Synergy Technologies

Resident of the Industrial Park
Located in the Technopolis
"Himgrad"

Complex Approach to the Application of Technologies - An Effective Tool for Increasing Oil and Gas Production in Field Development and Operation

Kazan - 2024

LLC "SYNERGY TECHNOLOGIES"

- Resident of Technopolis “HIMGRAD” since 2011
- Participant in the machine-building cluster of the Republic of Tatarstan.
- Our own scientific laboratory develops chemical compositions fully adapted to the conditions of the Client's application.
- Efficient production system allows for the quality manufacturing of the required amount of reagent in the shortest possible time.
- Scientific and technical personnel of the laboratory carry out pilot-industrial implementation, agreed with the Client.
- The company provides technological support at all stages of technology implementation.
- **Since 2011:**

- over 150 wells processed
- Average increase in oil and gas production by more than 60%.
- Over 70 clients from Russia and CIS countries.

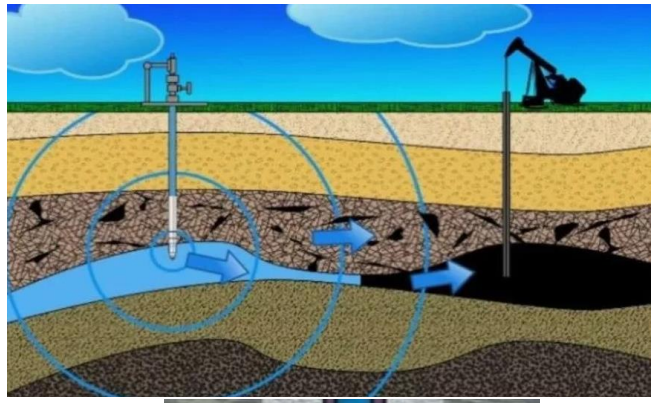


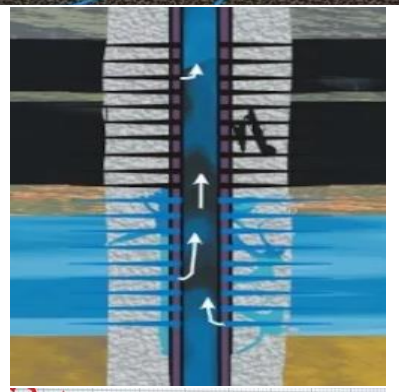
Synergy Technologies LLC
Business Policy based on utilization of domestic raw materials

- Developed chemical compositions consist of domestic components
- The company's policy is based on the implementation and application of Russian-made raw materials
- Replacement of imported technologies with Russian analogues

Main Problems in the Development of Oil and Gas Fields:

- Change in reserve structure (reduction of active reserves)
- Decrease of well debit
- Increase in water cut in produced products
- Decrease in reservoir pressure
- Decrease in well productivity





Stages of Technology Implementation:

- Study of technical and geological information and field data of the well
- Selection of technology and laboratory simulation of in-well processes
- Design and development of injection technology
- Prediction of technology effectiveness
- Preparation of the project for production works
- Engineering and technological support of works
- Analysis of the effectiveness of completed works

Effective Technology Implementation

Technologies for Repair-and-Isolation-Works:

- Inverted Emulsion Emulsifier "Eximol“
- Silicon-Organic Tamponage Composition "PLAST-ST“
- Isolation Composition "SilonWell“
- Organosilicate Composition "Polisom“
- Microcement "SoldStone“
- Isolation Composition "Sinblock“
- Viscoelastic Composition "Maxan“
- Liquid Packer "SinPak“
- Tamponage Composition “Tascon”

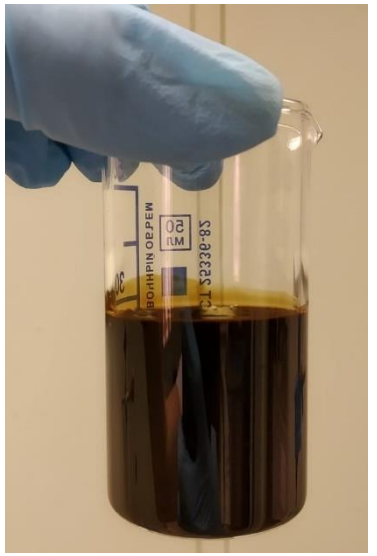
Tasks of Water Shutoff and Repair-and-Isolation-Works:

Elimination of behind-casing circulation, WS (water shutoff)	Elimination of losses and selective water isolation in the open productive horizontal section	Adjusting the intake capacity profile of injection wells	Elimination of inter-casing pressure
Technology proved its effectiveness with joint application of PLAST-ST/Polisom/Polisom-Poly followed by reinforcement with special isolation material Silon-Well	Complex of tasks in the extended horizontal open section is solved by combining injections of two reagents "Unisolt" (hydrocarbon-based composition) and "Eximol" (invert emulsion emulsifier)	Efficiency of technology is attributed to sequential injection of selective blocking compositions forming gels with predetermined rheological properties. The anomalous coefficients of pseudoplastic gels are selected within the framework of the technical task.	Application of SilonWell SIM followed by reinforcement with plugging materials "SolidStone". Combining of the technologies results in maximum repair effect while reducing costs on the irrational use of expensive reagents

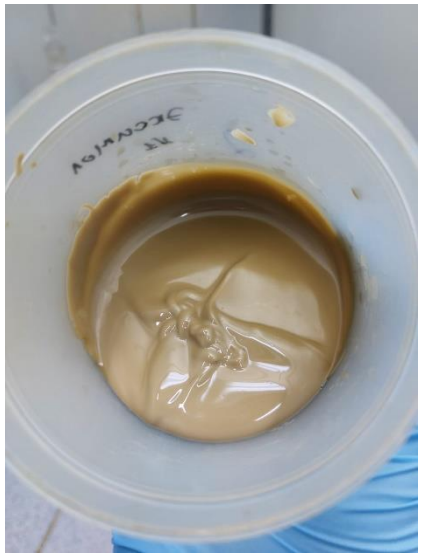
Inverted Emulsion Emulsifier “Eximol”

Emuslifier “Eximol” is designed for the preparation of stable inverted emulsions in technologies for selective temporary water isolation during well killing, selective temporary water shutoff during adjustment of the intake capacity profile of injection wells or for preparing hydrocarbon-based drilling fluids. Contains nonionic lipophilic surfactants that stabilize the emulsion by concentrating at the water-hydrocarbon interface. Reverse emulsions based on Eximol emulsifier are characterized by low water loss due to the location of the water layer in the internal phase; mild impact on the formation and selectivity, as the system liquefies upon contact with oil and increases in viscosity upon interaction with formation water.

Physical appearance of the emulsifier “Eximol”



Physical appearance of the emulsion based on the “Eximol” emulsifier



Areas of application:

- Standalone well killing fluid
- Well killing fluid in combination with a blocking composition
- Selective "soft" water isolation - thickens upon contact with water and liquefies upon contact with hydrocarbons
- To reduce injectivity during repair-and-isolation-works
- To preserve collective properties during killing using salt compositions
- As a diverter during acid treatments

Main Properties:

- High viscosity of emulsions;
- Ability to adjust viscosity and density over a wide range;
- Minimal water loss

Filtration of the emulsion based on the “Eximol” emulsifier through the strainer – sediment is not present

Silicon-Organic Plugging Composition "PLAST-ST"

Silicon-Organic Plugging Composition "PLAST-ST“ is applied for the selective water isolation during works on oil and gas wells. “PLAST-ST” – is a system with low initial viscosity (2-5 cPs), its is designed to block low-permeability collection reservoirs.

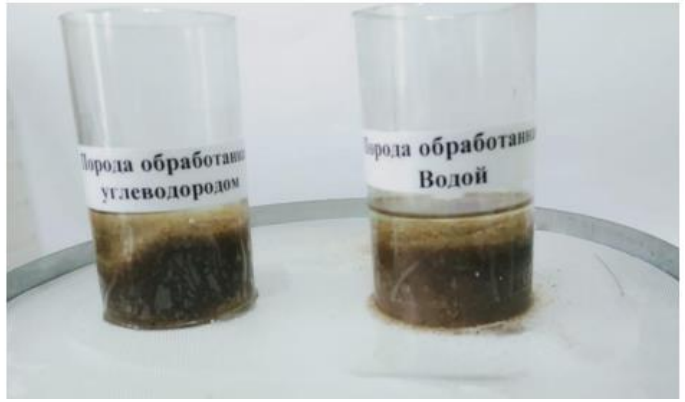
- **Main characteristics of PLAST-ST**
- Selectivity of solidifying under the influence of water and selectivity of penetration into the watered interval of the formation.
- Cured product is resistant to hydrogen sulfide aggression, saline solutions and acids.
- Full-volume curing (complete pore blockage) and high chemical adhesion to the rock provide a high insulating effect and the ability to withstand high depressions on the formation (more than 10 MPa)

Resistance to depressions in the formation, MPa	**Up to 50**
Viscosity of working solutions, cPs	1-3
Chemical destruction potential	Dissolved in alkali solutions
Permeability recovery coefficient, %	>90
Application temperature, °C	under 200

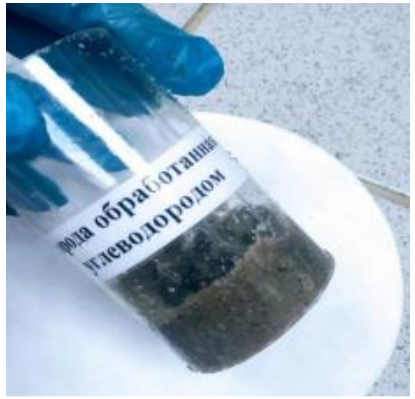
Physical appearance of the composition PLAST-ST

Selectivity of effect of composition “PLAST-ST” with water and hydrocarbon

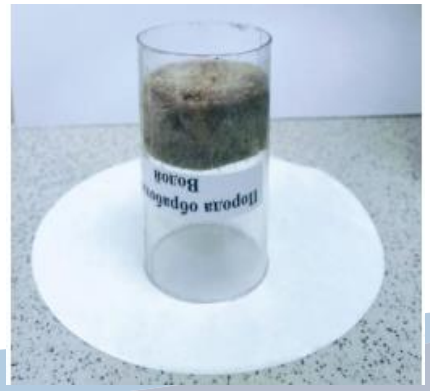
“PLAST-ST” poured onto mountain rock models treated with suitable fluids



Upon contact with hydrocarbon-treated rock, “PLAST-ST” remains liquid



Upon contact with water filled rock, “PLAST-ST” gains viscosity



Special Isolation Composition "SilonWell"

Special isolation composition “SilonWell” is a balanced organosilicate solutions-based composition, designed for repair-and-isolation-works.

Areas of application of SIM “SilonWell”:

- elimination of behind-casing flows in the annulus;
- Isolation of waterflow in production wells situated inside formations with low injectivity;
- Elimination of inter-casing pressures.

Main properties of SIM “SilonWell”:

- Has low viscosity (2-3 cPs)
- “SilonWell”-based gel in the formation can withstand the pressure up to 20.0 MPa. Temperature range of sol application is from 15 to 150 °C. Also, (unlike polymer systems) – SIM “SilonWell” is absolutely fully resistant to the temperatures and does not decay over time;
- Possibility of deblocking with alkaline solution

Particle size, nm	**40**
Physical Appearance	Opalescent liquid
Density at 20℃, g/l	1190-1210
pH (5% water suspension)	9,0-10,5

Organosilicate composition “POLISOM”

The reagent is based on organosilicates, natrium and modifying additives. “POLISOM” is used in water isolation technologies in production and injection wells. Reagent is characterized by full-volume curing and low shrinkage over time.

Cured structure is fully resistant to acid and saline solutions. Reagent can be used for selective treatments in the presence of formation water with divalent ions (calcium and magnesium), in contact with which, a strong sediment is formed.

“POLISOM” main properties:

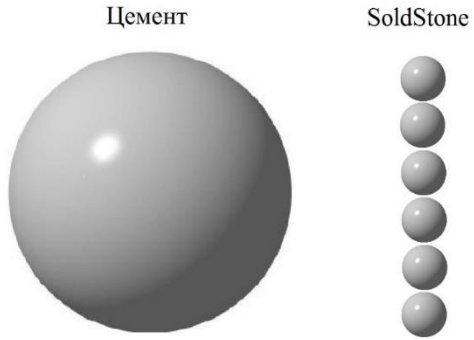
- Resistance to depressions over 10 MPa
- High durability and thermostability below 190^0C
- Low viscosity – 1-3 cPs
- Resistance to salts and acids
- Possibility of deblockage with alkaline solution

“POLISOM” is used in injection wells for:

- Leveling of displacement front;
- Profile leveling of injection wells;
- Elimination of cone formation;
- Solutions of non-trivial problems of eliminating zones with durable screen forming.

Special Tamponage Material STM “SoldStone”

”SoldStone” – sulphoresistant tamponage fine-grained portlandcement used for repair-and-isolation-works.
Concentration of particles sized 3 and 5 μm no less than 95%.



Advantages:

- Suspension possesses high fluidity, compared even to water liquidity, even with minimal W/C (0.7);
- Suspensions’s penetrating ability is compared to non-dispersing binder systems (penetrates into microgaps, microcracks and low-permeability formations);
- Is a thixotropic material (increased viscosity at rest and descread in motion).
- Cement stone also has adequate mechanical durability with low density, corrosion resistance and long service life during well operation.
- Possibility of use in the form of two technologies – aqueous suspension and hydrocarbon suspension. When used in hydrocarbon suspension it can be used for selective waterproofing – curing occurs only in water-filled area of the formation.

Isolation Composition “Sinblock” A

“Sinblock” represents a dry polysaccharides based mixture with the addition of cellulose microfibers, the average size of which is in the range of 50-120 μm

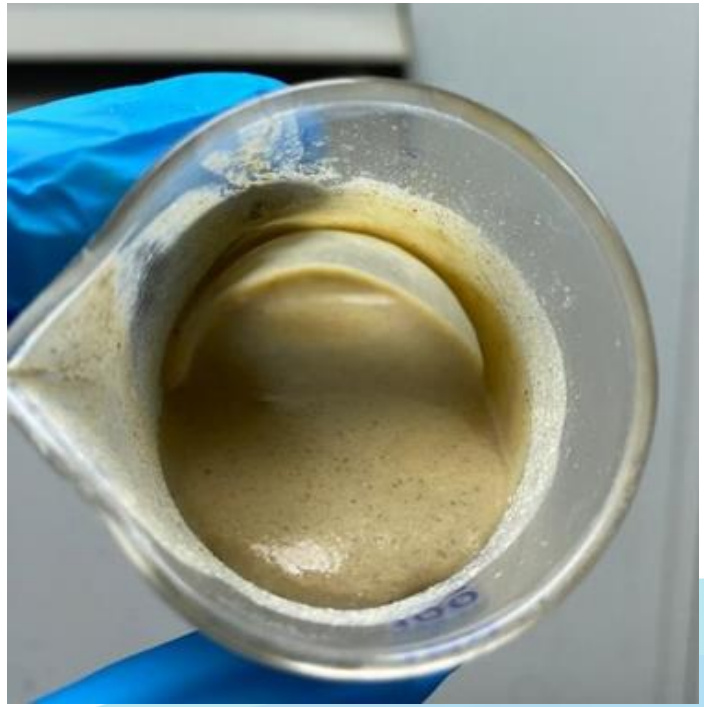
“Sinblock is recommended for use in heterogenous porous, fractured-porous terrigenous, fractured-porous and fractured-porous-cavernous carbonate collection reservoirs, characterized by layer-by-layer and zonal heterogeneity.

