MINERALS OF THE OCEAN - 9
Joint International Conference

PROGRAMME

June 5-7, 2018
VNIOkeangeologia, St. Petersburg
JOINT INTERNATIONAL CONFERENCE
MINERALS OF THE OCEAN-9

PROGRAMME

5-7 JUNE, 2018

VNIIOKEANGEOLIGIA
1 Angliysky prospekt, St. PETERSBURG, RUSSIA

14:00-14:20 Obzhirov Anatoly (Pacific Oceanological Institute named after V. I. Il'ichev, FEB RAS, Vladivostok)
CONDITION TO FORM GAS HYDRATE AND OIL-GAS DEPOSIT IN THE OKHOTSK SEA

14:20–14:40 Syrbu Nadezhda (Pacific Oceanological Institute named after V. I. Il'ichev, FEB RAS, Vladivostok)
ABNORMAL DISTRIBUTION OF HELIUM AND HYDROGEN CONCENTRATION IN BOTTOM SEDIMENTS AND WATER AROUND SHALLOW GAS HYDRATES IN TATAR STRAIT

14:40–15:00 Suetnova Elena (Schmidt Institute of Physics of the Earth, RAS, Moscow)
DEPENDENCE OF THE RATE OF ACCUMULATION OF GAS HYDRATES FROM LOCAL CONDITIONS OF FILTRATION IN THE SEA FLOOR

15:00 Posters, Final Discussion & Coffee-break

17:00–21:00 Boat trip and excursion along Neva river
**6 JUNE, WEDNESDAY**

**GAS HYDRATES IN NATURAL ENVIRONMENTS**

(Moika River, 120, room 15)

*Convener: Manakov Andrey* (Nikolaev Institute of Inorganic Chemistry, SB RAS, Novosibirsk)

10:00–10:30 *Portnov Alexey* (School of Earth Sciences, The Ohio State University, USA; CAGE — Centre for Arctic Gas Hydrate, Environment and Climate, Tromsø, Norway)

**GAS HYDRATES IN DYNAMIC GEOLOGICAL SYSTEMS**

10:30–11:00 *Tomilov Alexander* (Tyumen Petroleum Research Center, Tyumen)

**PRIMARY EVALUATION OF RESERVOIR PROPERTIES AND GAS PRODUCTION OF GAS HYDRATES ON THE EXAMPLE OF ROSNEFT’S FIELD**

11:00–11:20 **Coffee-break**

11:20–11:40 *Semenova Anastasiia* (VNIIOkeangeologia, St. Petersburg)

**PERMAFROST-RELATED GAS HYDRATE SYSTEM EVALUATION ON THE ARCTIC SHELF OFFSHORE RUSSIA**

11:40–12:00 *Krylov Alexey* (VNIIOkeangeologia, St. Petersburg)

**CRYSTALLIZATION OF SIDERITES WITH AN EXTREMELY HEAVY VALUE OF 13C IN THE MUD VOLCANO «KEDR», LAKE BAIKAL**

12:00–12:20 *Bochkarev Alexey* (VNIIOkeangeologia, St. Petersburg)

**GEOTHERMAL MODELLING OF HYDRATE-BEARING GAS SEEPS IN THE SEA OF OKHOTSK**

12:20–14:00 **Lunch**

**PROGRAMME**

(The first authors of oral presentations are only shown)

**4 JUNE, MONDAY**

18:00–20:00 Registration of participants, Reception/Ice-breaker

**5 JUNE, TUESDAY**

10:00 **Welcome announcement**

*Valery Kaminsky*, Director General of VNIIOkeangeologia

10:10 **PLENARY SESSION**

*Convener: Professor Cherkashov Georgy*

10:10–10:30 *Cherkashov Georgy* (VNIIOkeangeologia, St. Petersburg, Russia)

**DEEP-SEA MINERALS: STATUS, EXPLORATION AND PERSPECTIVES**

10:30–10:50 *Matveeva Tatiana* (VNIIOkeangeologia, St. Petersburg, Russia)

**GEOLOGICAL ZONING (PROVINCING) OF GAS HYDRATE-BEARING WATER AREAS**

10:50–11:10 *Xuefa Shi* (First Institute of Oceanography, SOA, China)

**RECENT PROGRESS OF DEEP SEA MINERAL EXPLORATION AND RESEARCH BY COMRA ESPECIALLY ON POLYMETALLIC SULFIDES AND REY-RICH SEDIMENTS**

11:10–11:30 *Lynch Paul* (Cook Islands Seabed Minerals Authority)

**LATEST DEVELOPMENTS FROM THE COOK ISLANDS RELATING TO THE MANAGEMENT OF ITS LARGE SEABED MINERALS RESOURCE OF COBALT RICH FERROMANGANESE NODULES**

11:30–11:50 *Parianos John* (Nautilus Minerals, Brisbane, Australia)

