B S Z D P O U S P M G B D D I P S T P S F M E F U G M R X V E Q B U H D O M B T U I F T F D P O E B S Z D P O U S P M G B D U P S ' J O B M M Z U I F Q B Q F S F T U B C M J T I F T U I F E J T D S J N J O B O T I P X T U I B U U I F E J T D S J N J O B U J P O G V O D U J P O J T F G G F D U J W F B O E D B O C F V T F E J O P U I F S X B U I F P S F U J D C B T J T B O E U F D I O J D B M T V Q Q P S U G P S S F T F S W P J S G M P X V O J U T U V E Z J O P U I F

**Keywords** ' V Z V P J M G J F M E : B O H E B D I F O H [ J P J M M B Z F S G M P X V O J U T D P S S F T Q P O E F O D F B O B

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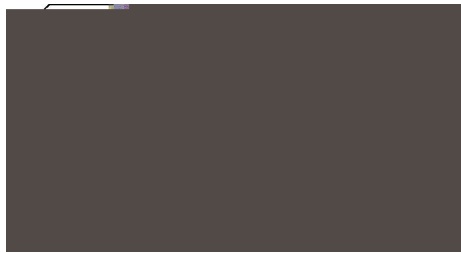
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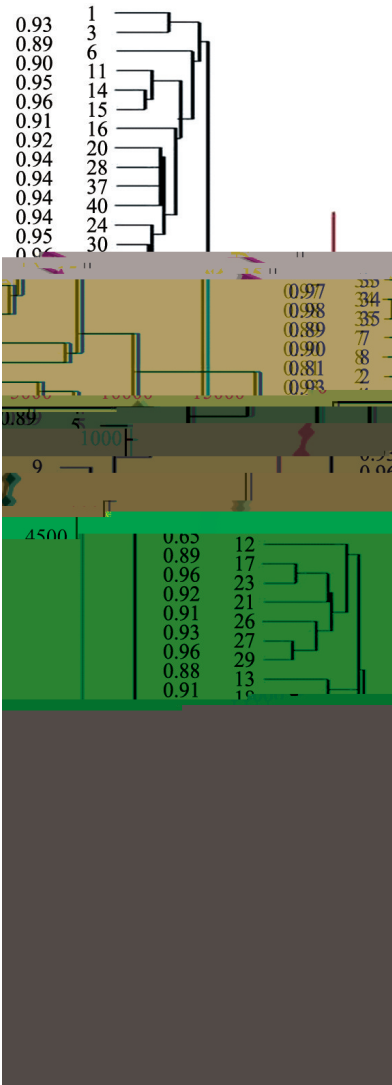


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Fig. 1 Chart of flow unit division

2.3

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 E = y M ± 1 ) 3 U E 6 W Õ ð d î E = y " n Õ , p ? 3 U £ A ^ 2 (   
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 ( » \* 1 " \* 1 " \* \* 1 " n Õ , p d î • 3 X g !



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Fig. 2 Cluster analysis dendrogram

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 • i È T ! ! i G i \* ^ 8 7 7 U 1 = • @ i • i È T ! " B U X F ü  
 ± ± : 9 U ' ) 3 ? g Õ ð d î m 1 ± ± ! ¶ / , % S : 9 U % D p " B U  
 X F ü i ± ± Õ ð d î & Á ± ± # D E < ( ' i : 9 U ' ) 3 ? g 9 - , % S  
 Z ± ± Õ ð d î = Õ 6 # 4 % o \* U : 9 ! \* ^ ' 3 G } ) 3 ? g  
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 , p ± ± ž ú ! ! ¶ / % o \* U \ " n Õ , p 3 1 " ± ± h > @ Ô c 2 M U =  
 Õ % o \* U \ " n Õ , p 3 1 " ± ± N > @ Ô c 2 M U E ; ] B U " ā ± ±  
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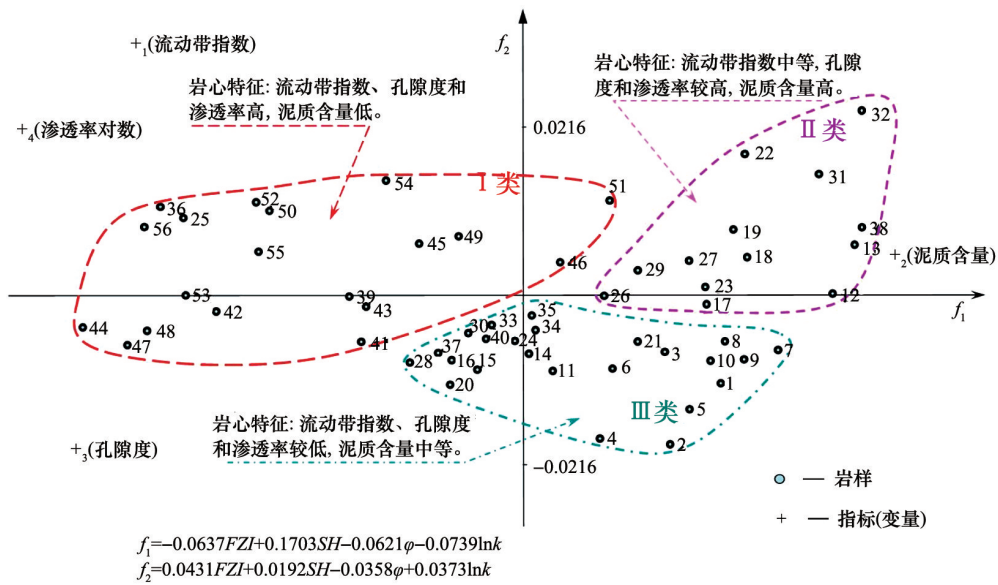