Working form of the viscoelastic composition “Sinblock is from 3% to 10%, depending on the absorption intensity of the working well.

Deconstruction is performed with hydrochloric acid treatment.

Is compatible with waters of any mineralization.

Physical appearance 5%
VEC “Sinblock”



Technical characteristics:

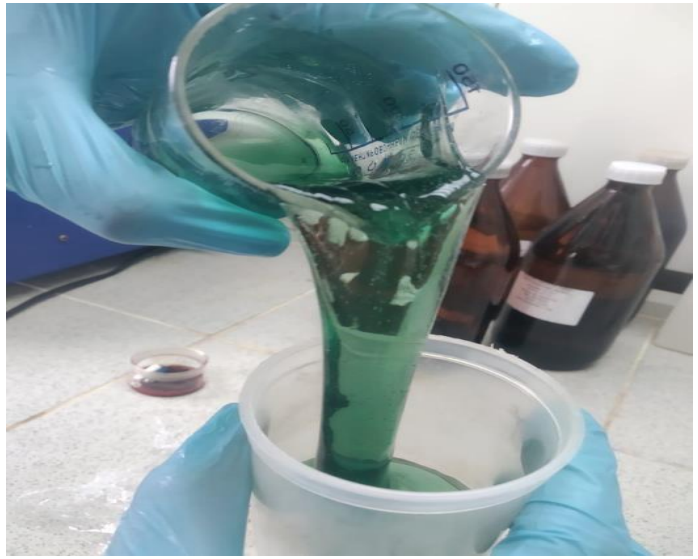
Physical appearance	Powder or white-to-grey granules
Mass moisture content, %, not more	10
10% solution filtration rate, at 100 psi, ml not mroe	5

Composition “Maxan” A

Composition “Maxan” A represents a polymer-based system. The composition possesses time regulated gelation, high durability, adhesive and isolating effect.
Depending on geological conditions of wells, a reinforcing filler agent is selected, according to fractions.

Primary Properties:

- Regulated initial viscosity of the system;
- Working (stratal) temperature range is up to 80° C;
- Resistance to fresh and mineralized water;
- Regulated gel formation time



Working form of the viscoelastic composition “Maxan” is from 5% to 10%, depending on the absorbtion intensity of the working well. Preparation of working VEC – polymer of the composition “Maxan” is mixed with technical water for injection of the composition through the pipe. Upon contact with technical water “Maxan” forms a viscous-plastic mass for injecting into the well. Upon further interaction inside the well with formation water, composition forms a polymer blocking compound.
Composition loading is performed on site. Ready composition is fed into the well through the pipe. After interaction with the formation water, the composition increases rheological properties.

Liquid Packer “SinPak”

The composition is a durable cross-linked polysaccharide gel, designed to eliminate in the construction and repair of oil and gas wells: water insulation in the open bore of the horizontal section of the well; temporary isolation interval for the duration of the repair-and-isolation works.
The composition after preparation has a moving aggregate condition, which allows it to be pumped through the pipes. Cross-linked gel has good durability properties, withstanding heavy loads.

Main Properties:

- Slow gelling, which allows pumping during necessary intervals;
- High durability properties;
- Bestroyed during drilling and treatment with acid-free destructor KAP-1;
- Application temperature up to 100°C.

Technical characteristics of the composition

Physical appearance	**Powder of white-to-brownish color**
Mass content of dry residue, %, no less than	**85**
Bulk density, g/cm3, within	**0,7 – 1,8**
Hydrogen ion activity, pH, within	**2,5 - 5**

Physical appearance of “SinPak” after preparation

Physical appearance after relieving mechanical pressure

Physical appearance of the composition right after submergence under water and after thermostating under 50°C (on the right)in 2 hrs.

Tamponage Composition “Taskon”

Tamponage composition «Tascon» - balanced composition based on modified polymer compounds. The composition of «Tascon» is a two-component system of epoxy resin and specially selected hardeners for different temperature intervals and ranges.

Resin Properties:

- Resistance to chemical aggression (acids, alkalines, highlymineralized waters)
- High mechanical durability
- High adhesion to rock and metal

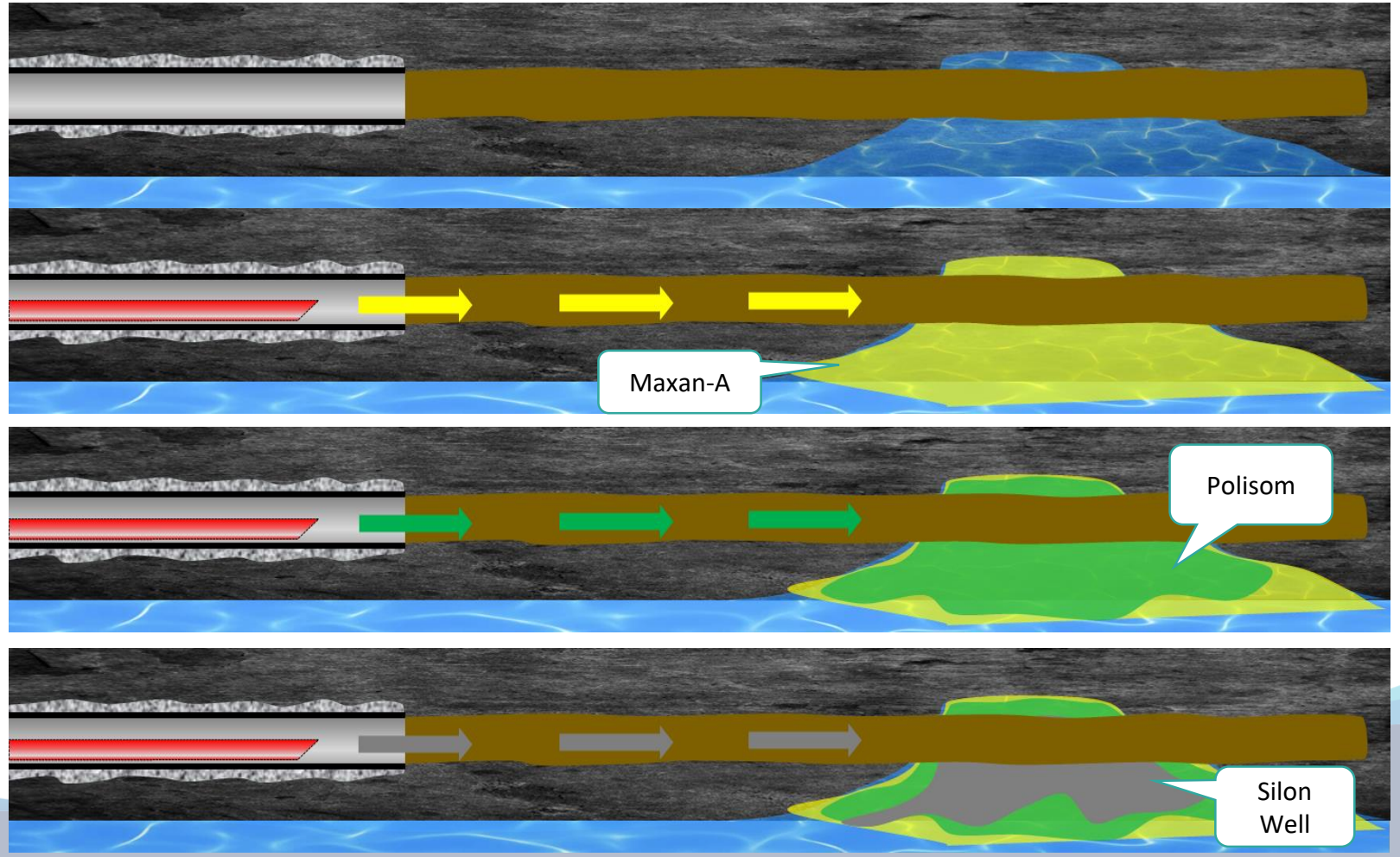
Areas of application of resin:

- Elimination of inter-casing pressures,
- Elimination of over-casing flows withing the annulus,
- Insulation of highly permeable and weak wetted rocks,
- Restoration of non-hermeticity of the service casing,
- Reinforcing material for the injection of gel systems during the water isolation

Physical appearance of the tamponage composition ”Taskon”

Example of selective flow isolation of the well #5 of Orenburg NGKM

Open shaft 640 m, horizontal well.
Task: to carry out waterproofing operations using selective compositions.



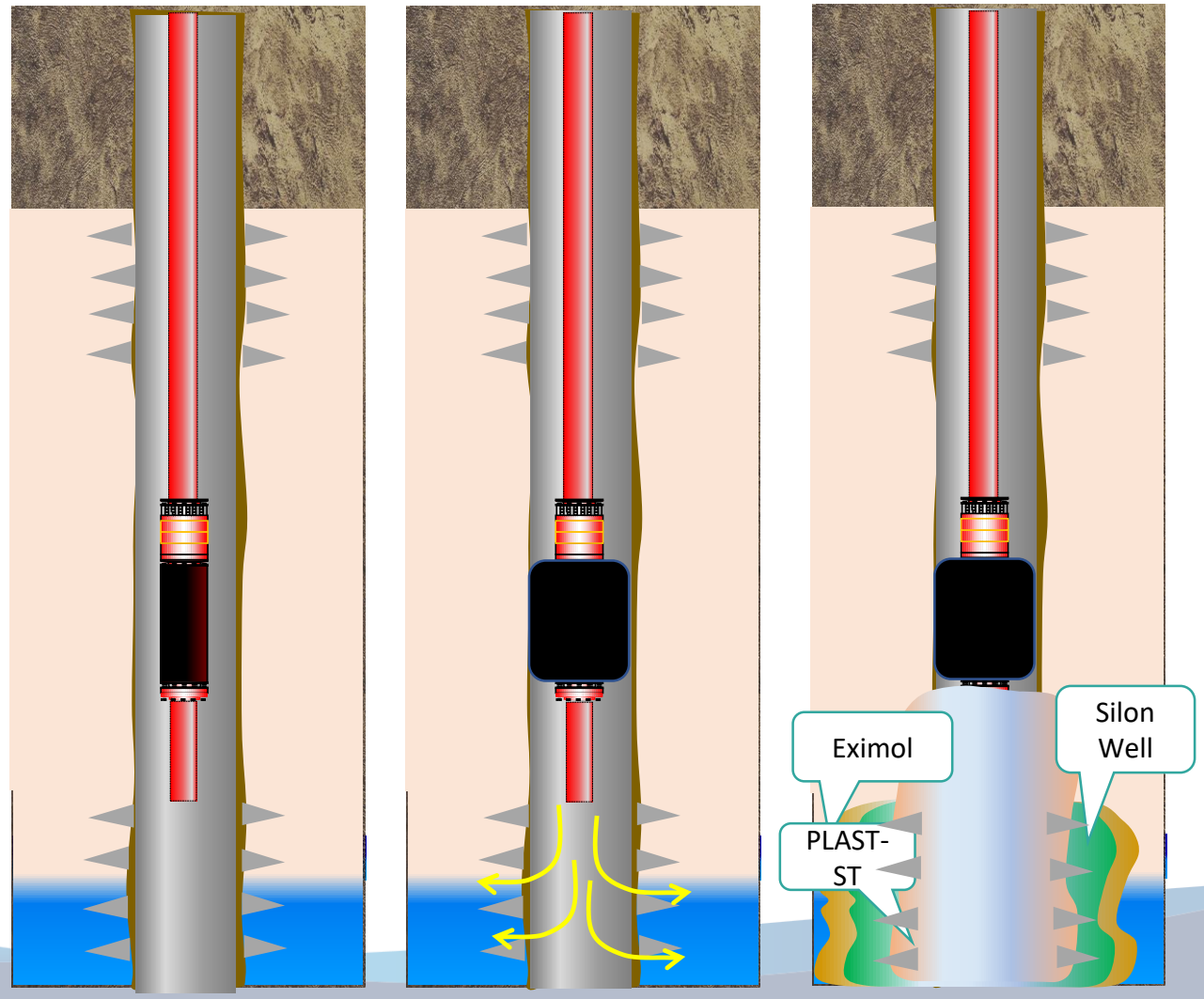
Initial reservoir pressure	18,86 Mpa
Current blockage	1950м
Drilled blockage	2529м
Service casing	1920м D-177,8мм.
Maximum curvature	89,5°C

Sequence of works:

1. Injection of VE system “Maxan-A” for reducing intake capacity.
2. Injection of organosilicate composition «Polisom» to isolate the watered interval.
3. Subsequent injection of isolating composition “SilonWell” and solution of $CaCl_2$ for reinforcing the “Polisom”.

The result: the watered interval is insulated, the total water level of the extracted products is reduced.

