



# PRODUCT CATALOGUE

Naberezhnye Chelny



## AUTOMOBILE PRODUCTION HOLDING “AUTOCRAT”

- Production of the “Bars” series well drilling and workover trucks
- Production of equipment and specialized vehicles for the oil-and-gas industry
- Production of coiled-tubing drilling rigs
- Delivery of the KamAZ trucks and specialized vehicles for the oil-and-gas industry
- Spare parts and accessories for the truck-mounted workover rigs

### About the Company

The company's assets include large production facilities with the office building. Total area makes 30,000 m<sup>2</sup>. State-of-the-art high-tech equipment for metal cutting, machining, welding and assembling, and shot-blasting chamber for the paint coating preparation are installed in the manufacturing shops. In order to ensure high finished product quality, painting is carried out in the paint booth (with hot drying).

The factory has own design-engineering and technological services, and service block for conducting the warranty and post-warranty service.

Sales geography of well drilling and workover trucks, and other specialized vehicles for the oil-and-gas industry includes Siberian, Central, Volga and South regions of Russian Federation. Former Soviet republics.

APH “Autocrat” produces the mobile drilling rigs and trucks for well servicing and workover with the carrying capacity of 40 to 160 tons on the self-propelled chassis and semitrailers. The “KamAZ” and “Ural” vehicle chassis, self-propelled chassis of own design with 6×6.1; 8×6.1; 10×8.1 wheel arrangements based on the “KamAZ-43118” assemblies and heavy self-propelled chassis with 8×8.1; 10×10.1; 12×12.1; 14×12.1; 16×12.1 wheel arrangements are used. 3-axle semitrailers with single-tire wheels on 3 and 4 axles are also manufactured at the plant.

BARS-10K, BARS-20K coiled-tubing drilling rigs

BARS-30K trucks on various chassis are manufactured in co-operation with partners from Byelorussia.





# BARS-40 Truck for the well servicing, workover, production testing and drilling

## 1. Purpose

The truck is intended for well servicing, workover, production testing and drilling in the regions with temperate and cold climate at the ambient temperature from -45°C to +50°C. Climatic modification – Y, placement category – I as per the GOST 15150.

For the well workover, production testing and drilling truck operation, the truck equipping with manifold standpipe, mechanical (universal shaft or chain) and hydraulic rotor drive, hydraulic cathead and oil cooler is available.



## 2. Standard truck package

1	Derrick and draw-works unit	1
	Chassis with the power-plant	1
	Upper equipment drive-train (power take-off assembly, 3-stage gearbox of upper equipment)	1
	Pinion-type draw-works with bevel gear box	1
	Mast with crown-block, back mast support	1
	Hook block	1
	Auxiliary winch	1
	Operator's cab with console	1
	Foundation beam, front foundation piers	1+2
	Hydraulic tong hanger, ESP roller hanger	1 each
	Rotary-drill line (string-up), m	300
	Electrical equipment connecting cable, m	50
	Truck electric, hydraulic, pneumatic systems	set
	Traveling block limit switch, overload limiter	1 each
	SPK	set
	Spare wheel holder	1
2	Measurement package DEL-150	1

## 3. Standard truck package specifications

1	Derrick and draw-works unit			
1.1	Safe hook load, t	40		
	- with wind guys installation	40		
	- without wind guys installation			
1.2	Transport base	Self-propelled chassis SABR-22103-02	Ural-4320	KamAZ-43118
	Wheel arrangement	8x6.1	6x6.1	6x6.1
	Truck and chassis power drive	KamAZ-260 (E-2)	YaMZ-236 (E-5)	KamAZ (E-5)
	Engine power, hp.	260	300	300
	Gearbox	KamAZ-154	YaMZ-236	KamAZ-154
1.3	Truck mast with "tubing anchor"	Tilting open-face box-section mast		
	Number of sections	material St. 09Г2С		
	Ground to crown-block axis height, m	2		
		19.5		



	Hook lifting height, m Tilt angle, deg. Mast lifting Upper section extension	16 3° 2 hydraulic cylinders Hydraulic draw-works
1.4	Block-and-tackle system String-up Ratio Rotary-drill line diameter, mm	4x3 6 22
1.5	Draw-works	Pinion-type single-shaft single-drum with air-operated clutch. Draw-works drive bevel gear box. Draw-works operation – from operator's cab.
	Draw-works brake	Single-band brake with ratchet gear, lever-type equalizer, shoes 230×120 mm, brake chamber with diaphragm spring brake cylinder, service brake – hand-operated, auxiliary – foot-pedal operated.
1.6	Operator's cab	Heat-insulated, 2 electric heaters including 1 – with demister system, operator console. GRP design with impact and falling object protection.
1.7	Hydraulic system	Single-circuit; type 310.4.112 axial-piston pump for the actuation of outriggers, mast lifting hydraulic cylinders, upper section extension draw-works and auxiliary (Kermak) winch, hydraulic tong. Oil heating system.
1.8	Pneumatic system Operating pressure, kg/cm² Additional equipment	With air dryer, air receivers volume – 60l. 7 Pneumatic spider connector
1.9	Truck electrical equipment Length of power cable for truck connection to the external mains, m	Explosion-proof design 30
1.10	Truck lighting  Power supply voltage, V	Explosion-proof LED lamps 24 (from the chassis on-board electric system and transformer-rectifier)
1.11	Emergency drive for rig dismantling External hydraulic power unit connection Hand-operated pump	Pump unit NSH-4, electric motor 3 kW, 380 V Fitting 3/4" For mast lifting at cab tilting.
1.12	Dimensions, mm, max	12000 x 2500 x 4000
1.13	Truck weight, t, max The truck fully complies with public roadway regulations without the need for dimensions and axle load permits	22.5
1.14	Auxiliary winch Hook load, t Rope diameter, mm	Hydraulic 3 13
1.15	Charging unit	Orion-404
1.16	Measurement package Controlled parameters	DEL-150 String weight
1.17	Overload limiter	Electro-pneumatic based on the DEL-150 device
1.18	Hook block lifting height limiter	Electro-pneumatic, cable-type
1.19	Truck leveling	2 bubble-type incline levels
1.20	Emergency engine stop	Air gate valve actuated from operator's cab
1.21	Locking of stabilizing jacks	Mechanical locks
1.22	Transfer gearbox disconnection at the upper equipment operation	Manual



# BARS-50

## Truck for the well servicing, workover, production testing and drilling

### 1. Purpose

The truck is intended for well servicing, workover, production testing and drilling in the regions with temperate and cold climate at the ambient temperature from -45°C to +50°C. Climatic modification – Y, placement category – I as per the GOST 15150.

For the well workover, production testing and drilling truck operation, the truck equipping with manifold standpipe, mechanical (universal shaft or chain) and hydraulic rotor drive, hydraulic cathead, driller's station at the left rear of truck, and oil cooler is available.



### 2. Standard truck package

1	Derrick and draw-works unit	1
	Chassis with the power-plant	1
	Upper equipment drive-train (power take-off assembly, 3-stage gearbox of upper equipment)	1
	Pinion-type draw-works with bevel gear box	1
	Mast with crown-block, back mast support	1
	Hook block	1
	Auxiliary winch	1
	Operator's cab with the operator console (or driller's station with console)	1
	Foundation beam, front foundation piers	1+2
	Hydraulic tong hanger, ESP roller hanger	1 each
	Rotary-drill line (string-up), m	300
	Electrical equipment connecting cable, m	50
	Truck electric, hydraulic, pneumatic systems	set
	Traveling block limit switch, overload limiter	1 each
	SPK	set
	Spare wheel holder	1
2	Measurement package DEL-150	1
3	Remote mast lifting and upper section extension console	1

### 3. Standard truck package specifications

1	Derrick and draw-works unit			
1.1	Safe hook load, t			
	– with wind guys installation	50		
	– without wind guys installation	40		
1.2	Transport base	Self-propelled chassis SABR-22103-02 on the KamAZ 43118 assemblies	Self-propelled chassis SABR-22103 on the KrAZ assemblies	Semitrailer SP-94183 3-axle single-tire
	Wheel arrangement	8×6.1	6×6.2	
	Truck and chassis power drive	KamAZ-260 (E-2)	YAMZ-238M2 (E-0)	YaMZ-238M2 (E-0)
	Engine power, hp.	260	240	240
	Gearbox	KamAZ-154	YaMZ-236	YaMZ-236
1.3	Truck mast with “tubing anchor”	Tilting open-face box-section mast of St. 09Г2С material		
	Number of sections	2		



