Multidisciplinary Journal of Science and Technology
ISSN: 2582-4686
Impact factor: 8.848
SJIF 2021-3.261
Volume-2, Issue-2 2022

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

Biopolymer-clay in the system mutually effect processes complexity and less information to have that it was due to clay phase dispersion inhibitors choose, basically, dirt solutions for the work of developed reagents known from the list used without empirical method made increases. In Russia, there are a lot of polysaccharides in the regions and abroad.

Rescheduled research based on the retarding polysaccharide drilling fluid composition (Table 5) and the preparation and use of technology work released drilling fluid linear did not happen indicators p and n and many cases of conventional cutting at speed is determined . suitable respectively drilling pipe and ring If the zenith of the angles values from 45-65 ° if increasing , slide down at the speed of drilling fluid sticky function of the well shallow from the sections of the trail in transport an important role is played by Foreigner authors in his opinion according to , horizontal wells indicator VLSS to appreciate to be at least 21,000 imp/s you need

Table 5

technological parameters and retarding polysaccharide drilling fluid composition

Difficult	R* 3 kg/m	UV, r	pv , MPa	bottom , dPa	SNS, dPa	contribution added by cps	pH	PF, Jr.	Pr / Pa

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new solution (SR): 0.2% Soncid 8103 + 3% Phyto PC + + 0.5% Gammaxan + 0.1% NGL mineralized solution (MP): 0% NaCl + 1.2% $CaCl_3$ + + 2.56% $MgCl_2$ X 6H_2O + 5% KC1 PR: MR = 1:1 + 5% Carbonate weight + + 0.5% lubricant oils + 3% polyglycol	1135	25	10.0	46	15/20	4100	9.09	4.9	0.597 0.447
new Solution (PR): 0.2% Soncid 8103+3% Phyto RK + + 0.6% Gammaksan mineralized solution (MR): 8%MaC1+ 1.2%$CaC1_{2+}$ + 2.56% $MgCl_2$ x 6H_2O + 5% KC1 PR: MP = 1:1 + 5% Carbonate weight + 0.5% lubricating oil + 3% polyglycol	1120	26.5	12.0	50	18/26	4500	6.60	4.6	0.616 0.459
new Solution (PR): 0.2% Soncid 8103 + 3% Phyto RK + + 0.7% Gammaksan mineralized solution (MR): 10% NaCl + 1.2% $CaCl_{2+}$ + 2.56 % $MgCl_{2x}$ 6H_2O + 5% COP! PR: MP = 1:1 + 5% Carbonate weight + 0.5% lubricating oil + 3% polyglycol	1140	thirty	13.0	65	18/26	10000	6.72	5.5	0.576 0.492

If the inhibitory polysaccharide drilling fluid transport ability to increase, as well as other technological parameters to change necessary if yes then it again work need - structural chemical reagents concentration change one separately in the case of drilling fluid with processing to give a method justification for mathematicians in the model expressed by this system behavior about to imagination have to be need

B stress fluid control function to do the algorithm work The output principle is shown.

Chemical kinetics problem optimization extreme problems to the class includes them solution in the process two approach is The first is the process of learning mechanism and after its theory to create Kinetic reaction scheme in the development exactly as the state is observed . The second approach is an experimental extreme problem event mechanism about full information to have not happened without a decision being made. This drilling fluids content design and optimization approach is used.

So So What If dependencies theoretical from considerations come came out If they are approximately simple linear Not It happened differential equations system How expression can If dependencies experimental research on basis if , then parametric addiction assume will done (many polynomial regression drilling liquids characteristics mathematician model build For is used).

polysaccharide washing liquids parameters technological and geological factors effect learning The results of the mathematician model in making the following assumption made to increase the possibility

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gives:

1) layer water Login When speech goes to the surface coming solutions mineralization, from dilution except, decision technological options significant Effect Not shows;

2) drilling liquid high Good quality bactericide with care enough enzymatic stability keeps and biodegradable Effect significant not

3) polymer reagents adsorption, mechanical destruction, biodegradation such How processes Effect only stabilizer and structurant effective concentrations in decline manifestation will be

4) in the sea, a well to build a high step due to an important role does not play

Higher All assumptions check received without , next factors variable indicators How Adoption will be :

- Phyto-RK starch concentration (% by mass),
- Gammaxan from biopolymer concentration (% by weight) ,
- general hard substances quantity (kg / m ^{3}),
- colloid phases composition (kg / m ^{3}),
- temperature (°C).

