SOCIETY OF PETROPHYSICISTS AND WELL LOG ANALYSTS

# QATAR CHAPTER



SPWLA Qatar Chapter Virtual Event

Guest Speaker

## Danil Nemushchenko

Head of Geosteering ROGII

# THEORY OF VENDOR INDEPENDENT STOCHASTIC INVERSION OF DEEP AZIMUTHAL RESISTIVITY TOOLS FOR GEOSTEERING, CASE STUDIES IN DIFFERENT CONDITIONS.

Zoom Meeting ID: **206 811 7061**

Meeting Passcode: **12345**

Registration Required

# Society of Petrophysicists and Well Log Analysts
# Qatar Chapter

c/o North Oil Company
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Qatar Section

## Technical Talk



The SPWLA – Qatar Chapter cordially invites you to a technical talk

Date: **07th February 2022**
Time: **12 – 1pm Qatar Time**
Venue: **Zoom Virtual Meeting**
Details **Zoom Meeting ID: 206 811 7061**
**Meeting Passcode : 12345**

Presenter: **Danil Nemushchenko from ROGII**
Topic: **Vendor independent stochastic inversion of deep azimuthal resistivity tools for Geosteering, case studies in different conditions**

Geosteering has become an integral services while drilling horizontal sections and allows operators to maximise the footage drilled in the target reservoir. Proactive geosteering is an effective method of placing the wellbore at desired intervals and proactively responding to prevent exit from these zones. Today, one of the most advanced technologies accomplishing this task is undoubtedly the deep-azimuthal resistivity tools, which provide information on contrasting boundaries, position on distance and keep the wellbore inside the target zone.

In this regard, there is a necessity of the general unified approach to the analysis of these data, independent of tool vendors. This method is stochastic inversion, which is realised as a module in independent software.

The interpretation of the deep-azimuthal resistivity data is not always obvious and can be influenced by many fine lamination and anisotropy, therefore, it is necessary to use a mathematical algorithm to transform it into an appropriate way for analysis and visualisation. This kind of algorithm is data inversion.

The ROGII company created and presented the first vendor-independent stochastic inversion, applicable to almost any deep-azimuthal induction tools on the market and allowing operators to standardise the performance of various geosteering services and analysing data themselves.

During presentation following themes will be considered:

- Theory of azimuthal resistivity physics
- Tool configuration and tool specifics, presented on the market
- Stochastic inversion theory
- Case studies

Biography:

Danil Nemushchenko is currently the Head of geosteering department in ROGII and technical analyst of resistivity module implementation

Danil has graduated from Novosibirsk State University as magister of Geology in 2012. He has more than 9 years geosteering experience around the world in major service companies such as Schlumberger and Baker Hughes. Experience includes geosteering with almost all types of real-time tools, especially resistivity tools such as AziTrak and PeriScope HD.