	Ground to crown-block axis height, m	21.5
	Hook lifting height, m	17.5
	Tilt angle, deg.	3°
	Mast lifting	2 hydraulic jacks
	Upper section extension	Hydraulic draw-works
1.4	Block-and-tackle system	
	String-up	4x3
	Ratio	6
	Rotary-drill line diameter, mm	25
1.5	Draw-works	Pinion-type single-shaft single-drum with air-operated clutch. Draw-works drive bevel gear box. Draw-works operation – from operator's cab.
	Draw-works brake	Single-band brake with ratchet gear, lever-type equalizer, shoes 230×120mm, brake chamber with diaphragm spring brake cylinder, service brake – hand-operated, auxiliary – foot-pedal operated.
1.6	Operator's cab	Heat-insulated, 2 electric heaters including 1 – with demister system, operator console. GRP design with impact and falling object protection.
1.7	Hydraulic system	Single-circuit; type 310.4.112 axial-piston pump for the actuation of outriggers, mast lifting hydraulic cylinders, upper section extension draw-works and auxiliary (Kermak) winch, hydraulic tong. Oil heating system.
1.8	Pneumatic system	With air dryer, air receivers volume – 60l.
	Operating pressure, kg/cm²	7
	Additional equipment	Pneumatic spider connector
	Truck electrical equipment	Explosion-proof design
1.9	Length of power cable for truck connection to the external mains, m	30
1.10	Truck lighting	Explosion-proof LED lamps
	Power supply voltage, V	24 (from the chassis on-board electric system and transformer-rectifier)
1.11	Emergency drive for rig dismantling	Pump unit NSh-4, electric motor 3kW, 380V
	External hydraulic power unit connection	Fitting 3/4"
	Hand-operated pump	For mast lifting and cab tilting.
1.12	Dimensions, mm, max	12000 x 2500 x 4000
1.13	Truck weight, t, max	27
	The truck fully complies with public roadway regulations without the need for dimensions and axle load permits	
1.14	Auxiliary winch	Hydraulic
	Hook load, t	3
	Rope diameter, mm	13
1.15	Charging unit	Orion-410
1.16	Measurement package	DEL-150
	Controlled parameters	String weight
1.17	Overload limiter	Electro-pneumatic based on the DEL-150 device
1.18	Hook block lifting height limiter	Electro-pneumatic, cable-type
1.19	Truck leveling	2 bubble-type incline levels
1.20	Emergency engine stop	Air gate valve actuated from operator's cab
1.21	Locking of stabilizing jacks	Mechanical locks
1.22	Transfer gearbox disconnection at the upper equipment operation	Manual



# BARS-50N

Truck for repair of directional wells for the ultra-viscous oil extraction



## 1. Purpose

The truck is intended for ultra-viscous oil well servicing, workover and production testing after drilling in the regions with temperate and cold climate at the ambient temperature from -45°C to +50°C. Climatic modification – Y, placement category – I as per the GOST 15150.

## 2. Standard truck package

1	Derrick and draw-works unit	1
	Chassis with the power-plant	1
	Mast with top and bottom crown-blocks	1
	RIH/POOH operation hydraulic cylinder (main hydraulic cylinder)	1
	Carriage with built-in pneumatic elevator	1
	Remote mast lifting console	1
	Back and center foundation beams	1 set
	Front foundation piers	2
	Hydraulic tong hanger	1 set
	Manifold standpipe DN50, pressure 25MPa	1
	Built-in fluid drain funnel	1
	Mast pipe centralizer	2
	Operator's cab with operator console	1
	Hydraulic outriggers with the mechanical locks, item	6
	Automatic elevator	1
	Oil cooler	1
	Oil heating system	1
	ESP cable roller	1
	Hydraulic blowout preventer drive	1
	Overload limiter	1 set
2	Swivel VE-50	1
3	Hydraulic tong GKSh-2000N	1
4	Mates under truck, items	6
5	Working platform	1
6	Hydraulic pipe handler RK-8500V with pipe grab	1 set



### 3. Standard truck package specifications

1	Derrick and draw-works unit	
1.1	Safe string load on the automatic elevator, t – at string pulling – at string running	100 40
1.2	Transport base Wheel arrangement Power drive Engine power, hp.	Self-propelled chassis SABR-22103 10×8.1 KamAZ-260 (E-2) 260
1.3	Gearbox Truck mast Number of sections Mast tilt angle, deg. Transportation length, mm Working length, mm Mast lifting Upper section extension Manifold standpipe with gooseneck	KamAZ-154 Tilting, extending (telescopic), flat design 2 30-90 13000 19000 Hydraulic jack Main hydraulic cylinder DN50, pressure 25MPa
1.4	RIH/POOH operation hydraulic cylinder (main hydraulic cylinder)	Single-section, piston diameter 240mm, stroke – 6300mm cylinder pressure – 45MPa max.
1.5	Operator's cab with operator console	Heated. Demister system. Impact and object falling protection.
1.6	Hydraulic system	Three-circuit; 310.4.160 type pump – 1 item; 310.4.112 pumps – 2 items, working pressure up to 35MPa. Actuation of truck machinery, hydraulic tong GKSh-2000N, pipe handler RK-8500V. Oil heating and cooling system.
1.7	Pneumatic system	With air dryer
1.8	Truck electrical equipment	Explosion-proof design
1.9	Truck lighting Power supply voltage, V	Explosion-proof LED lamps 24
1.10	Emergency drive	Fittings for external hydraulic power unit connection
1.11	Dimensions, mm, max	13000 x 2500 x 4300
1.12	Truck weight, t, max	37
1.13	Charging unit Measurement package	Orion-410 DEL-150
1.14	Controlled parameters	Hydraulic tong torque, main hydraulic cylinder pressure
1.15	Overload limiter	Main hydraulic cylinder maximum pressure sensors based on the DEL-150 device
1.16	Emergency engine stop	Air gate valve actuated from operator's cab and remote mast lifting console
1.17	Remote mast lifting console	Cable 20m
1.18	Truck leveling	2 bubble or electronic type incline levels
1.19	Locking of stabilizing jacks	Mechanical locks
1.20	Hydraulic tong hanger	2 hydraulic cylinders: tong up and down motion, tong rotation
2	Operating swivel	VE-50
3	Hydraulic tong	GKSh-2000N
4	Mates under truck, items Dimensions, mm	6 5000x2000x150
5	Working platform, mm	2000x3500x3000



# BARS-80

Truck for well workover, production testing and drilling (configuration with the short mast without the racking platform)

## 1. Purpose

The truck is intended for well workover, production testing and drilling in the regions with temperate and cold climate at the ambient temperature from -45°C to +50°C. Climatic modification – Y, placement category – I as per the GOST 15150.



## 2. Standard truck package

1	Derrick and draw-works unit	1
	Chassis with the power-plant	1
	Upper equipment drive-train (power take-off assembly, 3-stage gearbox of upper equipment, rotor drive reducing gear)	1
	Pinion-type draw-works with bevel gear box	1
	Mast with crown-block, manifold standpipe	1 set
	Back mast support	1
	Remote mast lifting and laying down console	1
	Traveling block	1
	Driller's station with the driller's console	1
	Back foundation beam	1
	Front foundation piers	2
	GKSh-1500, GKSh-1800 type hydraulic tong hanger	1
	KMT type power tongs hanger	2
	ESP roller bracket hanger	1
	Mud bucket hanger	1
	Hydraulic cathead	1
	Rotary-drill line (string-up), m	400
	Electrical equipment connecting cable, m	35
	Truck electric, hydraulic, pneumatic systems	1 set
	Traveling block limit switch, overload limiter	1 each
	SPK	1 set
	Spare wheel holder	1
2	Measurement package DEL-150	1

## 3. Standard truck package specifications

1	Derrick and draw-works unit				
1.1	Safe hook load, t	80			
	- with wind guys installation	80			
	- without wind guys installation	50			
1.2	Transport base	Self-propelled chassis SABR-22103 on the KamAZ assemblies 10×8.1	Self-propelled chassis SABR on the KrAZ assemblies 6×6.2	Self-propelled chassis SABR on the KrAZ assemblies 8×6.1	Semitrailer SP-94183 3-axle single-tire
	Wheel arrangement				
	Truck and chassis power drive	YaMZ-238B1	YaMZ-238B1	YaMZ-238B1	YAMZ-238M2
	Engine power, hp.	(E-0) 300	(E-0) 300	(E-0) 300	(E-0) 240
	Gearbox	YaMZ-238	YaMZ-238	YaMZ-238	YaMZ-236
1.3	Truck mast with "tubing anchor"	Tilting open-face box-section mast			
	Number of sections	material St. 09Г2С			
	Ground to crown-block axis height, m	2			
	Hook lifting height, m	22.06			
	Tilt angle, deg.	18			
	Mast lifting	3°			
		2 hydraulic cylinders			



	Upper section extension Manifold standpipe with gooseneck	Hydraulic draw-works DN50, pressure 25MPa
1.4	Block-and-tackle system String-up Ratio Rotary-drill line diameter, mm	4x3 6 25
1.5	Draw-works  Draw-works brake	Pinion-type single-shaft single-drum with air-operated clutch. Draw-works drive bevel gear box. Draw-works operation – from the driller's console. Double-band with lever-type equalizer, shoes 230×120mm, service brake – hand-operated, auxiliary – foot-pedal operated.
1.6	Driller's station with the driller's console  Driller's shelter Driller's station floor heating Optionally, installation of operator's cab to the truck with truck control function duplication is available. GRP cabin with heating and demister system, impact and object falling protection. If agreed, cabin installation behind the draw-works at the rear truck platform is available.	Located at the rear of truck, to the left in the travel direction Rubb shelter Electrical explosion-proof heating element
1.7	Hydraulic system  Optionally, installation of hydraulic rotor drive of R-250, R-80×400 type with hydraulic power unit is available	Single-circuit; type 310.4.112 axial-piston pump for the actuation of outriggers, mast lifting hydraulic cylinders, upper section extension draw-works and auxiliary (Kermak) winch, hydraulic cathead and hydraulic tong.
	Pneumatic system	With air dryer, air receivers volume – 60l.
1.8	Operating pressure, kg/cm <sup>2</sup> Additional equipment Truck electrical equipment	7 Pneumatic spider connector Explosion-proof design
1.9	Length of power cable for truck connection to the external mains, m Truck lighting	30  Explosion-proof LED lamps
1.10	Power supply voltage, V Emergency drive for rig dismantling External hydraulic power unit connection	24 (from the chassis on-board electric system and transformer-rectifier) Pump unit NSh-4, electric motor 3kW, 380V Fitting 3/4"
1.11	If agreed, installation of emergency drive for the string RIH/POOH operation completion and rig dismantling is available	
1.12	Dimensions, mm, max Truck weight, t, max The truck fully complies with public roadway regulations without the need for dimensions and axle load permits	12000 x 2500 x 4000 35
1.13	Auxiliary winch Hook load, t Rope diameter, mm	Hydraulic 3 13
1.14	Charging unit	Orion-410
1.15	Measurement package Controlled parameters	DEL-150 String weight
1.16	Overload limiter	Electro-pneumatic based on the DEL-150 device
1.17	Hook block lifting height limiter	Electro-pneumatic, cable-type
1.18	Truck leveling	2 bubble-type incline levels
1.19	Emergency engine stop	Air gate valve actuated from operator's cab and remote mast lifting console
1.20	Locking of stabilizing jacks	Mechanical locks
1.21	Transfer gearbox disconnection at the upper equipment operation	Manual
1.22	Remote mast lifting and upper section extension console	Electrical, cable length – 35m



# BARS-80 Truck for well workover, production testing and drilling (configuration with the long mast with the racking platform)

## 1. Purpose

The truck is intended for well workover, production testing and drilling in the regions with temperate and cold climate at the ambient temperature from -45°C to +50°C. Climatic modification – Y, placement category – I as per the GOST 15150.