Content optimization and drilling fluid control functions to do for immediately and ensure the regression of the problem is established and the solution is made . Immediately the task is solving the characteristics of a mathematician model to construct , that is, experience based on the following regression equation to determine the coefficients (Table 6):

$Y , = + b_{}_{l} X_{t} + b_{2l} X_{2} + b_{3t} X_{3} + b_{4i} x_{4} + b_{3l} X_{3} + b X , X_{2} + b_{m} X_{} X_{3} + b_{X4l} X_{x} X_{4} + + b_{x ii} X_{x} X_{5} + b_{23l} X_{2} X_{3} + b_{24i} X_{2} X_{4} + b_{25i} X_{2} X_{s} + b_{34i} X_{3} X_{4} + b_{3St} X_{3} X_{5} + b_{45i} X_{4} X_{c} + AX + b ^+ b_{33l} X^{2}_{3} + b_{44i} X^{2}_{4} + b_{S5i} X^{2}$, in which *bi* ,- regression equation required coefficients ;

hj ... xs - experience during changed factors (independent variables);

Y specified function .

Mathematician models adequacy check For maintain in points one row repeated experience (Table 7).

Table 6 -

Regression Equation Coefficients

Index	rotating viscometer indicators				HC	SNS-Yusek	SNS - Yumin	PF
	fbu	fzoo	FSO	e>3				
Yes	45.667	32.350	20.581	6.701	41.309	36.443	51.545	9892
b.	4590	3.011	1.375	-0.177	4.255	-0.507	-1.24	-1041
b_{2}	10.711	8.801	6.360	2.752	11.923	13.416	18.160	-0.333
b_{3}	2132	1273	0.652	0.108	0.870	0.609	1600	-0.384
'<	8119	6139	4161	1534	7000	5303	6901	1605
b_{5}	-6074	-4020	-1927	-0.469	-6773	-1814	-3208	2932
b_{12}	0.020	0.024	-0.022	-0.252	1552	-1283	-2144	0.310
33	0.331	0.182	0.088	-0.104	0.691	-0.609	1354	-0.159
E14	1908	1269	0.926	0.301	2931	1240	1069	-0.413
13	-0.670	-0.389	-0.060	0.050	-1263	-0.122	-0.302	0.175
23	-0.677	-0.445	-0.334	-0.201	-1.015	-1000	-1711	-0.122
b_{24}	1966	1630	1227	0.478	4278	1341	0.349	-0.323
23rd	-0.124	-0.224	0.071	-0.033	-2582	0.008	0.223	-0.026
b_{34}	0.361	0.360	0.37	0.062	0.651	0.333	0.321	0.058

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33	-0.579	-0.332	-0.154	-0.067	-1230	-0.241	-0.569	-0.143
b4s	-1251	-0.732	-0.244	-0.088	-1977	-0.052	0.308	0.730
bti	0.068	0.327	0.082	0.565	0.285	0.001	0.001	0.023
b 22	0.705	0.922	0.059	-0.001	0.111	-0.004	1000	-0.001
b 33	0.302	0.032	0.007	0.094	0.773	0.966	0.011	0.022
B44	1354	1020	0.852	0.121	0.870	-0.002	0.411	-0.001
b 55	-0.667	0.048	0.002	-0.002	-0.134	-0.001	-0.217	0.460

parameters mathematician models suitability check

Indicator	fbu	fzoo	FSO	fZ	HC	sns - Yusek	sns - Yumin	PF
F	0.087	0.091	0.131	0.236	1341	0.187	0.240	0.331
F crit~2.2	adequate	adequate	adequate	adequate	adequate	adequate	adequate	adequate

used books list

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