**UPDATE ON NAUTILUS PROJECTS**

11:50–12:10 **Coffee-break**

12:10–12:30 *Brekke Harald* (Norwegian Petroleum Directorate)

**SEABED MINERALS OF THE NORWEGIAN CONTINENTAL SHELF – PRELIMINARY RESULTS**

12:30–12:50 *Maslennikov Valery* (Institute of Mineralogy, UB RAS, Miass, Russia)

**TEXTURAL AND TRACE ELEMENT COMPARISON OF SMOKER CHIMNEYS FROM THE RAINBOW VENT SITE (MID-ATLANTIC RIDGE) AND DEVONIAN DERMANY SERPENTINITE-HOSTED MASSIVE SULFIDE DEPOSIT (THE URALS)**
12:50–13:10  **Melekesceva Irina** (Institute of Mineralogy, UB RAS, Miass, Russia)
TRACE ELEMENT ENRICHMENT OF FE-HYDROXIDES OF THE IRINOVSKE HYDROTHERMAL FIELD (13°20’N, MAR)

13:10–13:30  **Ayupova Nuria** (Institute of Mineralogy, UB RAS, Miass, Russia)
URANIUM IN MODERN AND ANCIENT FE-OXIDE SEDIMENTS OF THE MID-ATLANTIC RIDGE AND SOUTH URALS, RUSSIA

13:30–14:2  Lunch

14:20  TECHNICAL SESSION
Convener: **Professor Maslennikov Valery**

14:20–14:40  **Skakovskiy Vaclav and Logatchev team** (Polar Marine Geosurvey Expedition, Lomonosov, Russia)
PRELIMINARY RESULTS OF THE RECENT EXPEDITION TO THE RUSSIAN EXPLORATION AREA AT THE MAR

14:40–15:00  **Gabлина Irina** (Geological Institute, RAS, Moscow, Russia)
MINERALS OF SULFIDE ORES AS INDICATORS OF THEIR FORMATION (MAR CASE)

15:00–15:20  **Firstova Anna** (VNIIOkeangeologia, St. Petersburg, Russia)
INITIAL STAGE OF SEAFLOOR MASSIVE SULFIDE FORMATION AT THE SLOW-SPREADING MID-OCEAN RIDGES: CASE STUDY OF ASHADZE-1 HYDROTHERMAL FIELD

15:20–15:40  **Dobrecova Irina** (Polar Marine Geosurvey Expedition, Lomonosov, Russia)
RARE-EARTH ELEMENTS IN THE HYDROTHERMAL FERROMANGANESE FORMATIONS WITHIN THE RUSSIAN EXPLORATION AREA (MAR)

15:40–16:00  **Barckhausen Udo** (BGR, Hannover, Germany)
3D MODELING AND INVERSION OF DEEP TOW MAGNETIC DATA FROM A HYDROTHERMAL FIELD AT THE SOUTHEAST INDIAN RIDGE

16:00–16:20  Coffee-break

16:20–16:40  **Morgunova Inna** (VNIIOkeangeologia, St. Petersburg, Russia)
MOLECULAR MARKERS OF HYDROTHERMAL PETROLEUM IN CARBONATE SEDIMENTS OF THE MID-ATLANTIC RIDGE

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**PROGRAMME OF GAS HYDRATE SESSION**

**4 JUNE, MONDAY**
(Angliysky prospect, 1)

18:00–20:00  Registration of participants, Reception/Ice-breaker

**5 JUNE, TUESDAY**
(Angliysky prospect, 1)

10:00  Welcome announcement
**Valery Kaminsky**, Director General of VNIIOkeangeologia

10:00–11:50  PLENARY SESSION
(Session will be held at VNIIOkeangeologia building at Moika River, 120, room 15)
*Oral and poster talk will be presented in Russian*

14:00  LABORATORY STUDIES OF GAS HYDRATES
Convener: **Matveeva Tatiana** (VNIIOkeangeologia, St. Petersburg, Russia)

14:00–14:30  **Manakov Andrey** (Nikolaev Institute of Inorganic Chemistry, SB RAS, Novosibirsk)
EXPERIMENTAL GAS HYDRATE STUDIES IN NIKOLAEV INSTITUTE OF INORGANIC CHEMISTRY SB RAS

14:30–14:50  **Adamova Tatiana** (Nikolaev Institute of Inorganic Chemistry, SB RAS, Novosibirsk)
INVESTIGATION OF THE GROWTH OF GAS HYDRATE IN THE METHANE-WATER-OIL SYSTEM USING VIDEO RECORDING

14:50–15:10  Coffee-break

15:10–15:30  **Bozhko Yulia** (Novosibirsk State University)
THEORETICAL MODELING OF MULTICOMPONENT GAS HYDRATE SYSTEMS BY MD METHODS

15:30–15:50  **Zhdanov Ravil** (Novosibirsk State University)
OZONE STORAGE CAPACITY IN CLATHRATE HYDRATES FORMED BY $O_3 + O_2 + N_2 + CO_2$ GAS MIXTURES
POSTERS