Fig. 3 Correspondence analysis planar graph of flow unit and characteristic parameters

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 ®! \*1"n Ö , p'!® U+ UŽŸ T g X!æ3ó-/ Ö U" ü\*bJ%  
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a UMÄ1ž=L•LJ- N\*L- 8 UMÄ1ž=L•BaKq 7 VU•+ U•BŽŽ'  
 1žK! Ž\*L N\*L- 8 ;P Ú- U+ U•GŽŽ!'n Ö S 4 • •KÆ  
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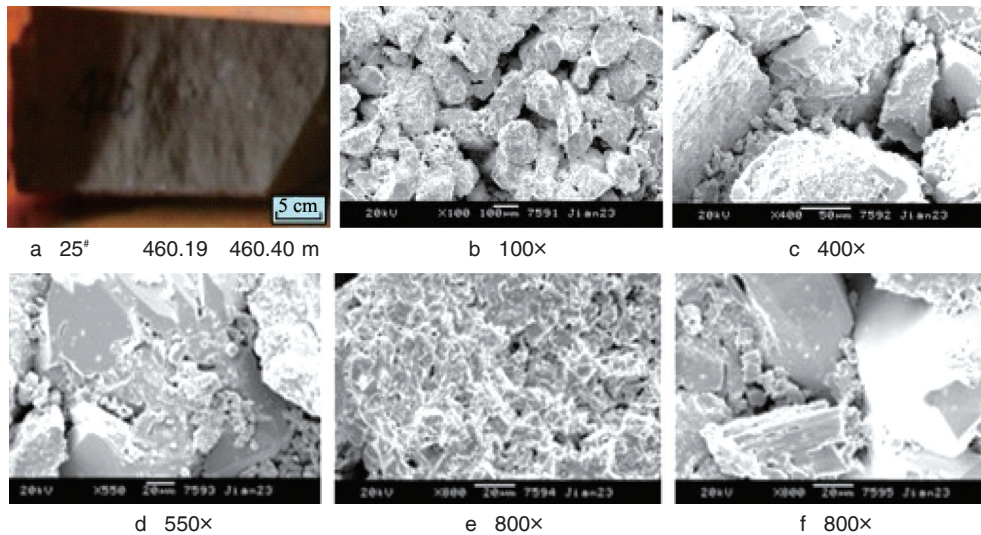
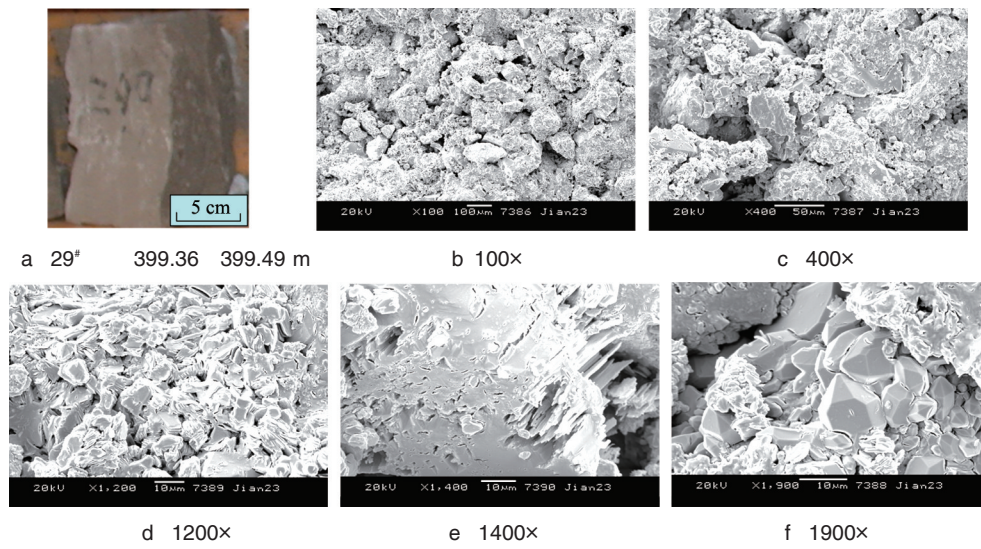


Fig. 4 Core and scanning electron characteristics of flow unit

\* 1"n Ö , p'!® U+ UŽŸ T !æ"¥3ó-/ Ö U" ü\*bJ%  
 &"t k.gMÄ1ž ž DD°2T ó UF 3MÄ1ž uJ£ y'ä U•KÆ p5ßD°  
 a UE EG TD° aUMÄ1ž=L•LJ- N\*L- 8 U1žK! •KÆ=ØP Ú-  
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 " BU XFüD°P !