An example of water isolation works with the use of organosilicon composition “PLAST-ST” and installation of “Coiltubing” at the well #1 of Gubkin GM



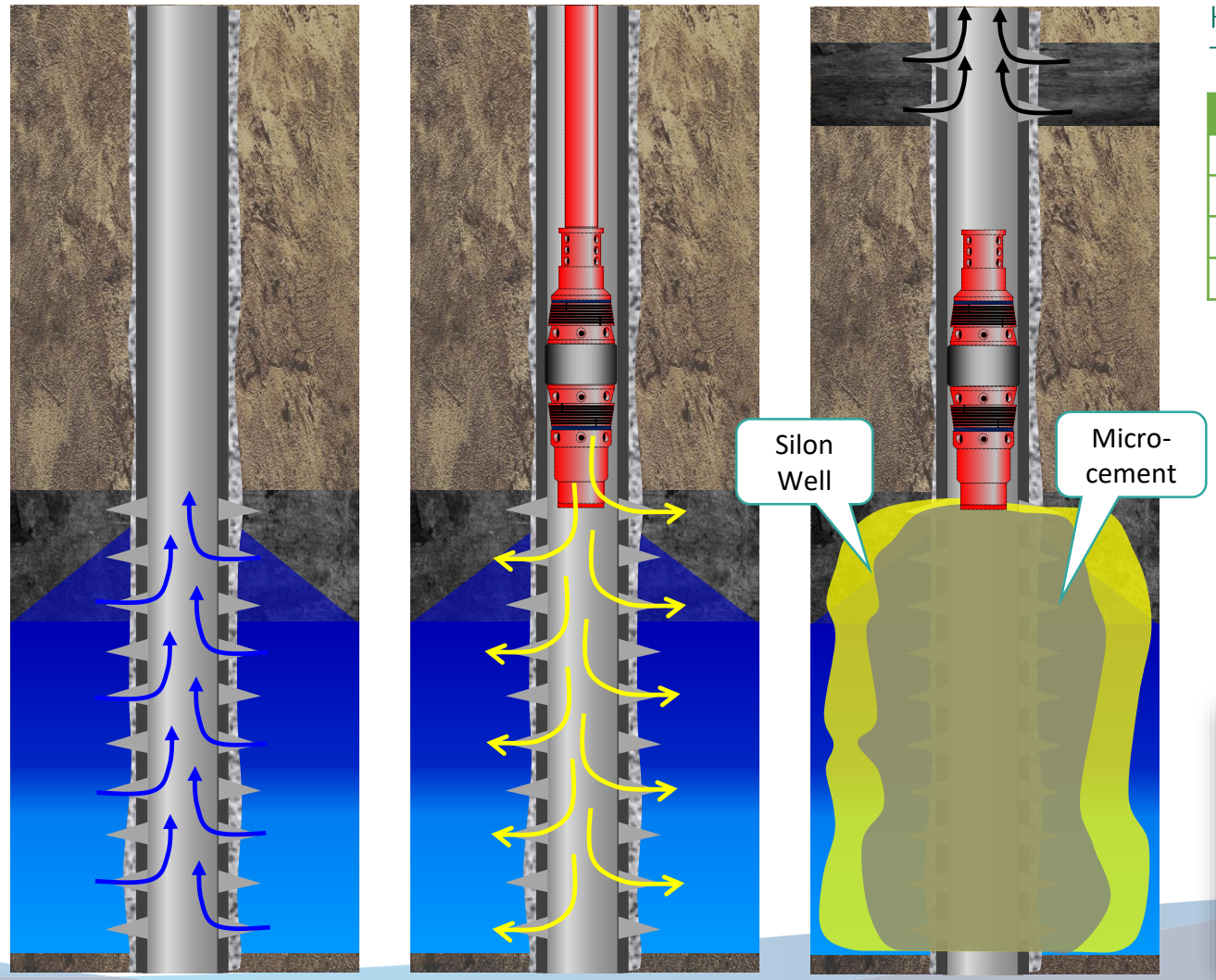
Initial reservoir Pressure	4,8 Mpa
Current blockage	864 м
Initial reservoir temperature	19°C
Current Gas-Water contact	852 м
Perforation intervals	832-841 м 848-854 м
Water debit	100м3/day

The water isolation works were carried out in the following sequence:

1. Descent and packaging of inflatable packer RCP to the 845m depth
2. Inhection of emulsion “Eximol” in a volume of 20м3 for pushing the water
3. Injection of SIM “SilonWell” in the volume of 10м3 to create a waterproof screen
4. Injection of organosilicate composition “PLAST-ST” for reinforcement

Result: 8% reduction in total product water cut, increased gas debit

An example of water isolation works at the well #1 of Pribrezhniy NGKM



High temperature well – temperature over 100°C.
Terrigenous reservoir.

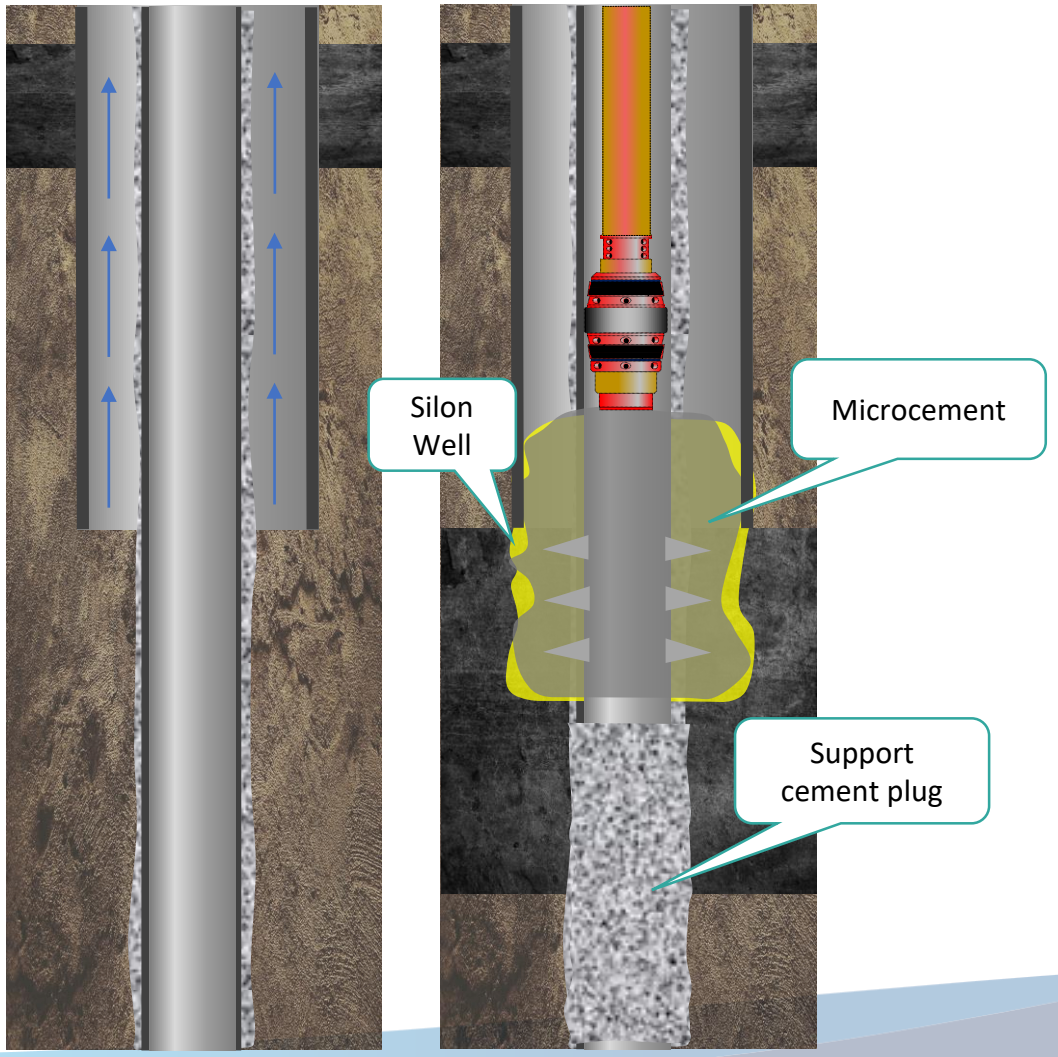
Initial reservoir Pressure	30,8 Mpa
Artificial blockage	3060м
Drilled blockage	3056м
Service Casing	3215м D-139,7мм.
Perforation intervals	3052-3057 м

Water isolation works were performed in this order:

1. Installment of packer RPK-106T to the depth of 3010m to isolate productive formation.
2. Isolation of water-filled interval with composition “SilonWell” in the volume of 6м^3.
3. Reinforcement with microcement

Result: water-filled formation is isolated, decrease in 7% of overall final product water cut.

An example of elimination on inter-casing pressure at Markovsky GKM



Initial reservoir Pressure	2,8 MPa
Current blockage	411м
Special perforation intervals	393-395 м
inter-casing pressure	13 atm

The work of elimination of inter-casing pressure were carried out in the following order::

1. Creation of special perforations 393-395м
2. Installment of drillable packer RPK-112 to the depth of 378m for the protection of the service casing from high pressures
3. Elimination of inter-flow from gas-filled interval with the composition “SilonWell”, with further reinforcement with microcement by the way of injecting into the interval of special perforations 393-395m

The result: inter-casing pressure eliminated, pressure at the mouth is 0 atm.

Table of applicability of compositions during RIW and WIW.

composition	Product form	Area of application during RIW and WIW								Characteristics		
		High Volume injection	Profile Injectivity leveling	Well Liquid-ation	Non-herm of e/k And casing	Over-casing flows	Liquid. of absorbtion	Liquid. of plantar waters	Liquid. of Inter-cas. pressure	Reaction time In the well	Destructor	Temperature Of application
PLAST_ST	liquid				+	+		+		6-8 hours	15-30% alkaline solution	<100 C
PLAST_ST	dry				+	+		+		from 4 hrs	15-30% alkaline solution	<100 C
Maxan-A	dry	+		+			+	+	+	from 4 hrs	destrcutor KAP-1	<100 C
Maxan VN	dry	+		+			+	+		1 hour	12-15% solution of hydrochloric acid	<100 C
SoldStone	dry			+	+	+		+		Cementing 60 hours	Mechanical deblockage	<120 C
Sintoksan	dry	+								from 1 hour	12-15% solution of hydrochloric acid	<100 C
SilonWell	liquid	+		+	+	+		+	+	6-8 hours	15-30% alkaline solution	<140 C
Polisom	liquid	+	+	+	+	+		+	+	6-8 hours	15-30% alkaline solution	<120 C
Polisom-poly	dry	+	+	+	+	+		+	+	Upon water contact	12-15% solution of hydrochloric acid	<100 C
Sinblock-A	dry	+	+			+		+		4 hours	12-15% solution of hydrochloric acid	<100 C
Sinpack	dry				+			+		From 12 hrs	destrcutor KAP-1	<100 C
Taskon	liquid				+	+			+	10-24 hrs	Mechanical deblockage	<80 C
Flok ST v. B	2-component composition		+				+			from 4 hrs	destrcutor KAP-1	<90 C
Flok ST “BS”	dry						+	+		Upon water contact	destrcutor KAP-1	<100 C

Compositions for well killing and preservation of productive formations

- **Blocking composition “UNISOLT”;**
- **Emulsion blocking composition “EXIMOL”;**
- **Salt composition “TITAN”;**
- **Polymer block-pack “FLOCK-ST”;**
- **Foam-Gel system “POLYFROS”;**
- **Hydrophobicator “GIDROSIL”.**



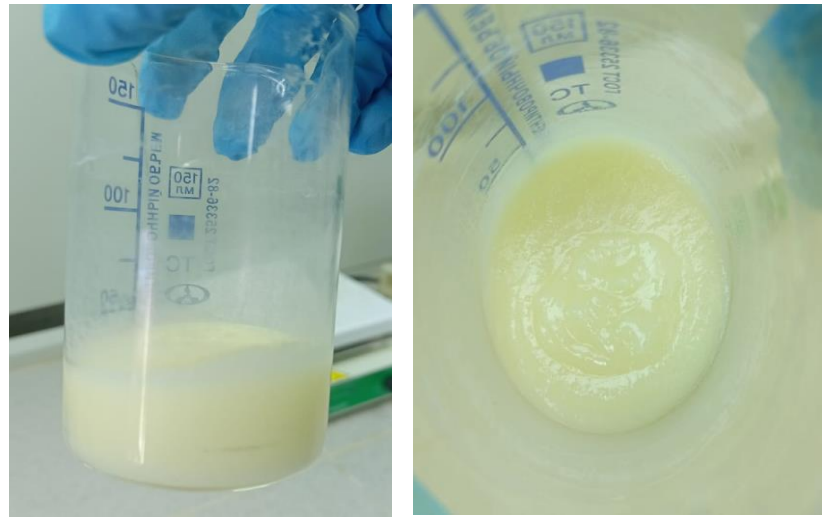

Hydrocarbon based blocking composition “UNISOLT”

Is a gel forming product based on a complex of organic compounds and additives for thickening a jamming hydrocarbon fluid and forming a non-filtering pseudoplastic mass for temporary filtration blocking. BC “UNISOLT” creates a strong colmating screen on the surface of the porous section of the formation and at the end of repair works at the well, provides full decolmation.

Areas of application:

- For temporary blocking the production area (implies the injection of the blocking compound into the formation with the elimination of absorption). At the same time, the well bore is filled with any technological fluid (inverted emulsion, technical water, salt damping fluid) and remains available for any capital works on the well.;
- During the repair works on the well with the aim of shutting of the intervals of the well with the help of installment of the blocking pack into the zone of filtration;
- During abnormally low formation pressures for the installment of the filtration screen and elimination of penetration of washing fluids into the productive intervals;
- During gas wells killing with subsequent easy development or their conservations.