## 3. Standard truck package

1	Derrick and draw-works unit	1
	Chassis with the power-plant	1
	Upper equipment drive-train (power take-off assembly, 2-stage gearbox of upper equipment, rotor drive) reducing gear)	1
	Pinion-type draw-works with bevel gear box	1
	Mast with crown-block, manifold standpipe	1 set
	Racking platform with derrick escape and shelter	1
	Remote mast lifting and upper section extension console	1
	Traveling block	1
	Driller's station with the driller's console	1
	Back foundation beam	1
	GKSh-1800, GKSh-3200 type hydraulic tong hanger	1
	KMT type power tongs hanger	2
	ESP roller bracket hanger	1
	Mud bucket hanger	1
	Hydraulic cathead	2
	Rotary-drill line (string-up), m	500
	Electrical equipment connecting cable, m	50
	Emergency drive for the string RIH/POOH operation completion and rig dismantling	1
	Truck electric, hydraulic, pneumatic systems	set
	Traveling block limit switch	1
	Overload limiter	1
	Operating and accompanying documentation	set
	Truck SPK	set
	Spare wheel holder	1
2	Measurement package DEL-150	1
3	Rotary base	1
4	Standing pipe rack	1
5	Rotor RUP-560 with PKR-560 (or spider SPG-100)	set
6	Drilling swivel	1
7	Kelly stem	1
8	Drilling link (pair)	1
9	Catwalk	1
10	Ramp	set
11	Emergency compressor S-412M	1



### 3. Standard truck package specifications

1	Derrick and draw-works unit				
1.1	Safe hook load, t - with wind guys installation - without wind guys installation	80 80 -			
1.2	Transport base	Self-propelled chassis SABR-23103-06 12x12.1 "Madara" axles YaMZ-7511.10 400 YaMZ-239	BAZ-69096  10x10.1  YaMZ-7511 400 YaMZ-239	MZKT-7004  10x10.1  YaMZ-7511 400 YaMZ-239	Semitrailer SP-95183 3-axle 2-tire YaMZ-7511 400 YaMZ-239
	Wheel arrangement				
	Truck and chassis power drive				
	Engine power, hp.				
	Gearbox				
1.3	Truck mast with "tubing anchor" Number of sections Ground to crown-block axis height, m Hook lifting height, m Tilt angle, deg. Mast lifting Upper section extension Manifold standpipe with service platform	Tilting open-face box-section mast material St. 09Г2С 2 32 28 3° 2 hydraulic cylinders DN60, BRS-21/2" with phase separator and pressure-gauge			
1.4	Block-and-tackle system String-up Ratio Rotary-drill line diameter, mm	4x3 6 25			
1.5	Racking platform  Ø114mm tubing board capacity, lin.m	3 platform positions, platform with shelter, height 2.5 m, with escape system  2200			
1.6	Drilling draw-works  Draw-works brake	Pinion-type single-shaft single-drum, air-line coupling-actuated. Speed selection from the driller's console. Heavy-duty draw-works drive bevel gear box. Draw-works control – from the driller's station. Double-band with equalizer, shoes 230×120mm, service brake – hand-operated, auxiliary – foot-operated.			
1.7	Driller's station with the driller's console  Driller's shelter Driller's station floor heating	Located at in the left rear of truck at the working platform height. Rubb shelter Electrical explosion-proof heating element			
1.8	Hydraulic system  If agreed, installation of oil cooler is available	310.4.112 type pumps – 2 items; axial-piston pump for actuation of truck machinery, hydraulic tong, hydraulic rotor and 2 hydraulic catheads.			
1.9	Pneumatic system Operating pressure, kg/cm <sup>2</sup> Additional equipment	With air dryer, air receivers volume – 100l up to 10  Pneumatic spider connector			
1.10	Truck electrical equipment	Explosion-proof design			
1.11	Truck lighting	Explosion-proof LED lamps			
1.12	Power supply voltage, V Emergency drive for the RIH/POOH operation completion and rig dismantling External hydraulic power unit connection	24 Electric motor 30kW, 380V, chain drive to drive-train. Emergency compressor S-412M Fitting 3/4"			
1.13	Dimensions, mm, max	19000 × 2500 × 4500 (without racking platform)			
1.14	Truck weight, t, max	55			
1.15	Auxiliary winch Hook load, t	Hydraulic 3			
	Rope diameter, mm	13			
1.16	Charging unit	APZA-500			



1.17	Measurement package Controlled parameters	DEL-150 string weight, hydraulic tong torque, rotor torque and rpm, hydraulic fluid pressure.
1.18	Overload limiter	Electro-pneumatic based on the DEL-150 device
1.19	Hook block lifting height limiter	Electro-pneumatic, cable-type
1.20	Truck leveling	2 bubble-type incline levels
1.21	Emergency engine stop	Air gate valve operated from the driller's station and remote console.
1.22	Hydraulic catheads, 2 items	Stroke – 1000mm, force 5t, location at the truck mast.
1.23	Remote mast lifting and upper section extension console	Cable 45m
1.24	Locking of stabilizing jacks	Mechanical locks
1.25	Mechanical rotor drive	R-80×400 or RUP-560 type. Reversing rotor drive reducing gear with pneumatic brake for the spring release. Drive to rotor with universal-shaft or chain drive. Rotation transmission to rotary table by vertical universal shaft or chain reducing gear.
1.26	Hydraulic rotor drive	R-80×400 or RUP-560 type with hydraulic drive. Rotor actuation from the 2 axial-piston pumps of 310.4.112 type. Installation of hydraulic oil cooling system is available.
2	Rotary base	Telescopic type. Dimensions: 6×2.5×5m (to rotary table) in working position. Manual hoist 5t. Blowout preventer service platform. Enclosure with shelter of 2.5m high with weather shield
3	Standing pipe rack	Telescopic type. Dimensions: 6×2.5×5m (surface to ground)
4	Rotor RUP-560 with PKR-560 (or spider SPG-100)	Drive from bevel gear box through the vertical universal-shaft. Carrying capacity – 150t, opening Ø560mm, torque 20000NM, speed 0-150rpm, bushing 89×89mm
5	Drilling swivel VB-80	Carrying capacity – 80t, clear opening 75mm.
6	Kelly stem	VB-80×80×11300
7	Drilling link (pair)	ShBD-80×1500
8	Catwalk	Skid-mounted. Dimensions, mm 14000×2300×600, 6 racks of 6m long. Pipe kick-back. Chute, width
9	Ramp	Height 300 mm



# BARS-100 Truck for well workover, production testing and drilling (configuration with the short mast without the racking platform)

## 1. Purpose

The truck is intended for well workover, production testing and drilling in the regions with temperate and cold climate at the ambient temperature from -45°C to +50°C. Climatic modification – Y, placement category – I as per the GOST 15150.



## 2. Standard truck package

1	Derrick and draw-works unit	1
	Chassis with the power-plant	1
	Upper equipment drive-train (power take-off assembly, 2-stage gearbox of upper equipment, rotor drive reducing gear)	1
	Pinion-type draw-works with bevel gear box	1
	Mast with crown-block, manifold standpipe	1 set
	Racking platform with derrick escape and shelter	1
	Remote mast lifting and upper section extension console	1
	Hook block	1
	Driller's station with the driller's console	1
	Back foundation beam	1
	GKSh-1800, GKSh-3200 type hydraulic tong hanger	1
	KMT type power tongs hanger	2
	ESP roller bracket hanger	1
	Mud bucket hanger	1
	Electrical equipment connecting cable, m	50
	Emergency drive for the string RIH/POOH operation completion and rig dismantling	1
	Remote mast lifting and upper section extension console	Cable 35m
	Truck electric, hydraulic, pneumatic systems	set
	Traveling block limit switch	1
	Overload limiter	1
	Operating and accompanying documentation	set
	Truck SPK	set
2	Measurement package DEL-150	1

## 3. Standard truck package specifications

1	Derrick and draw-works unit				
1.1	Safe hook load, t	100			
	- with wind guys installation	100			
	- without wind guys installation	60			
1.2	Transport base	Self-propelled chassis SABR-22103 10x8.1 Axles KamAZ 43118 YaMZ-238B1 (E-0) 300 YaMZ-238	Self-propelled chassis SABR 6x6.2 Axles KrAZ YaMZ-238D (E-0) 330 YaMZ-238	Self-propelled chassis SABR 8x6.1 Axles KrAZ YaMZ-238D (E-0) 330 YaMZ-238	Semitrailer SP-94183  3-axle single-tire YaMZ-238M2 240 YaMZ-236
1.3	Truck mast with "tubing anchor"	Tilting open-face box-section mast material St. 09Г2С			
	Number of sections	2			
	Ground to crown-block axis height, m	22.06			



