

Open hole Closed hole

# SNGK-Sh-2 Digital Spectral Neutron Wide-range Gamma-ray logging tool

*The equipment was development by AO NPP VNIIGIS in cooperation with AO NPF GITAS*



is designed to register energy spectrum gamma-ray radiation, forming:

- from natural radioactive elements;
- during neutron deceleration and absorption process from sealed radionuclide source and high-energy gamma-radiation dissipation.

## REGISTERED INFORMATION CAN BE USED FOR:

- determination natural radioactive elements (U, Th, K) concentration;
- determination clay mineral assemblage;
- determination fluid content;
- lithological breaking-up of well cross-section;
- estimation of elements concentration (Cl, H, Si, Ca, Fe, Mn, Ni, Co, etc.), anomalously absorbing thermal neutrons;
- dissepating and absorptive neutron and gamma-ray rock parameters and its ratios.

## FEATURES AND ADVANTAGES

- register gamma-ray logging in energy wide range, increasing SNGK methodic possibility;
- SNGK-Sh/GK-S/NAK-S methods' performance during the single trip;
- the tool is a triple-sonde module with three multichannel energy spectrometers for full gamma-spectra radiation.

## SPECIFICATIONS

Gamma-quantum measurements range, MeV:	
- GK spectrum	0,1 ÷ 3,0
- SNGK-Sh spectrum	0,1 ÷ 9,0
Energy resolution, %	up to 12
Energy scale instability, %	up to 12
Spectrometric track dead-time, microsec	4
Maximum cable length, mm	5000
Maximum pressure, MPa	100*
Operating temperature range, °C	от -5 до +120
Tool dimensions, mm:	
- diameter	90
- length	2950
Weight, kg	55; 85

\*depends on housing material

**Delivery in complete set:** downhole tool, interface unit, technological software, maintenance tool, spare parts and accessories, certificate, operating manual.