Physical ppearance of the blocking composition “UNISOLT”



Appearance of filtration crust of the blocking composition “UNISOLT”

General quality idicators	Norm
Physical appearance	Oily liquid from light yellow to dark brown
Acid Number, Mg KOH per 1 g of product	No less than 110
Density, g/cm3	0,8 – 1,05

Inverted Emulsion Emulsifier “Eximol”

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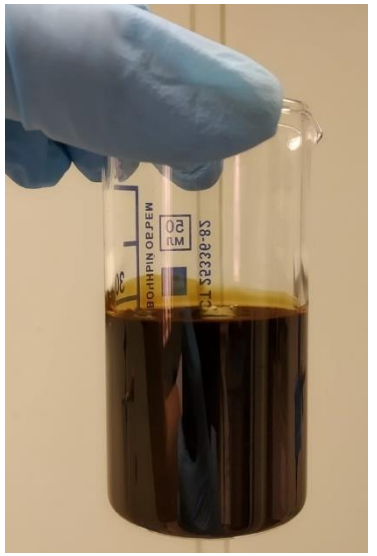
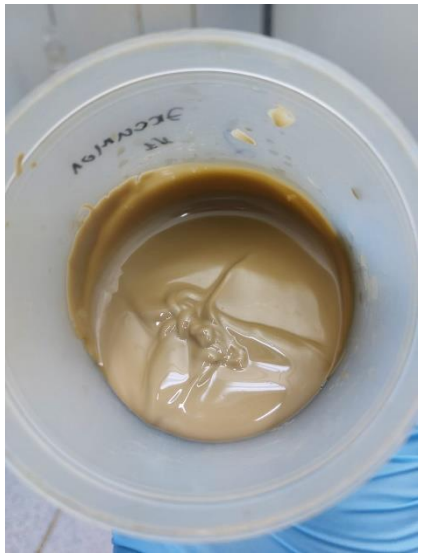
Physical appearance of the emulsifier “Eximol”



Physical appearance of the emulsion based on the “Eximol” emulsifier



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- To preserve collective properties during killing using salt compositions
- As a diverter during acid treatments

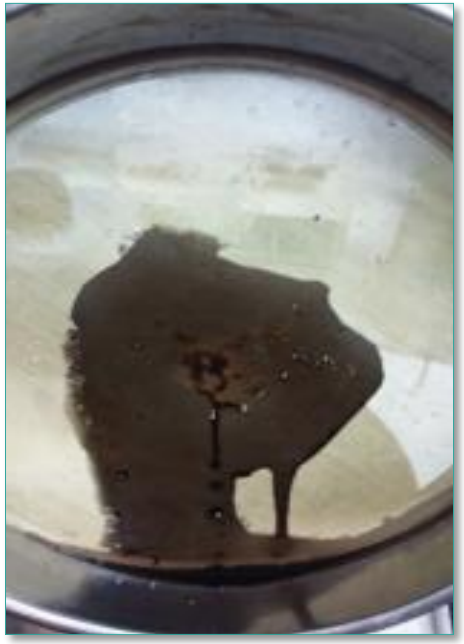
Main Properties:

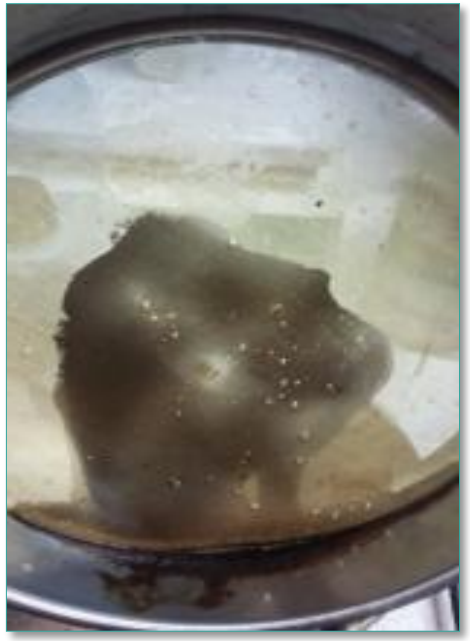
- High viscosity of emulsions;
- Ability to adjust viscosity and density over a wide range;
- Minimal water loss

Filtration of the emulsion based on the “Eximol” emulsifier through the strainer – sediment is not present

Complex application of the blocking composition “UNISOLT” and emulsifier “EXIMOL”

Task – a compatibility test of the blocking compositions “UNISOLT” and “EXIMOL” with each other and formation fluids.

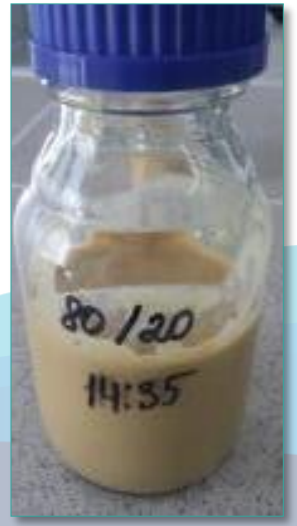




Hydrocarbon-based blocking composition with carbonate colmatant “UNISOLT”

Blocking emulsion “EXIMOL” of different concentration:

- 70% formation water – 30% hydrocarbon based emulsion polymer – viscosity 180 cPz;
- 80% formation water – 20% hydrocarbon based emulsion polymer – viscosity 253 cPz;



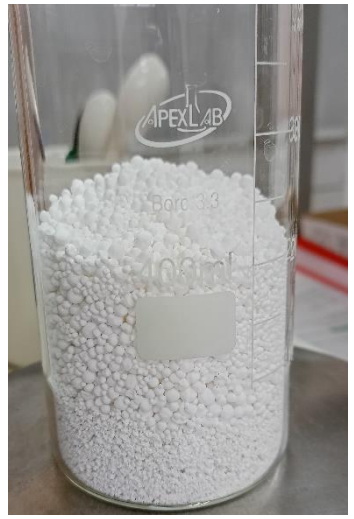
Conclusion: compounds “UNISOLT” and “EXIMOL” are completely compatible with teach other. They may be used together to create strong blocking packs during repair works.

Salt composition for the well jamming fluid preparation “TITAN”

Salt composition «Titan» is a balanced composition based on inorganic salts for the preparation of high density jamming fluids without solid phase.
Depending on the brand, one could obtain a density of up to 2.0 g/cm3.
The absence of solid jamming phase allows to perform gentle jamming with minimal effects on after repairs productivity of the well.
Salt compositions “TITAN” of brands A, B and C are balanced compositions based on calcium salts and modifying additives.
Salt compositions “TITAN” of brands D and E are balanced compositions based on zinc salts and modifying additives.

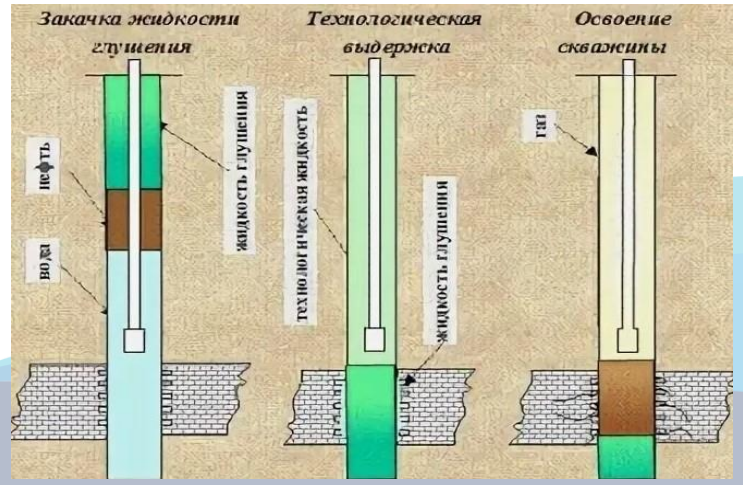
Main properties of salt composition “TITAN”:

- compatibility with jamming fluids based on other salt systems on homo- and hetero-component bases;
- Adjustable solution density in the range of 1000÷1900 kg/m^3;
- low corrosion activity;
- the possibility of repeated use of the jamming fluid and its further treatment for the purpose of additional weighting.



Physical appearance of the dry composition “TITAN”

Physical appearance of “TITAN” based jamming fluid



	“TITAN” brand A	“TITAN” brand B	“TITAN” brand C	“TITAN” brand D	“TITAN” brand E
Reagent based jamming fluids densities, g/cm^3	1,01-1,4	1,4-1,6	1,5-1,6	1,6-1,84	1,8-1,99

Polymer block-pack “FLOCK-ST”, brands A and B

The polymer blocking solution «FLOCK-ST» is a balanced system with the addition of carbonate colmatant, intended for use in wells with both abnormally low hydrostatic pressure, and abnormally high hydrostatic pressure, depositing itself on the walls of the well, prevents the absorption of jamming fluid into the formation. Depending on the permeability of the collector reservoirs, an acid-soluble colliant is selected by fraction. After jamming it is unblocked during well development.

Brand “A”

Brand “B”

Foam-Gel system “POLYFROS”

It is highly an optimized composition of biodegradable polymers whose functional groups possess a high reactivity to polyvalent ions. The reaction results in the formation of a strong transversely cross-linked structure («cross-linked» polymer) with a high molecular mass.

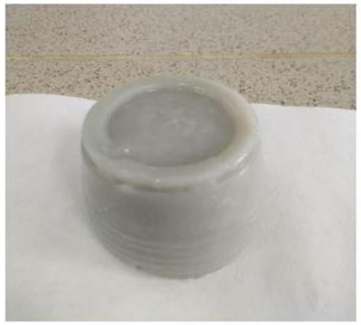
Advantages:

- Low density of the foam system. Calculated density of the finished foam system is 0,600 g/cm^3
- High initial viscosity values of the 2000-5000 mPa*s system are combined with a high degree of anomaly of the gel, reducing the viscosity of the system with increasing the shear rate - up to 50-150 mPa*s
- Possibility of gentle deblocking without negatively affecting the productive formations.

Physical appearance of the gel

Foamed up system

Cross-linked foam-gel system



Water-Swellable blocking polymer composition “MAXAN-VN”

TECHNOLOGY FEATURES:

- High water absorption of the composition (up to 10 parts of water per one part of the solution «MAXAN-VN»).
- It can withstand 18.0 MPa repression without filtering into the formation reservoir.
- Stability of at least 30 days at 125 ℃ from the moment of installation of the blocking screen.
- The blocking composition can be removed by inserting a destructor.
- Hydrocarbon suspension of the reagent «MAXAN-VN» is easily pumped by standard pumping units of type CA-320, SIN-35.
- The ease of preparation (adding the estimated amount of reagent to the hydrocarbon carrier - oil, diesel fuel, etc.).
- Stabilizing additives in the composition of «MAXAN-VN» allow to get a stable suspension, which substantially reduces the risks of an unplanned stop of the injection process
- All materials used in the manufacture of reagent are produced or available for purchase in the Russian Federation.
- Resistance to hydrogen sulfide.

Weighted composition “SINBARI”

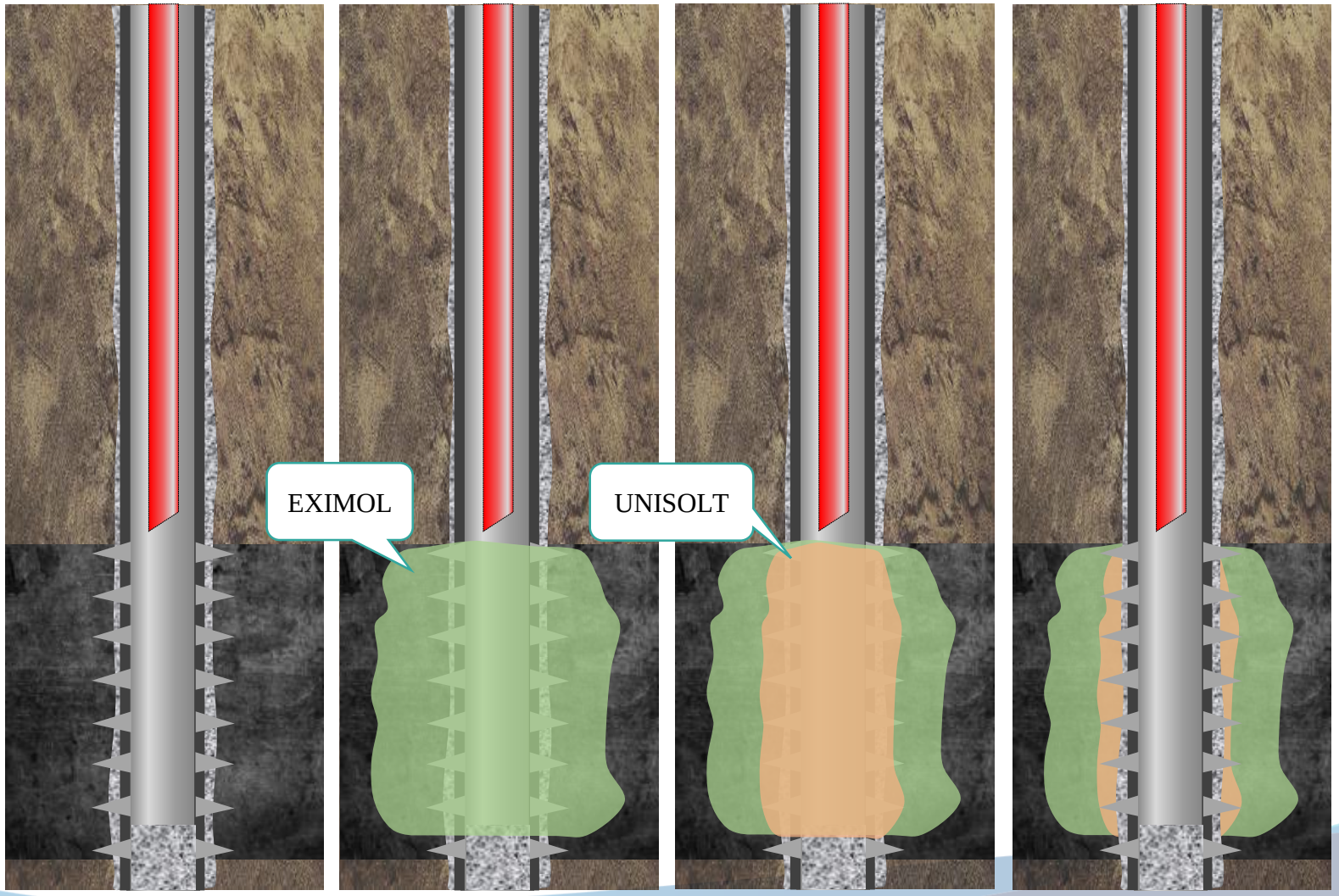
Weighted composition «Sinbari» - is a high density, barite-based balanced composition. Treatment with stabilizer reagents leads to the formation of a complex hydrophilic layer, as a result, the mutual repulsion of particles increases, which prevents the strengthening of solution structure and drastically reduces the thickening ability of «SINBARI». This makes it possible to inject a large amount of weighting agent into the solution while maintaining the structural and rheological indicators at the required level.

Primary Properties:

- Possibility of application at high temperatures;
- Possibility of injection a large amount of weighting agent into the solution while maintaining low viscosity from 100 mPa*s;;
- Possesses pseudoplastic properties, when increasing shear tension reduces viscosity by 10 times;
- Ability to regulate the density of the solution up to 2,5 g/cm^3;
- No corrosion aggressiveness;
- The presence of a complex of emulsifiers prevents sedimentation for a long time;

Physical appearance of the weighted composition “SINBARI”

An example of well jamming of Orenburg NGKM (“Gazprom Dobycha Orenburg”)



Initial reservoir pressure	10,85MPa
Artificial blockage	1942м
Drilled blockage	1950м
Service casing	0-1942м, D-139,7мм.
Perforation interval	1930-1950м
OCTG	D - 60мм. Do the depth of 1930м
Anomality coefficient	0,15

Order of works:

1. 10 m^3 of the emulsion «EXIMOL” was pumped into the pipe space during absorption with the closed annular.
2. 10 m^3 of the blocking composition “UNISOLT” with the addition of carbonate colmatant was pumped into the pipe space during absorption with the closed annular.
3. Pushed the blocking composition by injecting into the pipe 3,4 m^3 of tech. liquid, p = 1,0 g/cm^3.
4. Sealed the well. After a period of at least 6 hours, the level gauge was adjusted to the static level in the well, the residual pressure was released and the well was filled with a working solution according to hydrostatics.

Result: the well is jammed on first try without complications.