	Hook lifting height, m Tilt angle, deg. Mast lifting Upper section extension  Manifold standpipe with service platform	18 3° Hydraulic draw-works DN60, BRS-21/2" with phase separator and pressure-gauge
1.4	Block-and-tackle system String-up Rotary-drill line diameter, mm	6×4, 8-fold 25
1.5	Racking platform  Ø114mm tubing board capacity, lin.m	3 platform positions, platform with shelter, height 2.5 m, with escape system 2500
1.6	Drilling draw-works  Draw-works brake	Pinion-type, single-shaft, single-drum, speed selection from the driller's console. Heavy-duty draw-works drive bevel gear box. Draw-works operation – from the driller's station. Double-band with equalizer, shoes 230×120mm, service brake – hand-operated, auxiliary – foot-operated.
1.7	Driller's station with the driller's console  Driller's shelter	Located at the truck platform. Installation of driller's station floor electric heating system is available. Installation of operator's cab with the duplicate driller's console is available. Rubb shelter
1.8	Hydraulic system	Single-circuit; 310.4.112 type pumps – 2 items; axial-piston pump for actuation of truck machinery, hydraulic tong, hydraulic rotor and hydraulic cathead. Installation of oil cooler is available.
1.9	Pneumatic system Operating pressure, kg/cm <sup>2</sup>	With air dryer up to 10
1.10	Truck electrical equipment	Explosion-proof design
1.11	Truck lighting  Power supply voltage, V	Explosion-proof LED lamps 24
1.12	Emergency drive for the RIH/POOH operation completion and rig dismantling External hydraulic power unit connection	Electric motor 3kW, 380V, pump NSh-4  Fitting 3/4"
1.13	Dimensions, mm, max	12000 × 2500 × 4000 (without racking platform)
1.14	Truck weight, t, max	35
1.15	Auxiliary winch Hook load, t Rope diameter, mm	Hydraulic 3 13
1.16	Charging unit	APZA-500
1.17	Measurement package Controlled parameters	DEL-150 string weight, hydraulic tong torque, rotor torque and rpm, hydraulic fluid pressure.
1.18	Overload limiter	Electro-pneumatic based on the DEL-150 device
1.19	Hook block lifting height limiter	Electro-pneumatic, cable-type
1.20	Truck leveling	2 bubble-type incline levels
1.21	Emergency engine stop	Air gate valve operated from the driller's station and remote console.
1.22	Hydraulic catheads, 2 items	Stroke – 1000mm, force 5t, location at the truck mast.
1.23	Remote mast lifting and upper section extension console	Cable 35m
1.24	Locking of stabilizing jacks	Mechanical locks
1.25	Mechanical rotor drive	R-80×400 or RUP-560 type. Reversing rotor drive reducing gear with pneumatic brake for the spring release. Drive to rotor with universal-shaft or chain drive.
1.26	Hydraulic rotor drive	R-80×400 or RUP-560 type with hydraulic drive. Rotor actuation from the 2 axial-piston pumps of 310.4.112 type. Installation of hydraulic oil cooling system is available.



# BARS-100

## Truck for well workover, production testing and drilling (configuration with the long mast with the racking platform)

### 1. Purpose

The truck is intended for well workover, production testing and drilling in the temperate and cold climate at the ambient temperature from -45°C to +50°C. Climatic modification – Y, placement category – I as per the GOST 15150.



### 2. Standard truck package

1	Derrick and draw-works unit	1
	Chassis with the power-plant	1
	Upper equipment drive-train (power take-off assembly, 3-stage gearbox of upper equipment, rotor drive reducing gear)	1
	Pinion-type draw-works with bevel gear box	1
	Mast with crown-block, manifold standpipe	1 set
	Racking platform with derrick escape and shelter	1
	Remote mast lifting and upper section extension console	1
	Hook block	1
	Driller's station with the driller's console	1
	Back foundation beam	1
	GKSh-1800, GKSh-3200 type hydraulic tong hanger	1
	KMT type power tongs hanger	2
	ESP roller bracket hanger	1
	Mud bucket hanger	1
	Rotary-drill line (string-up), m	500
	Electrical equipment connecting cable, m	50
	Emergency drive for the string RIH/POOH operation completion and rig dismantling	1
	Truck electric, hydraulic, pneumatic systems	set
	Hydraulic catheads	2
	Traveling block limit switch	1
	Overload limiter	1
	Operating and accompanying documentation	set
	Truck SPK	set
	Spare wheel holder	1
2	Measurement package DEL-150	1
3	Rotary base	1
4	Standing pipe rack	1
5	Rotor RUP-560 with PKR-560 (or spider SPG-100)	set
6	Drilling swivel	1
7	Kelly stem	1
8	Drilling link (pair)	1
9	Catwalk	1
10	Ramp	set
11	Emergency compressor S-412M	1



### 3. Standard truck package specifications

1	Derrick and draw-works unit				
1.1	Safe hook load, t – with wind guys installation – without wind guys installation	100 100 –			
1.2	Transport base	Self-propelled chassis SABR-23103-06 12x12.1	Self-propelled chassis BAZ-69096 10x10.1	Self-propelled chassis MZKT-7004 10x10.1	Semitrailer SP-95183
	Wheel arrangement				3-axle 2-tire
	Truck and chassis power drive	YaMZ-27511.10 400	YaMZ-7511 400	YaMZ-7511 400	YaMZ-7511 400
	Engine power, hp.	YaMZ-239	YaMZ-239	YaMZ-239	YaMZ-239
	Gearbox				
1.3	Truck mast with “tubing anchor” Number of sections Ground to crown-block axis height, m Hook lifting height, m Tilt angle, deg. Mast lifting Upper section extension Manifold standpipe with service platform	Tilting open-face box-section mast material St. 09Г2С 2 32 28 3° 2 hydraulic cylinders Hydraulic draw-works DN76, BRS-3” with phase separator, pressure-gauge and hydraulic fluid pressure sensor.			
1.4	Block-and-tackle system String-up Ratio Rotary-drill line diameter, mm	6x4 8 25			
1.5	Racking platform  Ø114mm tubing board capacity, lin.m	3 platform positions, platform with shelter, height 2.5 m, with escape system  2500			
1.6	Drilling draw-works  Draw-works brake Installation of the “Hydromat” type hydrodynamic brake is available	Pinion-type single-shaft single-drum, air-line coupling-actuated. Heavy-duty draw-works drive bevel gear box. Draw-works operation – from the driller’s station. Double-band with equalizer, shoes 230×120mm, service brake – hand-operated, auxiliary – foot-operated.			
1.7	Driller’s station with the driller’s console Driller’s shelter Driller’s station floor heating	Located at in the left rear of truck at the working platform height. Rubb shelter Electrical explosion-proof heating element			
1.8	Hydraulic system	310.4.112 type pumps – 2 items; axial-piston pump for actuation of truck machinery, hydraulic tong, hydraulic rotor; installation of oil cooler is available.			
1.9	Pneumatic system Operating pressure, kg/cm² Additional equipment	With air dryer, air receivers volume – 100l. 7 Pneumatic spider connector			
1.10	Truck electrical equipment	Explosion-proof design			
1.11	Truck lighting Power supply voltage, V	Explosion-proof LED lamps 24			
1.12	Emergency drive for the RIH/POOH operation completion and rig dismantling External hydraulic power unit connection	Electric motor 30kW, 380V, chain drive to drive-train. Emergency compressor S-412M Fitting 3/4”			
1.13	Dimensions, mm, max	19000 × 2500 × 4500 (without racking platform)			
1.14	Truck weight, t, max	60			
1.15	Auxiliary winch Hook load, t Rope diameter, mm	Hydraulic 3 13			
1.16	Charging unit	APZA-500			
1.17	Measurement package Controlled parameters	DEL-150 string weight, hydraulic tong torque, rotor torque and rpm, hydraulic fluid pressure.			



1.18	Overload limiter	Electro-pneumatic based on the DEL-150 device
1.19	Hook block lifting height limiter	Electro-pneumatic, cable-type
1.20	Truck leveling	2 bubble-type incline levels
1.21	Emergency engine stop	Air gate valve operated from the driller's station and remote console.
1.22	Hydraulic catheads, 2 items	Stroke – 1000mm, force 5t, location at the truck mast.
1.23	Remote mast lifting and upper section extension console	Cable 45m
1.24	Locking of stabilizing jacks	Mechanical locks
1.25	Mechanical rotor drive	R-80×400 or RUP-560 type. Reversing rotor drive reducing gear with pneumatic brake for the spring release. Drive to rotor with universal-shaft or chain drive. Rotation transmission to rotary table by vertical universal shaft or chain reducing gear.
1.26	Hydraulic rotor drive	R-80×400 or RUP-560 type with hydraulic drive. Rotor actuation from the 2 axial-piston pumps of 310.4.112 type. Installation of hydraulic oil cooling system is available.
2	Rotary base	Telescopic type. Dimensions: 6×2.5×5m (to rotary table) in working position. Manual hoist 5t. Blowout preventer service platform. Enclosure with shelter of 2.5m high with weather shield
3	Standing pipe rack	Telescopic type. Dimensions: 6×2.5×5m (surface to ground)
4	Rotor RUP-560 with PKR-560 (or spider SPG-100)	Drive from bevel gear box through the vertical universal-shaft. Carrying capacity – 150t, opening Ø560mm, torque 20000NM, speed 0-150rpm, bushing 89×89mm
5	Drilling swivel VB-100	Carrying capacity – 100t, clear opening 75mm.
6	Kelly stem	VBT-89×89×11300
7	Drilling link (pair)	ShBD-100×1500
8	Catwalk	Skid-mounted. Dimensions, mm 14000×2300×600, 6 racks of 6m long. Pipe kick-back. Chute, width 1500mm.
9	Ramp	Height 300 mm



# BARS-125

## Truck for the well workover, completion and drilling

### 1. Purpose

The truck is intended for well workover, completion and drilling in the regions with temperate and cold climate at the ambient temperature from -45°C to +50°C. Climatic modification – Y, placement category – I as per the GOST 15150.