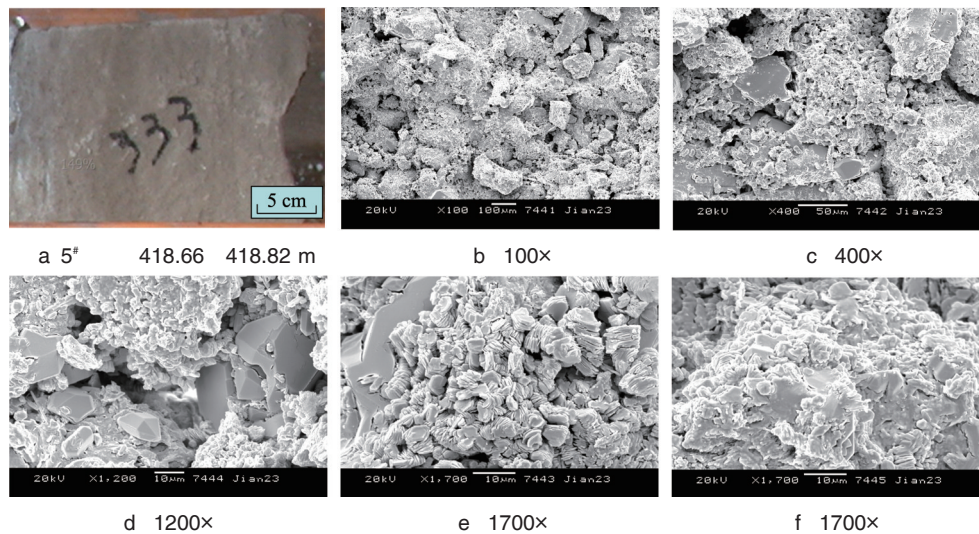
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 5ßD° UE EG TD° U1žK!LJ- N\*L- 8 U1žK! •KÆ=ØP Ú-  
 b < U+ U•BŽŽŽÄ1ž=L•BaKq 7 VU•+ U•GŽŽŽ'n Ö S 4

• •KÆ Ó #DE<('D° {U" BU XFüD° { !  
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 '... ' ; \* 4) † ML U•UŽ  
 \* 1"n Ö , p UŸ  
 '... ' ; \* 4) † ML U•UŽ  
 \* 1"n Ö , p UŸ  
 '... ' ; \* 4) † ML U•UŽ



5 II

Fig. 5 Core and scanning electron characteristics of flow unit II



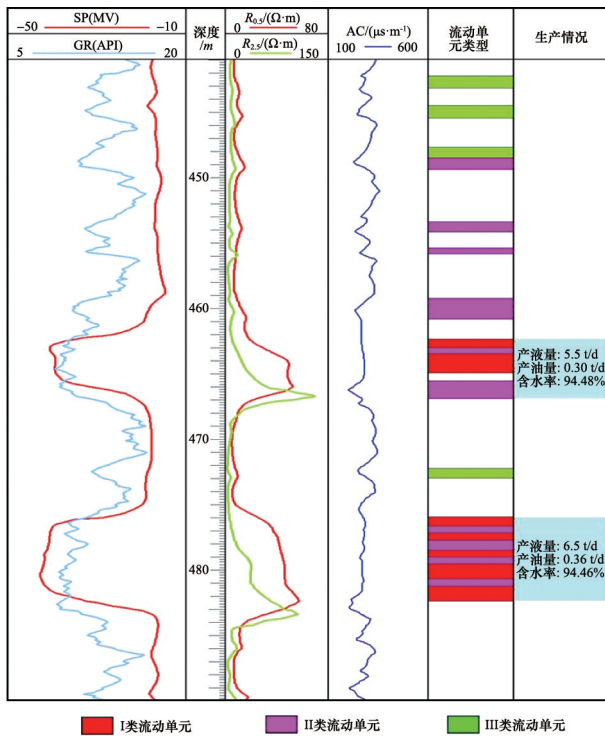
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Fig. 6 Core and scanning electron characteristics of flow unit III

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 K! Ž\*LP Ú- ; N\*L- 8 U1¿K! •KÆ=ØP Ú- b < UMÄ1¿=•  
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7 X13-8.4

Fig. 7 Graph of well X13-8.4 flow unit classification

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References

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