An example of well jamming at the well of Staro-Kazankovskiy oild field (BASHNEFT-DOBYCHA(LLC)

Initial reservoir pressure	2,4 MPa
Artificial blockage	1265 m
Service casing	0-1289м, D-146 мм
Perforation intervals	1235-1249 м
OCTG	D-73 мм To the depth of 1178 м

Order of works:

1. 10 m^3 of the emulsion «EXIMOL" was pumped into the pipe space during absorption with the closed annular.
2. 11 m^3 of the blocking composition "UNISOLT-M" with the addition of carbonate colmatant was pumped into the pipe space during absorption with the closed annular.
3. Pushed the blocking composition by injecting into the pipe 3,6 m^3 of tech. liquid, p = 1,0 g/cm^3.
4. Hermetically sealed the well. After a period of at least 6 hours, the level gauge was adjusted to the static level in the well, the residual pressure was released and the well was filled with a working solution according to hydrostatics.

Result: the well is jammed on first try without complications.

Table of compositions applicability during jamming

Composition	Product form	area of app. during jamming					Characteristics		
		Jam-ming	gentle jam.	jam. w. ALP	jam. w. AHP	liquid. absorp.	Destructor	Application temperature	Comaltant use
UNISOLT	dry	+	+				12-15% hydrochloric acid solution	<80C	+
UNISOLT-VT	dry	+	+				12-15% hydrochloric acid solution	<110C	+
EXIMOL	liquid	+	+				hydrocarbon solvent / alcohol	<80C	
EXIMOL-VT	liquid	+	+				hydrocarbon solvent / alcohol	80-120C	
FLOCK-ST A	dry			+	+		12-15% hydrochloric acid solution	<100C	+
FLOCK-ST B	2 comp.					+	Destructor KAP-1	<90C	
FLOCK-ST BS	dry					+	Destructor KAP-1	<100C	
MAXAN-VN	dry					+	Destructor KAP-1	<80C	
POLIFROS	3 comp.	+	+				Destructor KAP-1	<110C	
SINBARI	dry						hydrocarbon solvent, then mech. Deblock.	<80C	
TITAN	dry	+		+	+		watering	<110C	
GIDROSIL	dry	+					watering	80-120C	

Reagents for treating the near-wellbore area and inflow enhancement

➢ **Surfactants for self-diverting acid composition "STREAM-S" and "STREAM-G.“**

➢ **Washing compositions of the "Neominol" and "Bixol" series.**

➢ **Acid Compositions:**

- Delayed acid compositions: "Diskor 10," "Diskor 20," "Diskor 30";
- Organic acid composition: "Orix";
- ASPO solvent: "Sintasol";
- Thermo-foam-acid composition: "Termosin.“

➢ **Acid additives:**

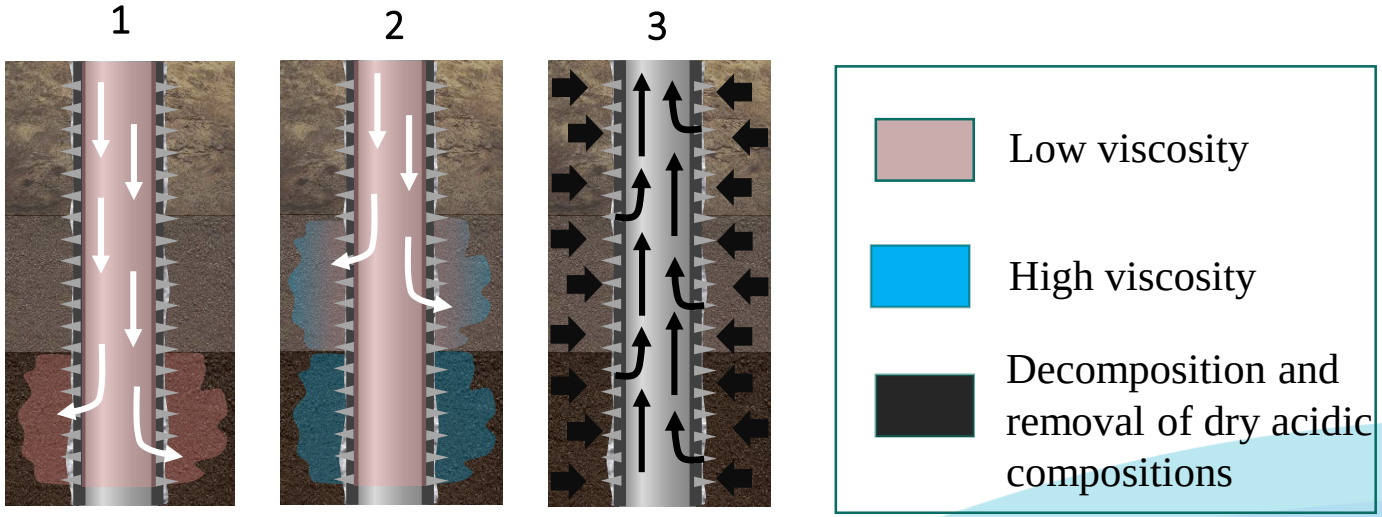
- Multifunctional surfactant "Surfasol";
- Reagent "Surfil";
- Iron stabilizer "Stab-Free";
- Corrosion inhibitor "Satis" grades A and B.
- ASPO and gypsum deposit solvent "Sintasol."

Self-Diverting Acid Compositions "STREAM-S"

The gelling agent "STREAM-S" is intended for use as a gelling agent in self-diverting acid compositions of various concentrations operating formations with heterogeneous collectors and temperatures from 20 to 120 °C. It is a mixture of a nonionic surfactant and an organic solvent used as a reagent in creating compositions for acid treatments and hydraulic fracturing in oil production processes.

Physical appearance

The resulting viscosity barrier is temporary. The viscosity of the gel decreases upon neutralization of the acid and upon contact with hydrocarbons. (3)



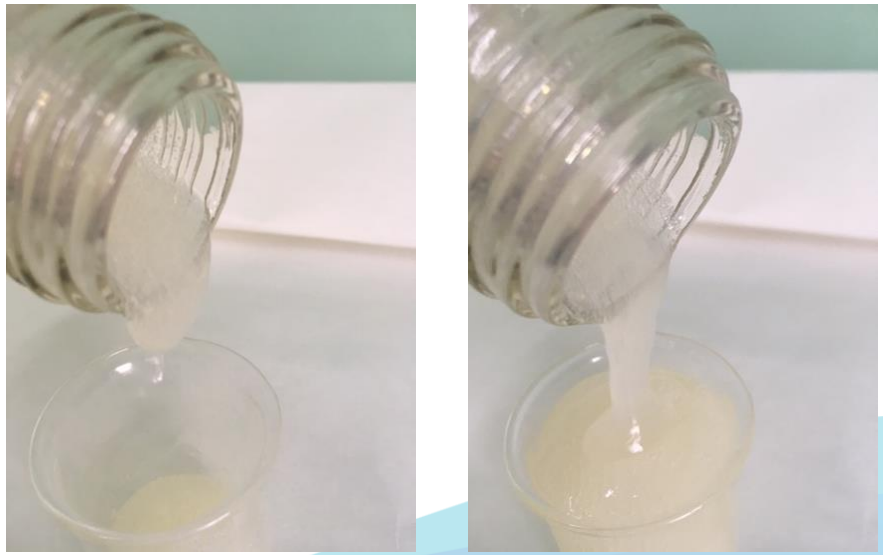
Self-Diverting Acid Compositions "STREAM-G"

The gelling agent "Stream-G" is used in drilling, construction, and well repair processes as a structuring agent for drilling fluids to regulate rheological and filtration properties, increasing viscosity and carrying capacity of drilling fluids.

Main properties:

- The "Stream-G" reagent has high rheological properties, ensuring the diverting action of the acid composition and increasing the effectiveness of the acid treatment.
- With increasing shear rate, thixotropic properties of the reagent are observed, significantly reducing viscosity, allowing for minimal energy expenditure during injection.
- Upon entering the productive zone of the formation and relieving stress, the viscosity properties fully recover, ensuring the diversion of the acid composition from the most washed-out zones, thereby increasing the coverage and efficiency of the acid treatment.
- The "Stream-G" reagent is capable of predictable self-destruction and significant viscosity reduction after the acid treatment, facilitating easy well development and rapid production startup.

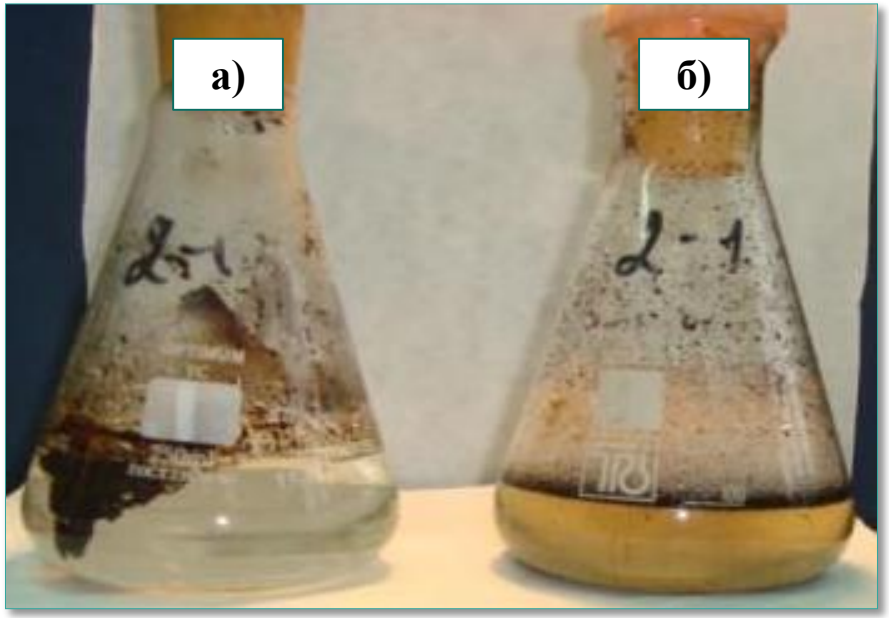
Physical appearance of the "STREAM-G" composition



Washing Compositions "Bixol" and "Neominol" Series

Complex Surfactant "Bixol“

Used in oil and gas production intensification processes for treating the near-wellbore zones of injection and production wells in washing fluids, acid compositions, and jamming fluids.



a) Appearance of ASP without adding "Bixol"
b) Dispersing ASP when mixed with "Bixol" aqueous solution

Washing Composition "Neominol"

- High surface activity.
- High solubility and stability against precipitation in mineral salt and acid solutions.

It represents:

- a system of specially selected cationic and nonionic synthetic surfactants;
- one component is a strong hydrophobizer that adsorbs on the rock, facilitating oil movement while preventing water phase filtration;
- it facilitates the micelle formation process due to the joint action of specially selected surfactants;
- the composition is stable against precipitation in highly mineralized solutions and acids..

Acid Compositions "DISKOR 10, DISKOR 20"

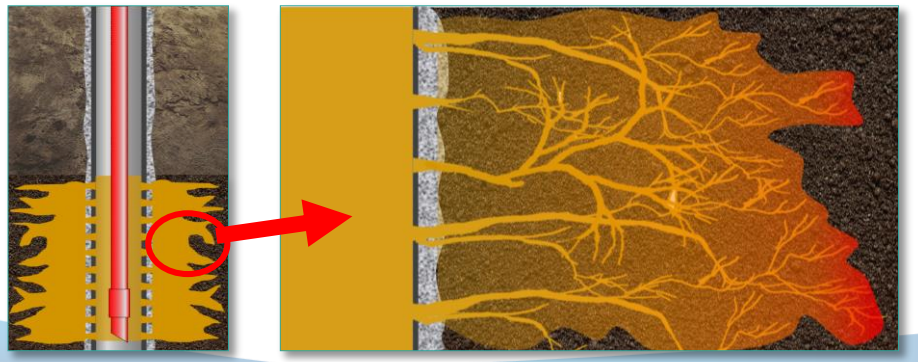
"Diskor" is a ready-to-use acid composition—a base acid and a complex of additives: corrosion inhibitor and surfactants. The reagent is produced in two grades:

- **"Diskor-10"** based on clay acid
- **"Diskor-20"** based on synthetic hydrochloric acid

"Diskor" is intended for acid treatment of production wells in carbonate and terrigenous reservoir collectors.

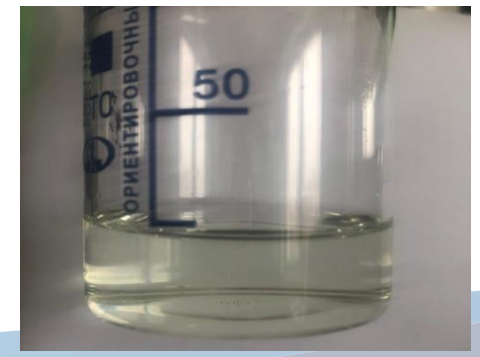
Advantages of the **"Diskor"** Acid Composition:

- High solubility with salts;
- Low reaction rate with carbonate rock, ensuring deep penetration into the formation;
- Low corrosivity;
- Effective permeability increase of terrigenous and carbonate reservoir collectors—the reagent can be used for primary well treatment after drilling (removal of filter cake).

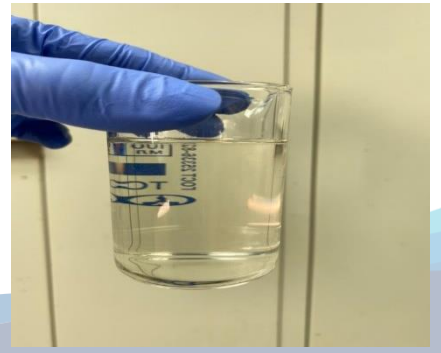


Uniform collection reservoir stimulation

«DISKOR-10»



«DISKOR-20»



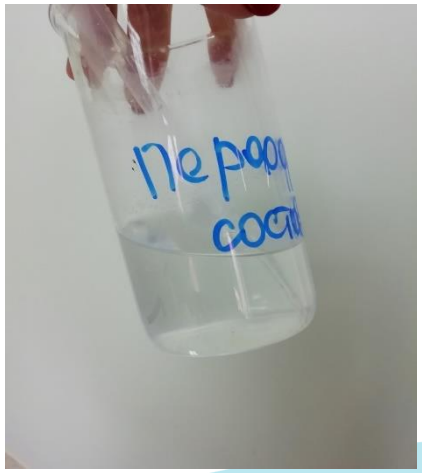
Selection of acid composition

Acid Compositions "Diskor 30 PS"

The acid perforation composition "Diskor-30 PS" is a ready-to-use composition based on mineral acids intended for treating low-permeability clay terrigenous reservoirs, as well as for acid treatment of wells to increase oil recovery.

The advantage of "Diskor-30 PS" is its excellent solubility with clay minerals but low activity towards cement and calcite. Unlike other Diskor grades, the perforation composition has relatively low corrosiveness towards metal, preserving technological equipment. It helps clean the near-wellbore zone from drilling fluid residues and other organic impurities.