### 2. Standard truck package

1	Derrick and draw-works unit	1
	Chassis with the power-plant	1
	Drive-train of upper equipment (transfer gearbox group, distributing reduction gear, rotor drive reducing gear)	1
	Drilling draw-works with "rapid" and "slow" travel chain drive, auxiliary hydrodynamic brake of "hydromat" type and air-operated	1
	Mast with crown-block, manifold standpipe	1 set
	Racking platform with derrick escape and shelter	1
	Remote mast lifting and upper section extension console	1
	Hook block	1
	Driller's station with the driller's console	1
	Back foundation beam	1
	GKSh-3200, GKSh-4000 type hydraulic tong hanger	1
	KMT type power tongs hanger	2
	ESP roller bracket hanger	1
	Mud bucket hanger	1
	Electrical equipment connecting cable, m	50
	Emergency drive for the string RIH/POOH operation completion and rig dismantling	1
	Truck electric, hydraulic, pneumatic systems	set
	Hydraulic catheads	2
	Traveling block limit switch	1
	Overload limiter	1
	Operating and accompanying documentation	set
	Truck SPK	set
	Spare wheel holder	1
2	Measurement package DEL-150	1
3	Rotary base	1
4	Standing pipe rack	1
5	Rotor RUP-560 with PKR-560 (or spider SPG-125)	set
6	Drilling swivel VB-125	1
7	Kelly stem VBT-108×108×11300	1
8	Drilling link (pair)ShBD-125×1800	1
9	Catwalk	1
10	Ramp	set
11	Emergency compressor S-412M	1



### 3. Standard truck package specifications

1	Derrick and draw-works unit				
1.1	Safe hook load, t – with wind guys installation – without wind guys installation	125 125 –			
1.2	Transport base	Self-propelled chassis SABR-23103-07 14x12.1	Self-propelled chassis BAZ-69099 12x12.1	Self-propelled chassis MZKT-7003 12x12.1	Semitrailer SP-95183
	Wheel arrangement				3-axle 2-tire
	Truck and chassis power drive	TMZ-8431	TMZ-8431	TMZ-8431	TMZ-8431
	Engine power, hp.	470	470	470	470
	Gearbox	YaMZ-239	YaMZ-239	YaMZ-239	YaMZ-239
1.3	Truck mast with “tubing anchor” Number of sections Ground to crown-block axis height, m Hook lifting height, m Tilt angle, deg. Mast lifting Upper section extension Manifold standpipe with service platform	Tilting open-face box-section mast material St. 09Г2С 2 32-37 28-33 3° 2 hydraulic cylinders Hydraulic draw-works DN76, pressure 350kg/sm <sup>2</sup> , BRS-3” on the top and on the bottom, with phase separator, pressure-gauge and hydraulic fluid pressure sensor.			
1.4	Block-and-tackle system String-up Rotary-drill line diameter, mm	6×4, 8-fold 28			
1.5	Racking platform Ø114mm tubing board capacity, lin.m	3 platform positions, platform with shelter, height 2.5 m, with escape system 3000			
1.6	Drilling draw-works Draw-works brake Auxiliary brake	With chain drive, drive-train of “rapid” and “slow” travel  Double-band with equalizer, shoes 230×120mm, service brake – hand-operated, auxiliary – foot-operated. Hydrodynamic, “hydromat” type			
1.7	Driller’s station with the driller’s console Driller’s shelter Driller’s station floor heating	Located at the bottom mast section at the working platform height. Rubb shelter Electrical explosion-proof heating element or steam heating from steam generating unit.			
1.8	Hydraulic system	310.4.112 type pumps – 2 items; axial-piston pump for actuation of truck machinery, GKSh-3200 type hydraulic tong and RUP-560 type hydraulic rotor.			
1.9	Pneumatic system Operating pressure, kg/cm <sup>2</sup> Additional equipment	With air dryer, air receivers volume – 100l up to 10 Pneumatic spider connector			
1.10	Truck electrical equipment	Explosion-proof design			
1.11	Truck lighting Power supply voltage, V	Explosion-proof LED lamps 24			
1.12	Emergency drive for the RIH/POOH operation completion and rig dismantling External hydraulic power unit connection	Electric motor 30kW, 380V, chain drive to drive-train. Emergency compressor S-412M Fitting 3/4”			
1.13	Dimensions, mm, max	27000 × 3300 × 4500 (without racking platform)			
1.14	Truck weight, t, max	70			
1.15	Auxiliary winch Hook load, t Rope diameter, mm	Hydraulic 3 13			
1.16	Charging unit	APZA-800			
1.17	Measurement package Controlled parameters	DEL-150 String weight, hydraulic tong torque, power tongs torque, rotor torque and rpm, hydraulic fluid pressure in the manifold standpipe.			



1.18	Overload limiter	Electro-pneumatic based on the DEL-150 device
1.19	Hook block lifting height limiter	Electro-pneumatic, cable-type
1.20	Truck leveling	2 bubble or electronic type incline levels
1.21	Emergency engine stop	Air gate valve operated from the driller's station and remote console.
1.22	Hydraulic catheads, 2 items	Stroke – 1000mm, force 5t, location at the truck mast.
1.23	Remote mast lifting and upper section extension console	Cable 45m
1.24	Locking of stabilizing jacks	Mechanical locks
1.25	Mechanical rotor drive	Rotor RUP-560. Actuation through reversing rotor drive reducing gear with pneumatic brake for the spring release. Rotation transmission to rotor from the bevel gear box through the vertical universal-shaft.
1.26	Hydraulic rotor drive	RUP-560 type with hydraulic drive. Rotor actuation from the 2 axial-piston pumps of 310.4.112 type. Installation of hydraulic oil cooling system is available.
2	Rotary base	Telescopic type. Dimensions: 6×2.5×6m (to rotary table) in working position. Manual hoist (2 items) 5t. Blowout preventer service platform. Enclosure with shelter of 2.5m high with weather shield
3	Standing pipe rack	Telescopic type. Dimensions: 6×2.5×6m (surface to ground)
4	Rotor RUP-560 with PKR-560 (or spider SPG-125)	Carrying capacity – 150t, opening Ø560mm, torque 20000NM, speed 0-150rpm, kelly stem bushing 108×108mm
5	Drilling swivel VB-125	Carrying capacity – 125t, clear opening 75mm.
6	Kelly stem	VBT-108×108×11300
7	Drilling link (pair)	ShBD-125×1800
8	Catwalk	Skid-mounted. Dimensions, mm 14000×2300×600, 6 racks of 6m long. Pipe kick-back. Chute, width 1500mm.
9	Ramp	Height 300 mm



## BARS-140 Truck for the well workover, completion and drilling

### 1. Purpose

The truck is intended for well workover, completion and drilling in the regions with temperate and cold climate at the ambient temperature from -45°C to +50°C. Climatic modification – Y, placement category – I as per the GOST 15150.



### 2. Standard truck package

1	Derrick and draw-works unit	1
	Chassis with the power-plant	1
	Drive-train of upper equipment (transfer gearbox group, distributing reduction gear, rotor drive reducing gear)	1
	Drilling draw-works with "rapid" and "slow" travel chain drive, auxiliary hydrodynamic brake of "hydromat" type and air-operated	1
	Mast with crown-block, manifold standpipe	1
	Racking platform with derrick escape and shelter	1
	Remote mast lifting and upper section extension console	1
	Hook block	1
	Driller's station with the driller's console	1
	Back foundation beam	1
	GKSh-3200, GKSh-4000 type hydraulic tong hanger	1
	KMT type power tongs hanger	2
	ESP roller bracket hanger	1
	Mud bucket hanger	1
	Electrical equipment connecting cable, m	50
	Emergency drive for the string RIH/POOH operation completion and rig dismantling	1
	Truck electric, hydraulic, pneumatic systems	set
	Hydraulic catheads	2
	Traveling block limit switch	1
	Overload limiter	1
	Operating and accompanying documentation	set
	Truck SPK	set
	Spare wheel holder	1
2	Measurement package DEL-150	1
3	Rotary base	1
4	Standing pipe rack	1
5	Rotor RUP-560 with PKR-560 (or spider SPG-140)	set
6	Drilling swivel VB-140	1
7	Kelly stem VBT-108×108×11300	1
8	Drilling link (pair)ShBD-140×1800	1
9	Catwalk	1
10	Ramp	set
11	Emergency compressor S-412M	1



