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IMPROVEMENT OF DRILLING FLUID FOR CONSTRUCTION OF WELLS IN ARCTIC SHELF WATER.

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Key words: *clay sandstones, inhibitor , montmorillonite clay , hydration , deformation , dispersion, water Arctic shelf.*

Annotation: *book and field information-based In the waters of the Arctic shelf, the well to build his own special geological and technical conditions, unstable mud in the mines inhibitor drilling from liquids to use the efficiency of seeing will be released.*

Researchers most of them in the borehole insults and falls appear to be drilling liquid clay own into the resulting floor with a physicist and chemical mutual effect process with connects

Khar another like braking doer drilling from liquids use exercise that 's all showed that from them some mining and geological in data circumstances use efficiency another in data circumstances wells successful drilling guarantee Not Maybe

Natural under the circumstances, the clay sex balance is in a state of far geological affairs as a result of organizing the found state processes. In this case, clay floors activity to evaluate suitable will come It's time to wet steam relative humidity with is determined. drilling fluid watery phase with reciprocal effect do as a result of clay floor well with opening as a result of the balance is broken and that's all together with the second so-called "layer". The adsorption pressure of the following is defined as:

$$P_{adc} = -\frac{RT}{V_M} \cdot \ln\left(\frac{a_n}{a_r}\right),$$

water molar volume where ;

T - steam temperature;

a - clay genus (an) and this relation who is the environment ("") activity measure ;

P is the steam pressure , P *$* - at temperature T saturated vapor pressure .

ME to his words according to _ Schenever , drill liquid watery activity phase (Table 1) and clay floor water activity (Fig . 2) weak connected water with _ alignment wetting and swelling _ _ Not will be .

Table 1

Polyglycol solutions and CBR activities to fit in with experience Results

Test solution	*p/n* $_s$	1 g clay k is known time within was swallowed up water amount (mg).		
		24 hours	**48**	72 hours
OBM contains 10% pure water There is	0.91	101	114	122
-//- 30% clear water	0.95	117	134	141

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50% pure water	0.97	123	138	150
distilled water	1.00	108	142	159
polyethylene glycol solution 10% mineralized water (10% NaCl)	0.90	96	112	120
-//- 20% NaCl	0.85	85	94	102
10% CaCl	0.84	83	94	99
-*I*- 20% $CaCl_2$	0.75	62	72	78
-//- 10% $MgCl_2$	0,83	85	89	96
-*I*- 20% $MgCl_2$	0,71	56	66	72
—//— 30% $MgCl_2$	0,46	38	46	51

For a comparative assessment of the inhibitory ability of drilling fluid filtrates (Table 2), various clay samples from the North Kamennomyssk site (well No. 6) were taken, as well as mudstone samples from the Semakovskaya deposit (well No. 100). .

The given data show the difference between drilling mud filtrates according to the method of inhibition: active inhibition (positive Kp) and passive inhibition (negative Kp).

Active inhibition is characteristic of filtrates containing potassium, calcium, and ammonium cations. *C* and for potassium chloride the value indicates a high acceleration of the hydration process.

Different media clay samples swelling indicators

explore environment	Swelling rate														
	Swelling level K_t			Absorbed water quantity K_2, ml / g of clay			Swelling period g, hour			Average swelling speed co , ml/h-($10'^3$)			Prohibition to do ability		
	TO,' TO," To who			*"G kg "* _ To who			T'	T"	T	So '	cooper O ation ")		*WIT H'*	*Si"*	*Xi*
colorful dirt															
Water	1.40	0.08	1.48	0.162	0.032	0.194	19	31	50	8.52	1.04	3.89			
10% NaCl solution	1.29	0.06	1.35	0.117	0.024	0.142	5	25	thirt	23.48	0.97	4.72	1.76	-0.07	1.69
5% solution of	1.20	0.03	1.23	0.081	0.012	0.093	2	10	12	40.49	1.21	7.76	3.75	0.16	3.91
5% p- pNH_4C	1.24	0.04	1.28	0.097	0.016	0.113	4	15	19	24.29	1.08	5.97	1.85	0.03	1.88
1% CaCl solution	1.28	0.04	1.32	0.113	0.016	0.130	7	14	21	16.19	1.16	6.17	0.90	0.11	1.01
1% MgClj solution	1.27	0.11	1.38	0.109	0.045	0.154	elev	29	40	9.94	1.54	3.85	0.17	0.47	0.64
10% polyethylene glycol solution	1.35	0.07	1.42	0.142	0.028	0.170	8	36	44	17.71	0.79	3.86	1.08	-0.25	0.83
3% phyto-RK starch solution	1.29	0.06	1.35	0.117	0.024	0.142	32	50	82	3.67	0.49	1.73	-0.57	-0.54	-1.10
Gammaxan xanthan gum 0.5% solution	1.33	0.05	1.38	0.134	0.020	0.154	24	41	65	5.57	0.49	2.37	-0.35	-0.53	-0.87
Argillite															

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Water	1.20	0.03	1.23	0.079	0.012	0.091	25	38	63	3.17	0.31	1.45			
10% NaCl solution	1.14	0.04	1.18	0.055	0.016	0.071	5	19	24	11.03	0.86	2.98	0.29	-0.18	0.11
5% solution of KCl	1.10	0.02	1.12	0.038	0.010	0.048	2	18	20	19.01	0.53	2.38	1.23	-0.49	0.74
5% p- pNH_4C	1.15	0.02	1.17	0.060	0.008	0.067	4	18	22	14.88	0.44	3.07	0.75	-0.58	0.17
1% solution $_2$	1.12	0.02	1.14	0.048	0.008	0.056	5	18	23	9.52	0.44	2.42	0.12	-0.58	-0.46
1% MgCl solution	1.13	0.05	1.18	0.051	0.021	0.072	10	28	38	5.13	0.75	1.90	-0.40	-0.29	-0.68
10% polyethylene glycol solution	1.15	0.08	1.20	0.060	0.020	0.079	12	43	55	4.96	0.46	1.44	-0.42	-0.56	-0.98
3% phyto-RK starch solution	1.10	0.05	1.15	0.040	0.020	0.060	26	46	72	1.53	0.43	0.83	-0.82	-0.59	-1.41
Gammaxan xanthan gum 0.5% solution	1.11	0.06	1.17	0.044	0.024	0.067	18	42	60	2.43	0.57	1.12	-0.72	-0.46	-1.17

Note: *Ki'*, K_2', g', *a>'*, C_{and}' - indicators of swelling in the first stage; *Ki''*, K_2'', g'', *co''*, C_{and}'' - indicators of swelling in the second stage.

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