Physical appearance "DISKOR-30 PS"

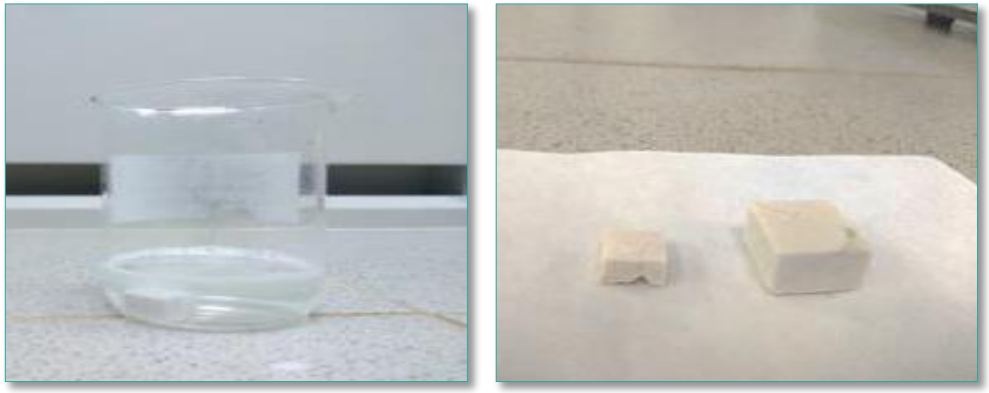


Physical appearance	Homogeneous liquid from colorless to light yellow without suspended particles
Density at 20°C, g/cm3	1,05
Freezing temperature, °C not below	-15
Dispersibility in water	Dispersible
Corrosive activity of the commercial form, g/(m2 * hour)	0,350

Organic Acid Composition "ORIX"

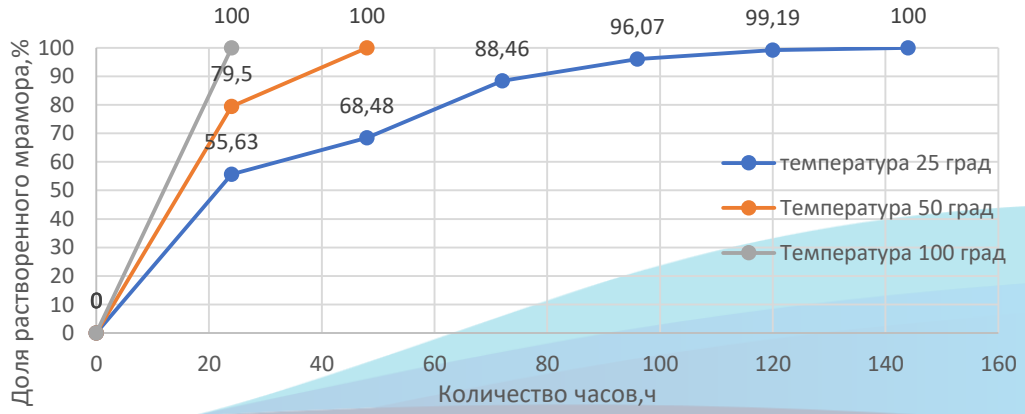
"ORIX" is a ready-to-use organic composition (with the addition of surfactant, corrosion inhibitor, iron stabilizer) intended for conducting near-wellbore zones treatment in high-temperature wells (with temperatures from 85°C). The main application is wells with a productive carbonate reservoir; due to the low reaction rate, the composition penetrates deeply into the formation and uniformly stimulates the pore space. In terrigenous reservoirs, "ORIX" is used for removing man-made colmatants as well as deposits from produced water.

Sample of marble after 4 days of dissolution in organic acid composition "Orix" for acid baths



Advantages of "ORIX" Composition: Fully compatible with oil (in the case of using compositions based on hydrochloric acid, even with the presence of surfactant dispersants, at high temperatures, the formation of precipitates - "sludges" - occurs upon contact with oil).

Marble Dissolution graph in Organic Acid Composition "ORIX" at different temperatures



Complex Action Inhibitor "Sintasol-MX"

Complex Action Inhibitor "Sintasol-MX" is a low-viscosity, low-freezing liquid (freezing point below minus 50°C) to prevent hydrate plug formation and reduce corrosion rate during well and pipeline operation.

The reagent is introduced into the gas stream, preventing hydrate formation upon gas contact with water and reducing the corrosiveness of the transported medium. The principle of action is based on thermodynamic and kinetic effects on hydrate deposits and the absorption of active substances on the metal surface, creating a protective layer that prevents corrosion. The reagent is also effective for removing already formed hydrate deposits.

Properties:

- High efficiency in inhibiting and dissolving hydrates, even at low temperatures.
- High efficiency in slowing down corrosion rates.
- Low reagent viscosity at negative temperatures.
- Low corrosiveness of the commercial form.

Physical appearance of the tamponage composition “Sintasol-MX”

Thermo-foam-acid Composition "Thermosin"

The "Thermosin" composition is a complex balanced multi-component composition of acids and surfactants and synergistic additives.

Designed for near-wellbore zones treatment in production wells and used for acid treatment of terrigenous and carbonate reservoirs, acid cleaning (restoration) of conductivity and production intensification, as well as for increasing the injectivity of injection wells and flow regulation. It has high penetrating ability into the pore space of the oil-saturated part of the reservoir due to 30-40 fold foaming and low interfacial tension at the oil-composition boundary. It facilitates reservoir treatment at greater depths due to the reaction retardation with the rock, preventing the precipitation of reaction products.

Appearance of the two-component thermo-acid composition before the reaction

Foam with a 30-fold volume increase

Advantages of the Composition:

- Fast reaction rate.
- The reaction accelerates with heating, reaching temperatures above 70 degrees Celsius.
- The multiple volume increase enlarges the coverage area and depth of chemical impact on the productive zone of the formation.

Table of application of the compositions during NWZT

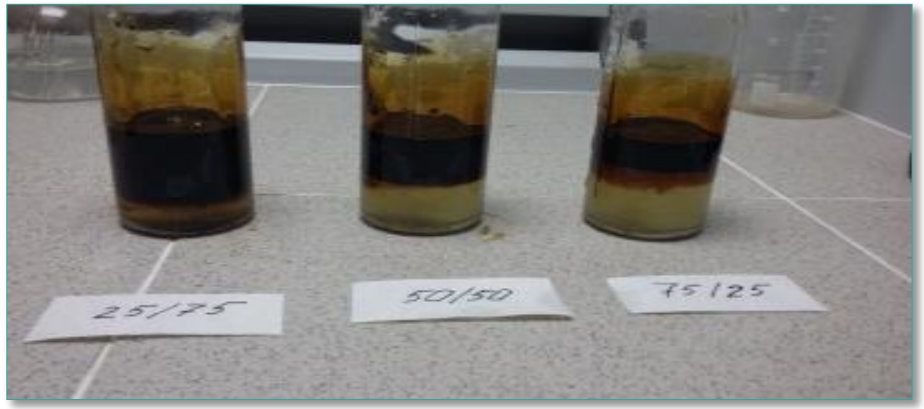
Composition	Product form	Applications during NWZT				Characteristics	
		Flow curv. of acid treat. from water bear. zone	Contamination of near-wellboaring zone	Declayizaition of the formation	Flow intensi-fication	Temperature of application	Collection reservoir type
ORIX	liquid		+		+	>80C	carb/ter
TERMOKSIN	liquid	+			+	<110C	carb/ter
STREAM-S	liquid	+			+	<120C	carb
STREAM-G	dry	+		+	+	<100C	ter
SURFASOL	liquid				+	<120C	carb/ter
KAP-1	dry		+	+	+	<100C	carb/ter
BIKSOL	liquid		+		+	<120C	carb/ter
NE OMINOL	liquid		+		+	<120C	carb/ter
SINTASOL B	liquid		+		+	<120C	carb/ter
SINTASOL BS-10	liquid		+		+	<120C	carb/ter
DISKOR-10	liquid			+	+	<100C	ter
DISKOR-20	liquid				+	<120C	carb

Laboratory Selection of Acid Package Based on Customer Requirements

Goal: to select an acid composition that meets customer requirements:

- Compatibility with formation fluids;
- Stability under formation conditions;
- Low corrosion rate at the given temperature;
- Low freezing point.

No sediment after mixing with oil

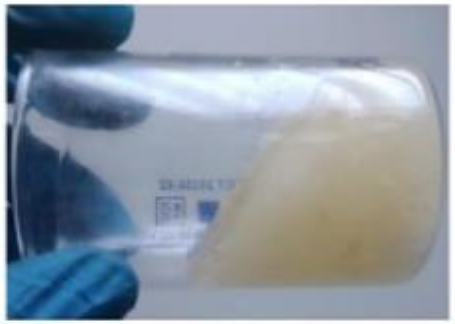


No emulsion after mixing with oil

Minimum corrosion rate of the acid composition: from 0.05 g/m2*hour

Lab tests of compositions “DISKOR” and “STREAM-G” with the samples of the formation fluids from the wells of Tatarstan

1. Physical appearance of “DISKOR-20” (left) and “STREAM-G” (right)



2. Physical appearance of the acid composition “DISKOR-20” with the addition of 3% of “STREAM-G”

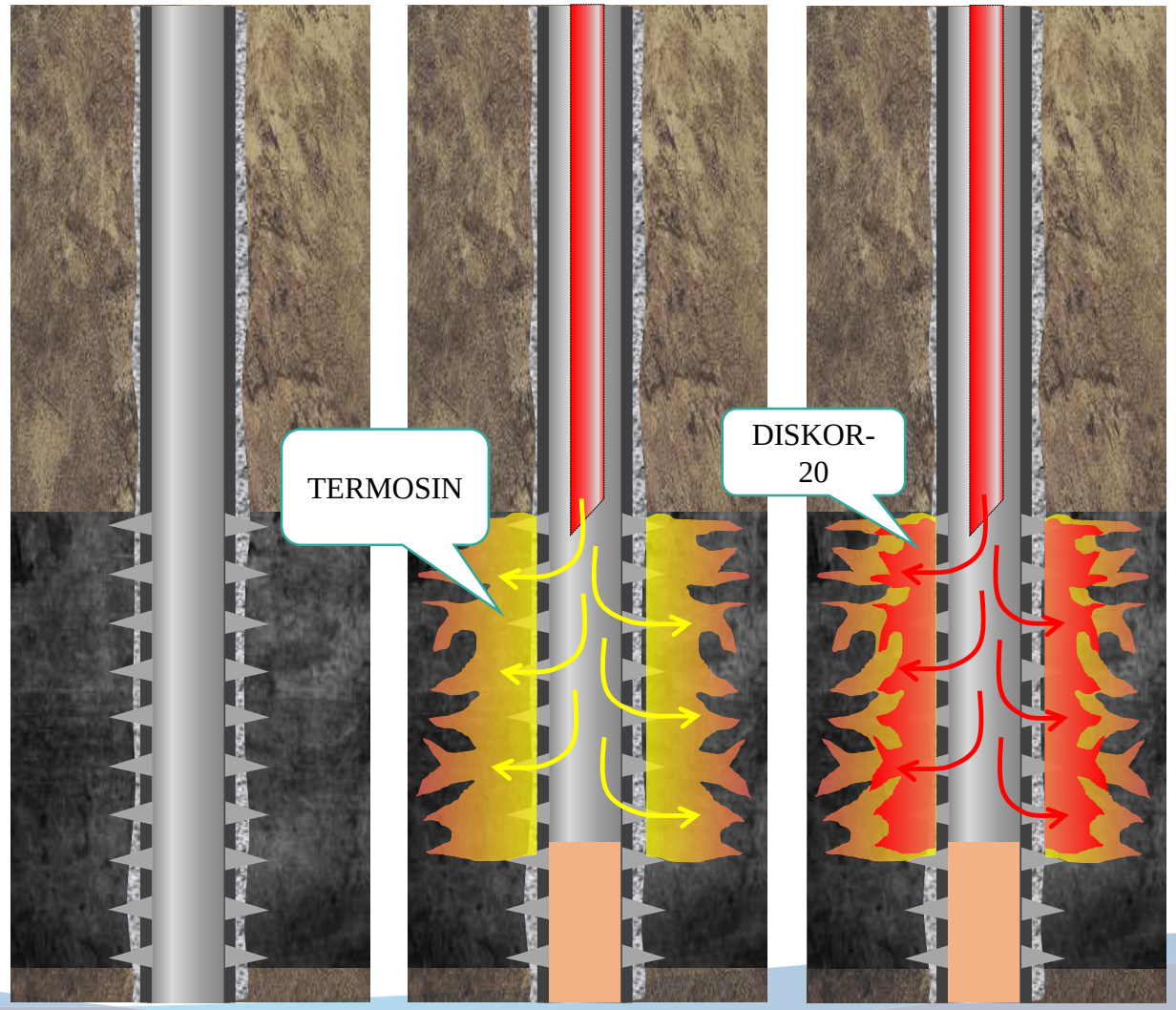
Physical appearance of the acid compositions “DISKOR-20” + oil in 4 hours of thermostating

3. a) Samples of the geomaterial before dissolution in the acid composition; b) samples of the geomaterial in acid compositions “DISKOR-20”; c) samples of the geomaterial at the end of the tests

Result: were performed tests of the acid compound “DISKOR 20” and a gel-forming composition “STREAM-G”. Conclusions are as follows:

- Injection of STREAM-G in the volume of 3% into DISKOR-20 leads to sufficient thickening of the system, which is able to decline further portions of acid composition to previously untreated areas.
- Efficiency of dissolution the geological material with acid composition “DISKOR-20” is 79,5%. Efficiency of dissolution can further be increased up to 90-95% with increasing the thermostating time.
- Acid composition “DISKOR-20” is compatible withformation water of the well #76 and #260 – it does not produce murk, gel, sediment and unlayering.
- The acid composition “DISKOR-20” is compatible with oild (in proportions 1:3, 1:1 and 3:1), does not form sediment or oil clots.

Example of Inflow Enhancement at a Well in the Orenburg NGKM



Productive Reservoir Thickness: 50 m.
The reservoir collector consists of fractured carbonates.

Initial reservoir pressure	8,59MPa
Drilled blockage	1865м
Service casing	1677м D-177,8мм. 1863м D-139,7мм.
Perforation interval	1697-1747 1700-1728
OCTG	D - 60мм. Lowered down to 1699 м

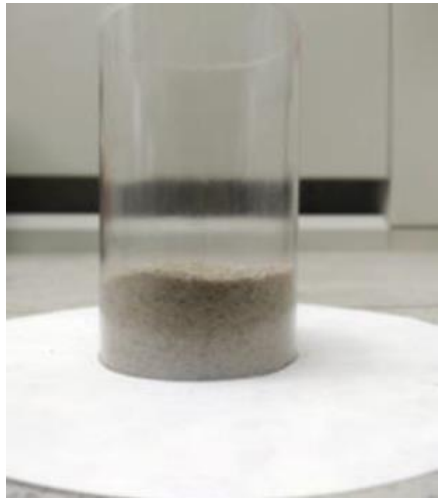
Intensification was carried out in four stages:

1. Injection of "TERMOSIN" thermo-foam-acid composition in the volume of 2m^3.
2. Injection of “DISKOR-20" acid solution in the volume of 5м^3.
3. Pressing of NKT solution with buffer (gas condensate) and brine with 1% of surfactant.
4. Reaction time period 12 hrs.