### 3. Standard truck package specifications

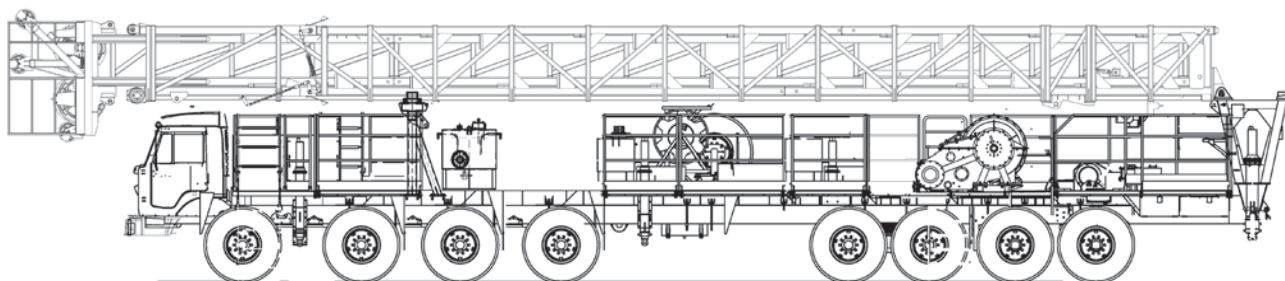
1	Derrick and draw-works unit				
1.1	Safe hook load, t – with wind guys installation – without wind guys installation	140 140 –			
1.2	Transport base  Wheel arrangement  Truck and chassis power drive Engine power, hp. Gearbox	Self-propelled chassis SABR-23103-07 14x12.1  TMZ-8431 470 YaMZ-239	Self-propelled chassis BAZ-69099 12x12.1  TMZ-8431 470 YaMZ-239	Self-propelled chassis MZKT-7003 12x12.1  TMZ-8431 470 YaMZ-239	Semitrailer SP-95183  3-axle 2-tire TMZ-8431 470 YaMZ-239
1.3	Truck mast with “tub-ing anchor” Number of sections Ground to crown-block axis height, m Hook lifting height, m Tilt angle, deg. Mast lifting Upper section extension Manifold standpipe with service platform	Tilting open-face box-section mast material St. 09Г2С 2 37 33 3° 2 hydraulic cylinders Hydraulic draw-works DN76, pressure 350kg/sm <sup>2</sup> , BRS-3” on the top and on the bottom, with phase separator, pressure-gauge and hydraulic fluid pressure sensor.			
1.4	Block-and-tackle system String-up Rotary-drill line diameter, mm	6×4, 8-fold 28			
1.5	Racking platform  Ø114mm tubing board capacity, lin.m	3 platform positions, platform with shelter, height 2.5 m, with escape system  3500			
1.6	Drilling draw-works Draw-works brake  Auxiliary brake	With chain drive, drive-train of “rapid” and “slow” travel  Double-band with equalizer, shoes 230×120mm, service brake – hand-operated, auxiliary – foot-operated. Hydrodynamic, “hydromat” type			
1.7	Driller’s station with the driller’s console Driller’s shelter Driller’s station floor heating	Located at the bottom mast section at the working platform height. Rubb shelter Electrical explosion-proof heating element or steam heating from steam generating unit.			
1.8	Hydraulic system	310.4.112 type pumps – 2 items; axial-piston pump for actuation of truck machinery, GKSh-3200 type hydraulic tong and RUP-560 type hydraulic rotor. Installation of oil cooler is available.			
1.9	Pneumatic system Operating pressure, kg/cm <sup>2</sup> Additional equipment	With air dryer, air receivers volume – 100l. 7 Pneumatic spider connector			
1.10	Truck electrical equipment	Explosion-proof design			
1.11	Truck lighting Power supply voltage, V	Explosion-proof LED lamps 24			
1.12	Emergency drive for the RIH/POOH operation completion and rig dismantling External hydraulic power unit connection	Electric motor 30kW, 380V, chain drive to drive-train. Emergency compressor S-412M Fitting 3/4”			
1.13	Dimensions, mm, max	27000 × 3300 × 4500 (without racking platform)			
1.14	Truck weight, t, max	75			
1.15	Auxiliary winch Hook load, t Rope diameter, mm	Hydraulic 3 13			
1.16	Charging unit	APZA-800			
1.17	Measurement package Controlled parameters	DEL-150 String weight, hydraulic tong torque, power tongs torque, rotor torque and rpm, hydraulic fluid pressure in the manifold standpipe.			



1.18	Overload limiter	Electro-pneumatic based on the DEL-150 device
1.19	Hook block lifting height limiter	Electro-pneumatic, cable-type
1.20	Truck leveling	2 bubble or electronic type incline levels
1.21	Emergency engine stop	Air gate valve operated from the driller's station and remote console.
1.22	Hydraulic catheads, 2 items	
		Stroke – 1000mm, force 5t, location at the truck mast.
1.23	Remote mast lifting and upper section extension console	Cable 45m
1.24	Locking of stabilizing jacks	Mechanical locks
1.25	Mechanical rotor drive	Rotor RUP-560. Actuation through reversing rotor drive reducing gear with pneumatic brake for the spring release. Rotation transmission to rotor from the bevel gear box through the vertical universal-shaft.
1.26	Hydraulic rotor drive	RUP-560 type with hydraulic drive. Rotor actuation from the 2 axial-piston pumps of 310.4.112 type. Installation of hydraulic oil cooling system is available.
2	Rotary base	Telescopic type. Dimensions: 6×2.5×6m (to rotary table) in working position. Manual hoist (2 items) 5t. Blowout preventer service platform. Enclosure with shelter of 2.5m high with weather shield
3	Standing pipe rack	Telescopic type. Dimensions: 6×2.5×6m (surface to ground)
4	Rotor RUP-560 with PKR-560 (or spider SPG-140)	Carrying capacity – 150t, opening Ø560mm, torque 20000NM, speed 0-150rpm, kelly stem bushing 108×108mm
5	Drilling swivel VB-140	Carrying capacity – 140t, clear opening 75mm.
6	Kelly stem	VBT-108×108×11300
7	Drilling link (pair)	ShBD-140×1800
8	Catwalk	Skid-mounted. Dimensions, mm 14000×2300×600, 6 racks of 6m long. Pipe kick-back. Chute, width 1500mm.
9	Ramp	Height 300 mm



# BARS-160 Truck for the well workover, completion and drilling



## 1. Purpose

The truck is intended for well workover, completion and drilling in the regions with temperate and cold climate at the ambient temperature from -45°C to +50°C. Climatic modification – Y, placement category – I as per the GOST 15150.

## 2. Standard truck package

1	Derrick and draw-works unit	1
	Chassis with the power-plant	1
	Drive-train of upper equipment (transfer gearbox group, distributing reduction gear, rotor drive reducing gear)	1
	Drilling draw-works with "rapid" and "slow" travel chain drive, auxiliary hydrodynamic brake of "hydromat" type and air-operated	1
	Mast with crown-block, manifold standpipe	1
	Racking platform with derrick escape and shelter	1
	Remote mast lifting and upper section extension console	1
	Hook block	1
	Driller's station with the driller's console	1
	Back foundation beam	1
	GKSh-4000, GKSh-4000 type hydraulic tong hanger	1
	KMT type power tongs hanger	2
	ESP roller bracket hanger	1
	Mud bucket hanger	1
	Electrical equipment connecting cable, m	50
	Emergency drive for the string RIH/POOH operation completion and rig dismantling	1
	Truck electric, hydraulic, pneumatic systems	set
	Hydraulic catheads	2
	Traveling block limit switch	1
	Overload limiter	1
	Operating and accompanying documentation	set
	Truck SPK	set
	Spare wheel holder	1
2	Measurement package DEL-150	1
3	Rotary base	1
4	Standing pipe rack	1
5	Rotor R-560 with PKR-560M	set
6	Drilling swivel VB-160	1
7	Kelly stem VBT-140x140x11500	1
8	Drilling link (pair)ShBD-160x1800	1
9	Catwalk	1
10	Ramp	set
11	Emergency compressor S-415	1



