JUSTIFICATION OF CYCLICAL EFFECTS ON THE RESERVOIRS WITH HIGH VISCOSITY OIL

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Key words: heavy oil; cyclic effect; the thixotropic property of crude oil

30 .) 43 % [1]. [2]. [1-6]

, , [6-8]. [2, 9, 10]. [6, 8]. [8]. 620 [11-13]. [14]. () 1.

-3	1,57	0,18	0,71	0,151
-1	1,9	0,22	0,60	0,151
-5	0,91	0,131	0,73	0,089
-4	1,13	0,145	0,754	0,157
-3	2,10	0,151	0,761	0,351
-2	1,47	0,147	0,732	0,274
-1	0,80	0,143	0,745	0,253
-2	2,31	0,14	0,75	0,235
-1	5,18	0,14	0,75	0,345
-10	1,04	0,206	0,866	0,320
-01	4,71	0,239	0,938	1,185
-02	3,0	0,242	0,95	1,878
-03+04	4,7	0,271	0,948	5,144
	3,73	0,154	0,702	0,053

300

0,01

30 %,

(70 %).

97 % [13, 15].

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10 , (. . . 2).
(10 000 /) 3,5 % [14–17].

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[9, 10, 16].

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14-

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$\cdot 10^2, \text{ }^{-1}$	,		$\mu, \text{ }^{-1}$	
1,12	0,018	0,010	1610	893
1,46	0,021	0,012	1440	822
2,94	0,028	0,017	952	578
5,11	0,031	0,020	607	391
11,2	0,042	0,042	375	375
14,6	0,054	0,054	370	370

. 2252

(= 0,003 ²)

$v \cdot 10^{10}, \text{ /}$	$\text{grad } p, \text{ /}$		$\text{ }^2/ \text{ } (\text{ } / \mu) \cdot 10^5,$	
1,47	0,062	—	0,24	—
1,92	0,066	—	0,29	—
3,91	0,122	—	0,32	—
6,78	0,212	—	0,32	—
14,7	0,459	—	0,32	—

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	2462	2172	2220	637	2233	2129	687	2245	2252	132
	0,026	0,015	0,023	0,014	0,019	0,019	0,019	0,025	0,026	0,018
	0,014	0,008	0,012	0,007	0,010	0,010	0,010	0,013	0,013	0,010
	0,036	0,021	0,031	0,019	0,026	0,026	0,026	0,034	0,035	0,025
	0,019	0,011	0,017	0,010	0,014	0,014	0,014	0,018	0,019	0,014
	230	375	200	220	364	516	220	575	370	274
	982	1250	890	893	1430	1700	982	1960	1610	1160
	4,3	3,3	4,4	4,1	3,9	3,3	4,5	3,4	4,4	4,2
	0,010	0,010	0,010	0,010	0,003	0,010	0,003	0,010	0,003	0,010
	0,025	0,014	0,021	0,013	0,036	0,018	0,037	0,023	0,049	0,017
	0,012	-	0,011	0,006	-	-	-	-	-	-
	0,033	0,019	0,029	0,017	0,049	0,024	0,050	0,032	0,067	0,024
	0,017	-	0,015	0,009	-	-	-	-	-	-
	$2,17 \times 10^{-5}$	$1,33 \times 10^{-5}$	$2,51 \times 10^{-5}$	$2,27 \times 10^{-5}$	$0,33 \times 10^{-5}$	$0,98 \times 10^{-5}$	$0,54 \times 10^{-5}$	$0,87 \times 10^{-5}$	$0,32 \times 10^{-5}$	$1,88 \times 10^{-5}$
	$0,67 \times 10^{-5}$	$0,86 \times 10^{-5}$	$0,74 \times 10^{-5}$	$1,05 \times 10^{-5}$	$0,30 \times 10^{-5}$	$0,70 \times 10^{-5}$	$0,33 \times 10^{-5}$	$0,52 \times 10^{-5}$	$0,24 \times 10^{-5}$	$0,77 \times 10^{-5}$
	3,2	1,5	3,4	2,2	1,1	1,4	1,6	1,7	1,3	2,4

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