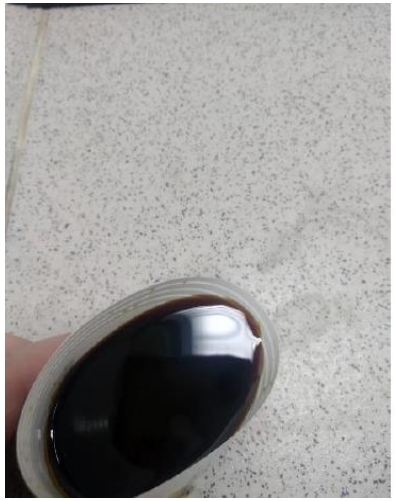
Result: received industrial oil inflow, continued further development.

Sand fixing with “Tascon” tamponage material

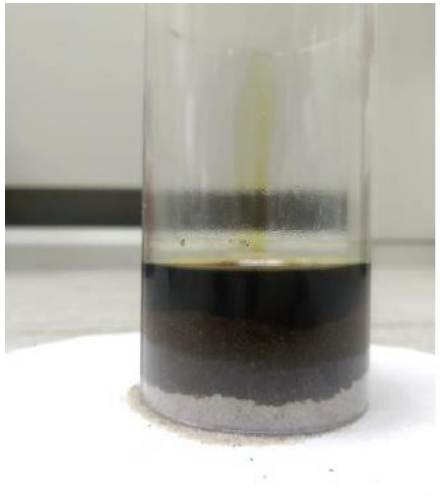
- Laboratory tests for the selection of the «Tascon» composition for performing fixing works of the near-wellboaring zone of the formation PAO “TATNEFT”, Turkmenistan



1. Sand sample



2. Physical appearance of the composition



3. Physical appearance of the sand, treated with the composition

4. Physical appearance of the filtration crust of the sand, cross section

5. Physical appearance of the filtration crust of the sand, cross section

The sand sample was placed in the cylinder model (1). Prepared the composition of the material “Tascon” (2) and poured the sand in a ratio of 1:1. The composition immediately began to penetrate the pores of sand (3). To determine the curing time of the sand attachment, the sample was left static at a temperature of 20°C. Temperature fixation was carried out:

- after 4 hours - moving sandstone, fully impregnated with the composition;
- After 19 hours, a strong adhesive sandstone filtration crust was produced (4 and 5).

Complex solutions for the repair-and-isolation works

Problem	Solution
Jamming of wells with abnormally low formation pressure	1)Eximol+Flock-ST 2) Flock-ST BS+Unisolt 3)Eximol + Flock-ST+carbonated filler
Gentle jamming of wells with abnormally high formation pressure	1)Unisolt + Titan 2)Flock-ST+Sinbari 3)Unisolt+Sinbari
Liquidation of absorption zones at capital well repairs	1)Sinblock+Flock-ST BS+Maxan Polymer 2)Sinblock+Polisom+colmatant 3)Flock-ST BS+Sinblock+Maxan Polymer+fibers
Water isolation using selective water isolating compounds	1)Eximol+Plast-ST+Blocksin 2)Eximol+Polisom+Plast-ST 3)Maxan VN+Plast-ST+SilonWell
Water isolation works in open shaft	1)Eximol+Sinpak+Polisom 2)Maxan-VN+Polisom+Sinpak 3)Sinblock+Sinpack+SilonWell
Elimination of inter-casing pressures	1)Tascon P+SilonWell+Soldstone 2)Silonwell+Soldsone+Tascon 3)Tascon P+Plast-ST+Soldstone
Elimination of non-hermeticity of service casing	1)Tascon+Silonwell+Soldstone 2)Plast-ST+Soldstone+Tascon P 3)Tascon+SilonWell+Plast_ST
Elimination of over-casing circulation flow	1)Sinblock+Silonwell+Soldstone 2)Eximol+Plast-ST 3)Polisom+Soldstone

Each composition is adapted to individual well conditions

Work experience

In the period from 2013 to 2024 the specialists of LLC «Synergy Technologies» successfully carried out the works of WIW and RIW with the use of insulating compounds in the fields:

Type of works	Objects	Num. Of wells/operation	Works period
Jamming of wells with blocking compositions, including hydrocarbons	Orenburg oil field	80	2013-2023 rr.
Jamming of wells using the «Polifros» gel-foam system	Orenburg oil field	4	2024 rr.
Water isolating works using micro cement	Orenburg oil field	77	2013-2024 rr.
Isolation of the inflow of formation water, incl. in high temperature wells by injection of isolating compositions	Pribrezhnoye, Grechanoye, Grivnevskoye, Peschanoye, Roshovskoye, Azovskoye, Markovskoye oil field	20	2016-2023 rr.
Complex jamming, reduced permeability, elimination of absorption zones.	Orenburg oil field	23	2015-2024 rr.
Well jamming with blocking compositions. Well jamming with abnormally low formation pressure	Urengoi oil field, Pireynoe oild field, Beregovoye oil field	8	2015-2023 rr.
Elimination of non-hermeticity in the inter-casing space. Elimination of non-hermeticity in E/Casing	Pelyatkinsk oil deposit, Abramoskoye oil deposit	17	2016-2022rr.
Formation waters isolation	Vyktilskoye oil field	6	2016-2022rr.
Treatment of near-wellboaring zone of the formation	Orenburg oil field	7	2016-2022rr.
Elimination inter-casing pressure	Avilovskoye oil field	1	2024 r.r
Water isolation works	Ruslanovskoye oil field	1	2023 r.r
Selective water isolation works with the help of OCTG	Gubkinskoye oild deposit, Orenburg oil field,	9 9	2020-2022rr. 2020-2022rr.

Scientific publications on the results of work performed

Journal	Article
Oil. Gas. Innovations 3 / 2021	Highly efficient selective water insulation methods to increase oil recovery of productive formations.
Gas industry 5/2021	Waterproofing technology without jamming the well using inflatable packer and organosilicon composition «Plast-ST» at the wells of the Gubkin oil deposit
Gas industry 11/2020	Experience of application of technologies and reagents on insulation of the water in fields of PJSC «GAZPROM»
Oil. Gas. Innovation 7/2020	Experience and Application of Technologies and Reagents for Suppression of Wells at «Gazprom» PJSC Fields
Oil. Gas. innovations 6/2019	Integrated Approach to Addressing Repair-and-Isolation and well jamming
GEOPETROL 2018	Application of integrated technologies for capital repairs of oil and gas wells to increase oil recovery
Oil. Gas. Innovations. 6/2018	Application of integrated technologies for capital oil and gas well repair and oil recovery
Oil Engineering. International Scientific and Technical Journal SPECIAL EDITION 12: RESULTS-2015 AND PROGNOSIS 2016	Increase of Production Productivity of Production Wells in the Application of composition «STREAM-S» Using the Example of Wells of Orenburg Oil and Gas Condensate Field
Special edition of «Gas Industry», 2015.	Improvement of Approaches to Jamming Gas Wells for Repair Works in Fields of Yamal-Nenets Autonomous Okrug
Scientific and Technical Journal "Exposition Oil. Gas." 7 (46) November 2015	Increasing production of production wells with self-deflecting acid composition (on the example of Orenburg oild field)
OIL. GAS. INNOVATIONS 7/2015	Increasing production of production wells when using self-deflecting acid composition «STREAM-S» using the example of Orenburg oil field.
OIL. GAS. INNOVATIONS 8/2016	Integrated Approach to Jamming Oil and Gas Wells with Anomalous Formation Parameters while Maintaining Filtration Properties of Production Collection Reservoirs

Scientific Research Work

«Satis» corrosion inhibitor formulation selection. for «Gazprom Mining Astrakhan» and “Gazprom Astrakhan”

Selection report

Kazan 19.06.2020

Test objective: to select corrosion inhibitor according to the customer’s requirements:

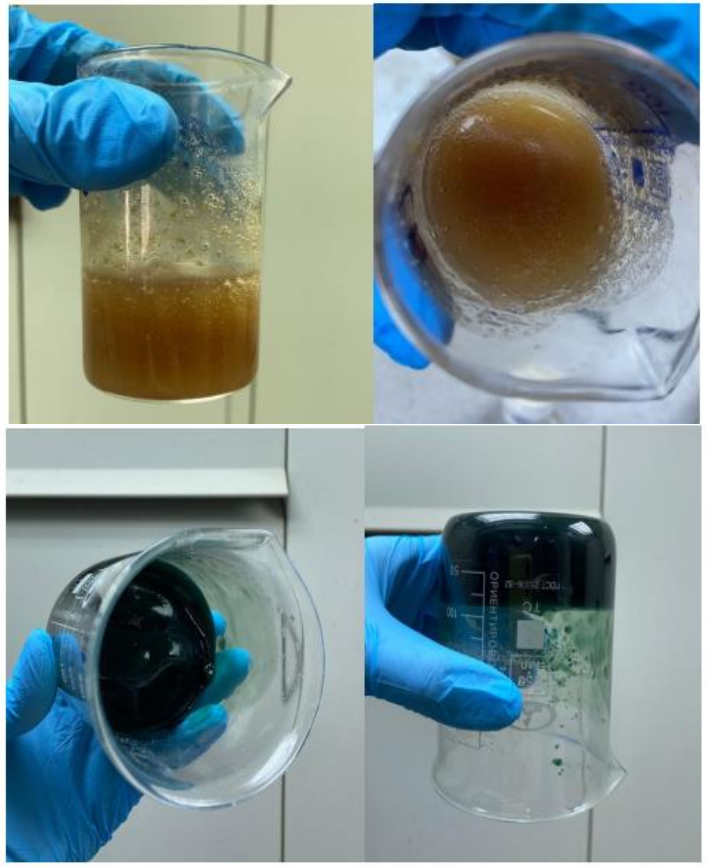
Customer: LLC «Gazprom Dobicha Astrakhan»

Subject of study::
Corrosion inhibitor «Satis» brand D

Information about specialists:
Head of CAL: Guseva E.O.
Performer:
Lead Engineer Kulik E.M.

Tasks:
1) Analyze the data obtained;
2) provide a response according to all requirements of the Astrakhan GKM.
3) select corrosion inhibitor.

Recipe selection of block packs for «Gazprom Mining Irkutsk»



Scientific Research Work

Selection of waterisolating compositions. for «Gazprom Mining Yamburg»

1.5. "Polisom testing under 25 degrees C"
the composition after mixing is fluid (Figure 1) testing "Polisom" at temperature 25 showed that gel formation occurs after 8 hours 10 minutes (Figure 2) the composition forms a hard gel, surface not deformed (gel type 1)

Рис.1. "Polisom" after mixing

Рис.2. Hardened structure "Polisom", hard gel

Test report

Kazan 25.11.2021

Test objective:
To select effective proportions of blocking compositions «Polisom» and special isolating material «SilonWell», according to the Customer's request.

Customer: Bashnet Mining

Information about specialists:
Head of CAL: Guseva E.O.
Performer: Engineer chemist-technician: Khafizova E.R.

Research subjects:
1. Blocking composition "Posilom"
2. Special isolating material "SilonWell"

Tasks:
1. Analyze the data obtained;
2. Based on the data of the Customer select effective compositions «Polisom» and «SilonWell», gel formation of which is 8-12 hours at 25-30°C;
3. Provide recipe and technology for preparation of the compositions indicating the density of components.

Selection of insulation compositions. for «Bashneft-Mining»

Selection report

Kazan 11.01.2022

Test objective: select an analogue for a water-isolating reagent PBS.

Customer: LLC «Gazprom underground repair Urengoi»

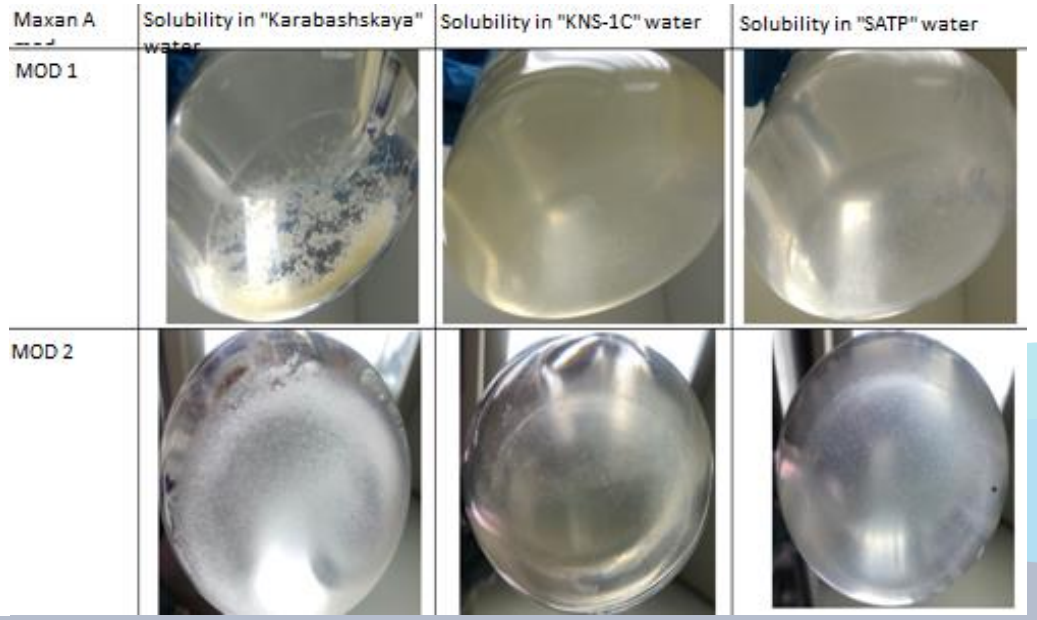
Research subjects:
1) Blocking Composition "Flock-ST";

Information about specialists:
Head of CAL: Guseva E.O.
Peformer: chemical analysis engineer Gaptelganieva I.I..

Tasks:
1) Analyze the data obtained;
2) Carry out a literature search;
3) Select the appropriate analogues.

Start date: 11.01.2022 at 08.00 h in CAL «Synergy Technologies» started searching for literary data by selection of the analogue;
End date: 11.01.2022, at 08:30 h in CAL «Synergy Technologies» selection is completed.