### 3. Standard truck package specifications

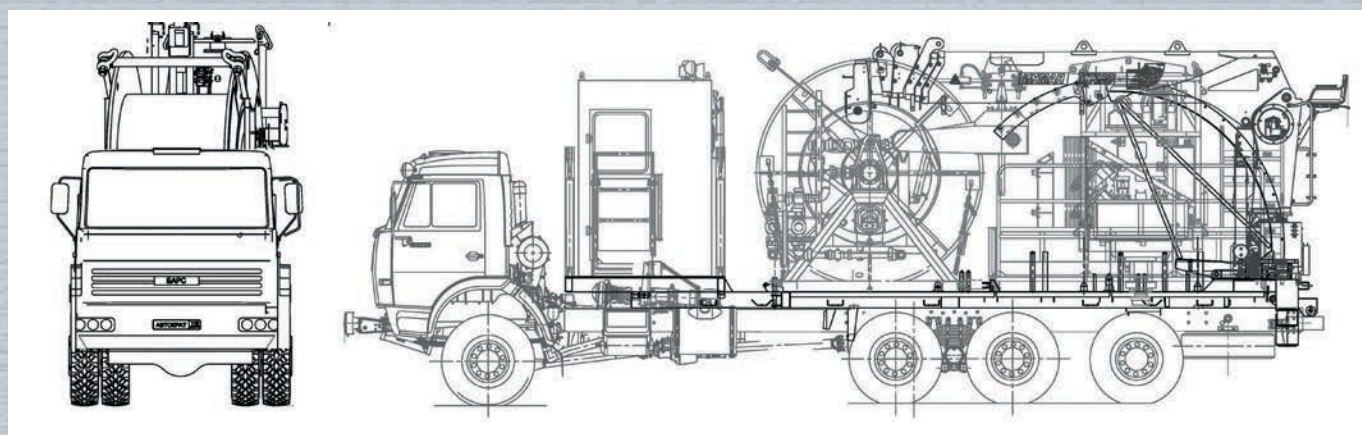
1	Derrick and draw-works unit			
1.1	Safe hook load, t	160		
	– with wind guys installation	160		
	– without wind guys installation	–		
1.2	Transport base	Self-propelled chassis SABR-23103-08 16×14.1	Self-propelled chassis PS-7 14×14.1	Semitrailer SP-96183 4-axle 2-tire
	Wheel arrangement	S-18, YaMZ-8502	S-18, YaMZ-8502	S-18, YaMZ-8502
	Truck and chassis power drive	600	600	600
	Engine power, hp.	Allison 4700 OFS	Allison 4700 OFS	Allison 4700 OFS
	Gearbox			
1.3	Truck mast with “tubing anchor”	Tilting open-face box-section mast material St. 09Г2С		
	Number of sections	2		
	Ground to crown-block axis height, m	37		
	Hook lifting height, m	33		
	Tilt angle, deg.	3°		
	Mast lifting	2 hydraulic cylinders		
	Upper section extension	Hydraulic draw-works		
	Manifold standpipe with service platform	DN76, pressure 350kg/sm <sup>2</sup> , BRS-3” on the top and on the bottom, with phase separator, pressure-gauge and hydraulic fluid pressure sensor.		
1.4	Block-and-tackle system	6x5		
	String-up	28		
	Rotary-drill line diameter, mm			
1.5	Racking platform	3 platform positions, platform with shelter, height 2.5 m, with escape system		
	Ø127mm tubing board capacity, lin.m	3300		
1.6	Drilling draw-works	With chain drive, drive-train of “rapid” and “slow” travel		
	Draw-works brake	Double-band with equalizer, shoes 230×120mm, service brake – hand-operated, auxiliary – foot-operated.		
	Auxiliary brake	Hydrodynamic, “hydromat” type		
1.7	Driller’s station with the driller’s console	Located at the bottom mast section at the working platform height.		
	Driller’s shelter	Rubber shelter		
	Driller’s station floor heating	Electrical explosion-proof heating element or steam heating from steam generating unit.		
1.8	Hydraulic system	310.4.112 type pumps – 2 items; axial-piston pump for actuation of truck machinery, GKSh-4000 type hydraulic tong.		
1.9	Pneumatic system	With air dryer, air receivers volume – 200l.		
	Operating pressure, kg/cm <sup>2</sup> Additional equipment	7 Pneumatic spider connector		
1.10	Truck electrical equipment	Explosion-proof design		
1.11	Truck lighting	Explosion-proof LED lamps		
	Power supply voltage, V	24		
1.12	Emergency drive for the RIH/POOH operation completion and rig dismantling	Electric motor 50kW, 380V, chain drive to drive-train. Emergency compressor S-415 Fitting 3/4”		
1.13	Dimensions, mm, max	27000 × 3500 × 4500 (without racking platform)		
	Truck weight, t, max	80		
1.14	Auxiliary winch	Hydraulic		
1.15	Hook load, t	5		
	Rope diameter, mm	15		
1.16	Charging unit	APZA-800		
1.17	Measurement package	DEL-150		
	Controlled parameters	String weight, hydraulic tong torque, power tongs torque, rotor torque and rpm, hydraulic fluid pressure in the manifold standpipe.		



1.18	Overload limiter	Electro-pneumatic based on the DEL-150 device
1.19	Hook block lifting height limiter	Electro-pneumatic, cable-type
1.20	Truck leveling	2 bubble-type incline levels
1.21	Emergency engine stop	Air gate valve operated from the driller's station and remote console.
1.22	Hydraulic catheads, 2 items	Stroke – 1000mm, force 5t, location at the truck mast.
1.23	Remote mast lifting and upper section extension console	Cable 45m
1.24	Locking of stabilizing jacks	Mechanical locks
1.25	Mechanical rotor drive	Rotor R-560. Actuation through reversing rotor drive reducing gear with pneumatic brake for the spring release. Rotation transmission to rotor through the chain reducing gear.
2	Rotary base	Telescopic type. Dimensions: 6×2.5×6m (to rotary table) in working position. Manual hoist (2 items) 10t. Blowout preventer service platform. Enclosure with shelter of 2.5m high with weather shield
3	Standing pipe rack	Telescopic type. Dimensions: 6×2.5×6m (surface to ground)
4	Rotor R-560 with PKR-560M	Carrying capacity – 150t, opening Ø560mm, torque 20000NM, speed 0-150rpm, kelly stem bushing 108×108mm
5	Drilling swivel VB-160	Carrying capacity – 160t, clear opening 75mm.
6	Kelly stem	VBT-108×108×11300
7	Drilling link (pair)	ShBD-160×1800
8	Catwalk	Skid-mounted. Dimensions, mm 14000×2300×600, 6 racks of 6m long. Pipe kick-back. Chute, width 1500mm.
9	Ramp	Height 300 mm



## BARS-10K Coiled-tubing drilling rig



### 1. Purpose

The coiled-tubing drilling rig is intended for well workover and production testing after drilling in the regions with temperate and cold climate at the ambient temperature from -45°C to +50°C. Climatic modification – Y, placement category – I as per the GOST 15150.

### 2. Standard truck package

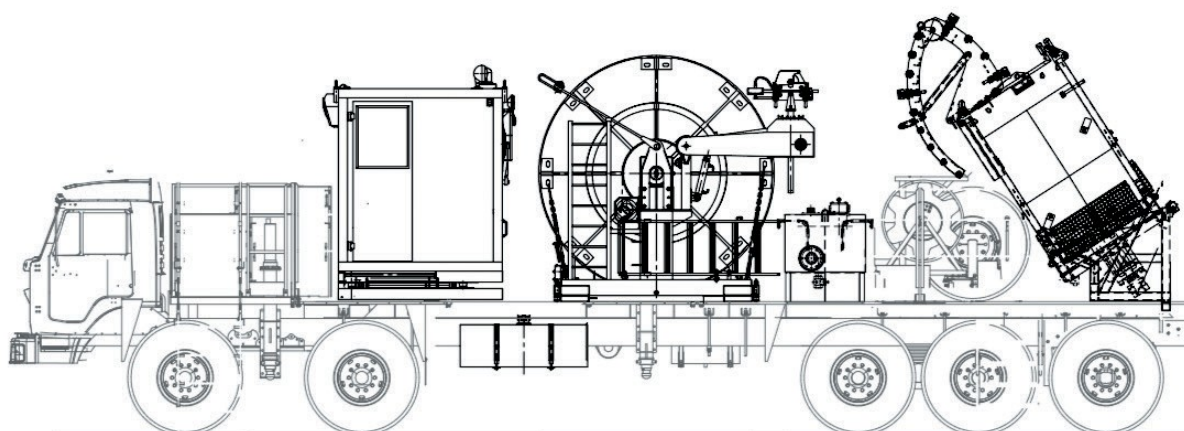
1	Chassis with the power-plant	1
2	Drive-train of upper equipment: power take-off assembly for the pump unit drive	1
3	Drilling rig hydraulic system	1 set
4	Operator's cab with operator console	1
5	Coiled tubing reel with the reducing gear and manifold	1
6	Injector of h/d 12.2t	1
7	Measuring-and-recording package	1
8	High-pressure hose reels	3
9	Blowout preventer equipment PPK-80×70	1
10	Pipe reduction inspection tool (coiled tubing tuboscope)	1
11	Trough-like guide	1 set
12	Telescopic legs	1 set
13	Equipment setting device of "IM-180 IT" type	1
14	Pack-off head	1

### 3. Standard truck package specifications

1	Coiled tubing diameter	up to Ø38.1		
2	Coiled tubing amount on the reel	2500m of Ø38.1 coiled tubing		
3	Working fluid pressure, max. MPa	up to 70		
4	Transport base	<div>Self-propelled chassis SABR-22103-03 on the KamAZ 65111 assemblies</div>		
	Wheel arrangement	8×6.2	MAZ-6317 6×6.1	KamAZ-65222 6×6.1
	Drilling rig and chassis power drive	KamAZ-260	YaMZ-7511	YaMZ-7511
	Engine power, hp.	260	400	400
	Gearbox	KPP-154	YaMZ-239	YaMZ-239
5	Overall dimensions, m	11.5x2.5x4	10.6x2.5x4	10.8x2.5x4
6	Weight, kg	34,300	34,000	34,100
7	Truck hydraulic system	DANFOSS pumps		
8	Operator's cab with control console panel	Heat-insulated, object falling protection, air-conditioner		
	Drilling rig machinery control	Hydraulic, from the operator console		
9	Loudspeaking communications system			
10	Drilling rig SPK			
11	Operating and permit documentation			



# BARS-20K Coiled-tubing drilling rig



## 1. Purpose

The coiled-tubing drilling rig is intended for well workover and production testing after drilling in the regions with temperate and cold climate at the ambient temperature from -45°C to +50°C. Climatic modification – Y, placement category – I as per the GOST 15150.

## 2. Standard truck package

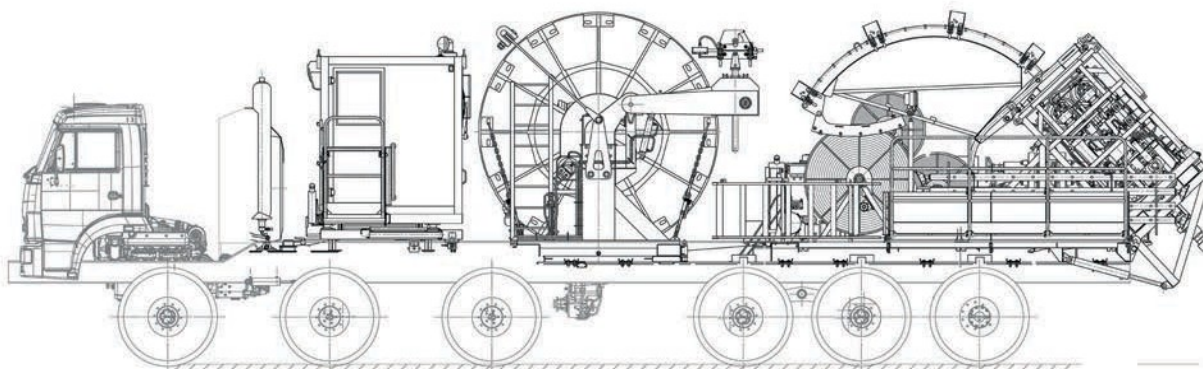
1	Chassis with the power-plant	1
2	Drive-train of upper equipment: power take-off assembly for the pump unit drive	1
3	Drilling rig hydraulic system	1 set
4	Operator's cab with operator console	1
5	Coiled tubing reel with the reducing gear and manifold	1
6	Injector of h/d 27	1
7	Measuring-and-recording package	1
8	High-pressure hose reels	3
9	Blowout preventer equipment PPK-80×70	1
10	Pipe reduction inspection tool (coiled tubing tuboscope)	1
11	Trough-like guide	1 set
12	Telescopic legs	1 set
13	Equipment setting device of "IM-240 IT" type (semitrailer-mounted)	1
14	Pack-off head	1

## 3. Standard truck package specifications

1	Coiled tubing diameter	Ø38.1 to Ø44.45mm		
2	Coiled tubing amount on the reel	3800m of Ø38.1 coiled tubing		
3	Working fluid pressure, max. MPa	up to 70		
4	Transport base	Self-propelled chassis SABR-22103-05	MZKT-652712	Semitrailer
	Wheel arrangement	10x10.1	8x8.1	4-axle single-tire
	Drilling rig and chassis power drive	YaMZ-7511	YaMZ-7511	YaMZ-7511
	Engine power, hp.	400	400	400
	Gearbox	YaMZ-239	YaMZ-239	YaMZ-239
5	Overall dimensions, m	16x2.5x4	13.6x2.5x4	20x2.5x4
6	Weight, kg max.	49,000	46,000	42,000
7	Truck hydraulic system	DANFOSS pumps		
8	Operator's cab with control console panel	Heat-insulated, object falling protection, air-conditioner		
	Drilling rig machinery control	Hydraulic, from the operator console		
9	Loudspeaking communications system			
10	Drilling rig SPK			
11	Operating and permit documentation			



## BARS-30K Coiled-tubing drilling rig



### 1. Purpose

The coiled-tubing drilling rig is intended for well workover and production testing after drilling in the regions with temperate and cold climate at the ambient temperature from -45°C to +50°C. Climatic modification – Y, placement category – I as per the GOST 15150.

### 2. Standard truck package

1	Chassis with the power-plant	1
2	Drive-train of upper equipment: power take-off assembly for the pump unit drive	1
3	Drilling rig hydraulic system	1 set
4	Operator's cab with operator console	1
5	Coiled tubing reel with the reducing gear and manifold	1
6	Injector of h/d 27 or 36t	1
7	Measuring-and-recording package	1
8	High-pressure hose reels	3
9	Blowout preventer equipment PPK-80×70	1
10	Pipe reduction inspection tool (coiled tubing tuboscope)	1
11	Trough-like guide	1 set
12	Telescopic legs	1 set
13	Equipment setting device of "IM-240 IT" type (semitrailer-mounted)	1
14	Pack-off head	1

### 3. Standard truck package specifications

1	Coiled tubing diameter	Ø38.1 to Ø44.45mm		
2	Coiled tubing amount on the reel	5000m of Ø38.1 coiled tubing		
3	Working fluid pressure, max. MPa	up to 70		
4	Transport base	Self-propelled chassis SABR-22103-06	MZKT-7004	Semitrailer
	Wheel arrangement	12x12.1	10x10.1	5-axle single-tire
	Drilling rig and chassis power drive	YaMZ-7511	YaMZ-7511	YaMZ-7511
	Engine power, hp.	400	400	400
	Gearbox	YaMZ-239	YaMZ-239	YaMZ-239
5	Overall dimensions, m	16.7x2.5x4.2	15x2.5x4.2	13x2.5x4
6	Weight, kg	62,000	59,000	55,000
7	Truck hydraulic system	DANFOSS pumps		
8	Operator's cab with control console panel	Heat-insulated, object falling protection, air-conditioner Hydraulic, from the operator console		
	Drilling rig machinery control			
9	Loudspeaking communications system			
10	Drilling rig SPK			
11	Operating and permit documentation			



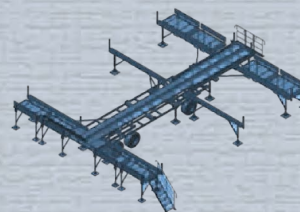
## Accessories and additional equipment for the truck-mounted workover rigs



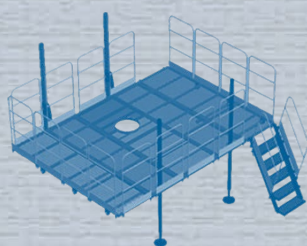
Working power platform  
Mast



Catwalk



semitrailer-  
or skid-mounted



Lightweight wellhead working platform  
with adjustable height



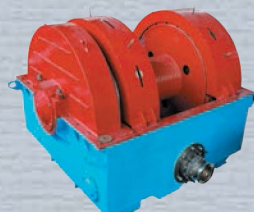
Ramp



Auxiliary draw-works (Kermak)



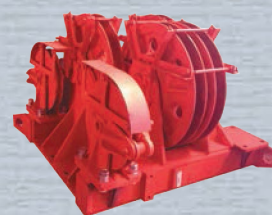
Retractable winch of  
upper mast section



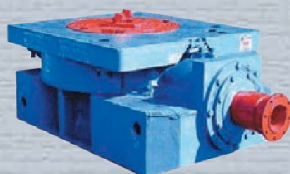
Drilling draw-works



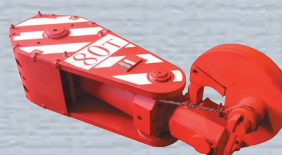
Bevel gear box



Crown-block



Drilling rotor  
(chain, universal-shaft, hydraulic)



Hook block, traveling block



Drilling, tubing,  
circulation swivels



Elevators



GKSh-1200/1500/1800/3200/4000  
type hydraulic tongs

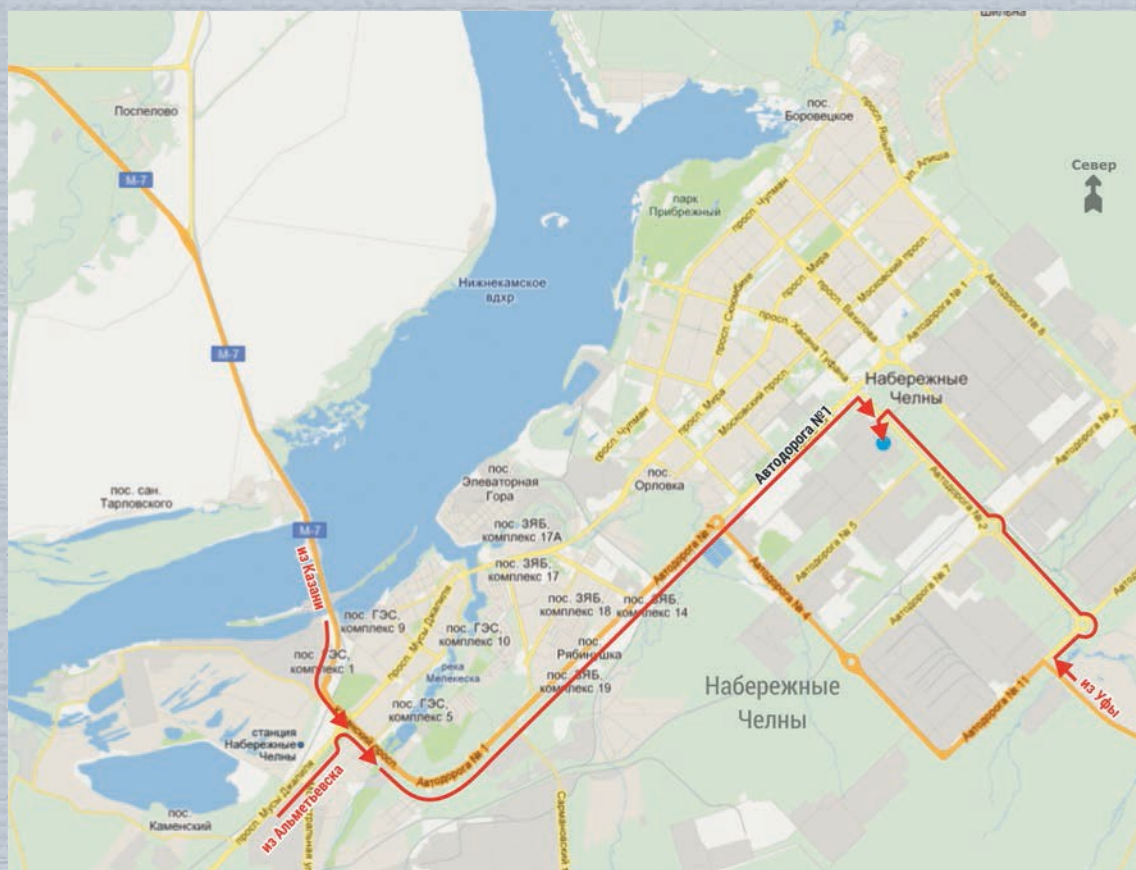


Kelly stems



Drilling links





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