Selection of an analogue composition. for «Gazprom underground repair Urengoy»

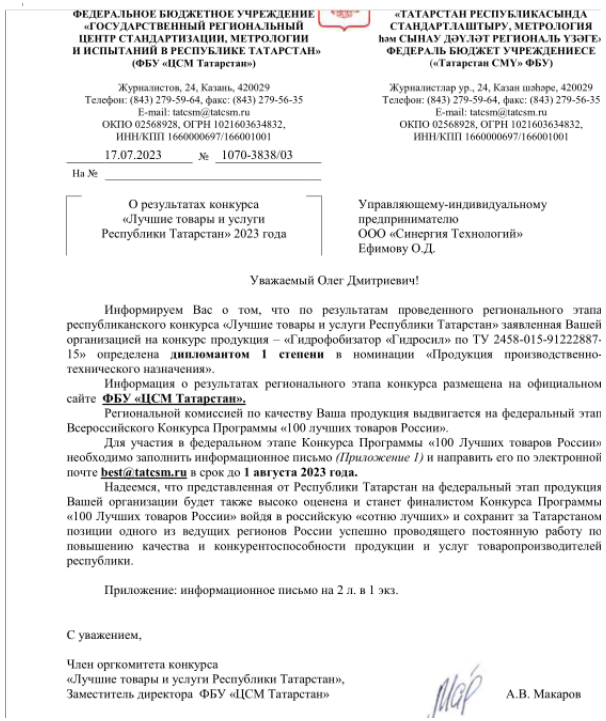


Selection of modification «Maxan». for «Tatneft»

Reagents of the company «Synergy of Technologies» annually takes part in the regional competition «The best goods and services of the Republic of Tatarstan», and also in the federal competition «The best goods of Russia». **According to the results of the competition, the declared reagents are determined by the Diplomants of the 1st and 2nd degree** in the nomination «Production and technical purpose».

Diploma Silicon organic composition PLAST-ST, best goods and services RT

Diploma Silicon organic composition PLAST-ST, 100 best products of Russia



ФЕДЕРАЛЬНОЕ БЮДЖЕТНОЕ УЧРЕЖДЕНИЕ «ГОСУДАРСТВЕННЫЙ РЕГИОНАЛЬНЫЙ ЦЕНТР СТАНДАРТИЗАЦИИ, МЕТРОЛОГИИ И ИСПЫТАНИЙ В РЕСПУБЛИКЕ ТАТАРСТАН» (ФБУ «ЦСМ Татарстан»)

«ТАТАРСТАН РЕСПУБЛИКАСЫНДА СТАНДАРТЛАШТЫРУ, МЕТРОЛОГИЯ һәм СЫНАУ ДӘҮЛӘТ РЕГИОНАЛЬ ҮЗӘГЕ» ФЕДЕРАЛЬ БЮДЖЕТ УЧРЕЖДЕНИЕСЕ («Татарстан СМУ» ФБҮ)

Журналистов, 24, Казань, 420029
Телефон: (843) 279-59-64, факс: (843) 279-56-35
E-mail: tatcsm@tatcsm.ru
ОКПО 02568928, ОГРН 1021603634832,
ИНН/КПП 1660000697/166001001

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Телефон: (843) 279-59-64, факс: (843) 279-56-35
E-mail: tatcsm@tatcsm.ru
ОКПО 02568928, ОГРН 1021603634832,
ИНН/КПП 1660000697/166001001

17.07.2023 № 1070-3838/03
На №

О результатах конкурса «Лучшие товары и услуги Республики Татарстан» 2023 года

Управляющему-индивидуальному предпринимателю ООО «Синергия Технологий» Ефимову О.Д.

Уважаемый Олег Дмитриевич!

Информируем Вас о том, что по результатам проведенного регионального этапа республиканского конкурса «Лучшие товары и услуги Республики Татарстан» заявленная Вашей организацией на конкурс продукция – «Гидрофобизатор «Гидросил» по ТУ 2458-015-91222887-15» определена **дипломантом 1 степени** в номинации «Продукция производственно-технического назначения».

Информация о результатах регионального этапа конкурса размещена на официальном сайте **ФБУ «ЦСМ Татарстан».**

Региональной комиссией по качеству Ваша продукция выдвигается на федеральный этап Всероссийского Конкурса Программы «100 лучших товаров России».

Для участия в федеральном этапе Конкурса Программы «100 Лучших товаров России» необходимо заполнить информационное письмо *(Приложение 1)* и направить его по электронной почте **best@tatcsm.ru** в срок до **1 августа 2023 года.**

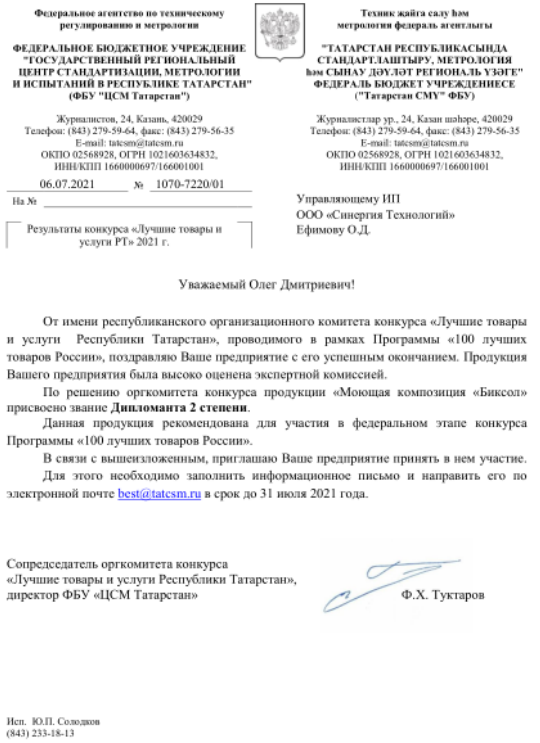
Надеемся, что представленная от Республики Татарстан на федеральный этап продукция Вашей организации будет также высоко оценена и станет финалистом Конкурса Программы «100 Лучших товаров России» войдя в российскую «сотню лучших» и сохранит за Татарстаном позиции одного из ведущих регионов России успешно проводящего постоянную работу по повышению качества и конкурентоспособности продукции и услуг товаропроизводителей республики.

Приложение: информационное письмо на 2 л. в 1 экз.

С уважением,

Член оргкомитета конкурса «Лучшие товары и услуги Республики Татарстан», Заместитель директора ФБУ «ЦСМ Татарстан» А.В. Макаров

Hydrophobicator Gidrosil Diplomant of the 1st degree in the competition the best goods and services of RT



Федеральное агентство по техническому регулированию и метрологии

Техник жайга салу һәм метрология федераль агентлыгы

ФЕДЕРАЛЬНОЕ БЮДЖЕТНОЕ УЧРЕЖДЕНИЕ "ГОСУДАРСТВЕННЫЙ РЕГИОНАЛЬНЫЙ ЦЕНТР СТАНДАРТИЗАЦИИ, МЕТРОЛОГИИ И ИСПЫТАНИЙ В РЕСПУБЛИКЕ ТАТАРСТАН" (ФБУ "ЦСМ Татарстан")

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ИНН/КПП 1660000697/166001001

06.07.2021 № 1070-7220/01
На №

Результаты конкурса «Лучшие товары и услуги РТ» 2021 г.

Управляющему ИП ООО «Синергия Технологий» Ефимову О.Д.

Уважаемый Олег Дмитриевич!

От имени республиканского организационного комитета конкурса «Лучшие товары и услуги Республики Татарстан», проводимого в рамках Программы «100 лучших товаров России», поздравляю Ваше предприятие с его успешным окончанием. Продукция Вашего предприятия была высоко оценена экспертной комиссией.

По решению оргкомитета конкурса продукции «Моющая композиция «Биксол» присвоено звание **Дипломанта 2 степени**.

Данная продукция рекомендована для участия в федеральном этапе конкурса Программы «100 лучших товаров России».

В связи с вышеизложенным, приглашаю Ваше предприятие принять в нем участие.

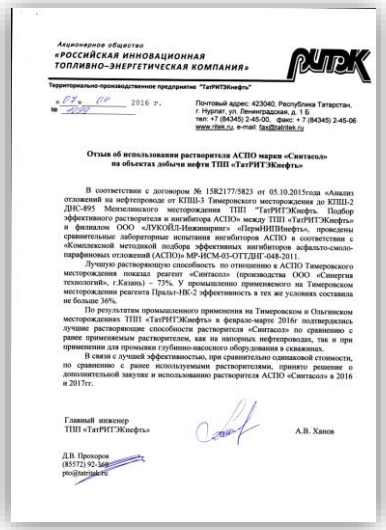
Для этого необходимо заполнить информационное письмо и направить его по электронной почте best@tatcsm.ru в срок до 31 июля 2021 года.

Сопредседатель оргкомитета конкурса «Лучшие товары и услуги Республики Татарстан», директор ФБУ «ЦСМ Татарстан» Ф.Х. Туктаров

Исп. Ю.П. Солодков
(843) 233-18-13

Surfactant Bixol Diplomant of the 2nd degree in the competition, 100 best products of Russia

Feedback from Customers



Акционерное общество
«РОССИЙСКАЯ ИННОВАЦИОННАЯ ТОПЛИВНО-ЭНЕРГЕТИЧЕСКАЯ КОМПАНИЯ»

Территориально-производственное предприятие "ТатРИТЭНефть"

Почтовый адрес: 423040, Республика Татарстан, г. Нурлат, ул. Ленинградская, д. 1 Б
тел: +7 (84345) 2-45-00, факс: + 7 (84345) 2-45-06
www.rite.ru, e-mail: fax@tatrite.ru

Отзыв об использовании растворителя АСПО марки «Синтасол» на объектах добычи нефти ТПП «ТатРИТЭНефть»

В соответствии с договором № 15R2177/5823 от 05.10.2015года «Анализ отложений на нефтепроводе от КПШ-3 Тимеровского месторождения до КПШ-2 ДНС-895 Мензелинского месторождения ТПП "ТатРИТЭНефть. Подбор эффективного растворителя и ингибитора АСПО» между ТПП «ТатРИТЭНефть» и филиалом ООО «ЛУКОЙЛ-Инжиниринг» «ПермНИПИнефть», проведены сравнительные лабораторные испытания ингибиторов АСПО в соответствии с «Комплексной методикой подбора эффективных ингибиторов асфальто-смоло-парафиновых отложений (АСПО)» МР-ИСМ-03-ОТГДНГ-048-2011.

Лучшую растворяющую способность по отношению к АСПО Тимеровского месторождения показал реагент «Синтасол» (производства ООО «Синергия технологий», г.Казань) – 73%. У промышленно применяемого на Тимеровском месторождении реагента Пралуг-НК-2 эффективность в тех же условиях составила не больше 36%.

По результатам промышленного применения на Тимеровском и Ольхинском месторождениях ТПП «ТатРИТЭНефть» в феврале-марте 2016г подтвердились лучшие растворяющие способности растворителя «Синтасол» по сравнению с ранее применяемым растворителем, как на напорных нефтепроводах, так и при применении для промывки глубинно-насосного оборудования в скважинах.

В связи с лучшей эффективностью, при сравнительно одинаковой стоимости, по сравнению с ранее используемыми растворителями, принято решение о дополнительной закупке и использованию растворителя АСПО «Синтасол» в 2016 и 2017гг.

Главный инженер
ТПП «ТатРИТЭНефть» А.В. Ханов

Д.В. Прохоров
(85572) 92-3[illegible]
pto@tatrite.ru

НЕФТЬСТРИМХОЛДИНГ

ОБЩЕСТВО С ОГРАНИЧЕННОЙ ОТВЕТСТВЕННОСТЬЮ
ПЕРМНЕФТЕОТДАЧА

618705, Российская Федерация, Пермский край, г. Добрянка, ост. Полазна, Трухина, д.70
Тел. (34265) 3-83-35, E-mail: proj@pln.pnnh.ru, www.pnnh.ru
ОКПО 55036462, ОГРН 1025901794412 ИНН 5918016150/590150001

№ 09/869 от 15.05 2015 г.
на № _____ от _____ 201 г.

ООО «Синергия Технологий»
Управляющему – индивидуальному предпринимателю
О.Д. Ефимову

Отзыв о реагенте Титан В

Уважаемый Олег Дмитриевич!

ООО «Пермнефтеотдача» применяет тяжелые жидкости глушения, на Ярино-Каменноложском месторождении ООО «ЛУКОЙЛ-ПЕРМЬ» при ремонтах нагнетательных скважин с аномально высоким пластовым давлением. В период с 2016 года по настоящее время проведено 6 скважино-операций с использованием жидкости глушения плотностью до 1,45 г/см3, приготовленных на основе состава ТИТАН марки В. Тяжелые жидкости глушения необходимой плотности легко готовятся непосредственно на скважине растворением в пресной воде указанного солевого состава с использованием лопастного перемешивателя. Замечаний к выходу скважин на режим после использования тяжелых жидкостей глушения, не возникало.

С уважением,

Директор А.В. Трухин

Исполнитель:
П.Г. Гонеев
Тел. (34265) 38-776
pproj@pln.pnnh.ru

Почтовый идентификатор:

ООО «Татнефть-РемСервис»

Директору
ООО «Синергия технологий»
О.Д. Ефимову

Уважаемый Олег Дмитриевич!

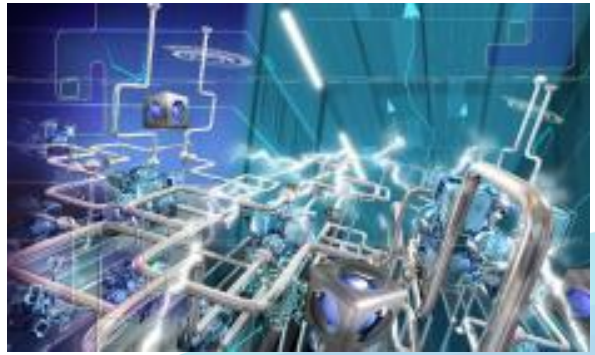
ТАТНЕФТЬ

Директору
ООО «Синергия технологий»
О.Д. Ефимову

Уважаемый Олег Дмитриевич!

Proposition of cooperation

- Development of new unique technologies and formulations for oil production and capital well repair
- Adaptation of technologies to existing field conditions, taking into account required parameters
- Work on replacement of imported technologies and reagents, selection of effective domestic analogues for the industry
- Carrying out research work, drafting recommendations for application
- Development of a complex approach to the selection of the technologies to existing conditions and adaptation of the technology



Thank you for your attention!

Contact information:

LLC «Synergy Technologies»

420095, Tatarstan Republic, Kazan,

city of Kazan, territory of Himgrad, house 126,

room 551 A

Tel./fax: 8 (843) 212-56-21

email: sin_tech@mail.ru

URL: www.synergytechnology.ru