Ivanov Vladimir (Yuzhmorgeologiya)
INNOVATION IN THE HARDWARE AND TECHNICAL COMPLEX IN THE STUDY OF COBALT-RICH FERROMANGANESE CRUSTS ON THE GUYOTS OF THE MAGELLANIC MOUNTAINS, PACIFIC OCEAN

Kruglyakova Maria (Yuzhmorgeologiya)
SPATIAL REGULARITIES IN THE GROWTH OF CO-RICH MN CRUSTS ON GAYOTS OF MAGELLAN SEA MOUNTAINS

Ampleva Elena (Institute of Geology of Ore Deposits, the Russian Academy of Sciences)
MINERALOGY OF ORES AND CHEMICAL COMPOSITION OF SULFIDES OF THE POBEDA MODERN SUBMARINE HYDROTHERMAL SULFIDE EDIFICE CLUSTER (MID-ATLANTIC RIDGE, 17°08’N)

Petukhov Sergey (VNIIOkeangeologia)
SEARCH FOR THE ZONES OF HYDROTHERMAL SULPHIDE MINERALIZATION OF MID-OCEAN Ridges

Egorov Igor (VNIIOkeangeologia)
THE SPECTRAL ANALYSIS OF THE DEEP-SEA RELIEF FOR THE FORECAST OF LOCALIZATION OF THE POLYMETALLIC SULPHIDES (RUSSIAN EXPLORATION AREA ON THE MID-ATLANTIC RIDGE)

Kolchina Natalia (VNIIOkeangeologia)
INFORMATION ANALYSIS SUPPORT OF THE CONTRACT WITH THE ISA

Shulyatin Oleg (VNIIOkeangeologia)

Mikhailik Pavel (Far Eastern Geological Institute FEB RAS)
GENESIS AND STRATEGIC METALS CONCENTRATION IN FERROMANGANESE PLACER FROM THE YOMEI GUYOT (IMPEROR RIDGE, PACIFIC)

Egorov Ilya (IzhoraRemServis, Saint-Petersburg mining university)
COMPLEX SURVEY OF THE STANDALONE HYDRAULIC LIFT SYSTEM TO EXTRACT UNDERWATER MINERAL RAW MATERIALS

16:40–17:00 Bich Artyom (VNIIOkeangeologia, St. Petersburg, Russia)
METALLIFEROUS SEDIMENTS AS INSTRUMENT FOR RECONSTRUCTION OF HYDROTHERMAL ACTIVITY: CASE STUDY OF HYDROTHERMAL FIELD POBEDA, MAR

17:00–17:20 Musatov Alexey (VNIIOkeangeologia, St. Petersburg, Russia)
HYDROTHERMAL ACTIVITY AND PLEISTOCENE GLACIATIONS: IS THERE ANY CONNECTION?

17:20–17:40 Huang Mu (First Institute of Oceanography, SOA, China)
THE GEOCHEMICAL CHARACTERISTICS AND THE REY-RICH DEEP-SEA SEDIMENTS IN THE CENTRAL INDIAN OCEAN BASIN

17:40–18:00 Ermakova Livia (VNIIOkeangeologia, St. Petersburg, Russia)
ENVIRONMENTAL PROTECTION DURING EXPLORATION AND FUTURE EXPLOITATION OF DEEP-SEA MINERALS: LEGAL REGULATION, CURRENT STATE AND PROBLEMS

18:00 Discussion & Poster session

6 JUNE, WEDNESDAY

10:00 TECHNICAL SECTION
Convener: Professor Shi Xuefa

10:00–10:20 Goldblatt Chris (Fish Reef Project)
MITIGATION FOR DEEP SEA MINING

10:20–10:40 Lygina Tatyana (Yuzhmorgeologiya, Gelendzhik, Russia)
THE FIRST EXPERIENCE OF USING DEEP-SEA COMPLEX “MAKRELIEF” FOR MAPPING THE OCEAN FLOOR DURING THE EXPLORATION OF MANGANESE NODULE DEPOSITS

10:40–11:00 Francisco Javier González Sanz (Geological Survey of Spain)
COBALT, TELLURIUM AND OTHER CRITICAL ELEMENTS DISTRIBUTION IN FERROMANGANESE CRUSTS FROM THE CANARY ISLAND SEAMOUNT PROVINCE (NE CENTRAL ATLANTIC)

11:00–11:20 Anokhin Vladimir (St. Petersburg Scientific Center of the Russian Academy of Sciences)
FEATURES OF THE GEOMORPHOLOGY OF THE MAGELLAN MOUNTAINS AS A FACTOR OF CRUST FORMATION

11:20–11:40 Coffee-break
11:40–12:00  Sedysheva Tatiana (Yuzmorgeologiya, Gelendzhik, Russia)  
GEOMORPHOLOGICAL STRUCTURE AND CRUST DEPOSITS OF GOVOROV GUYOT (MAGELLAN SEAMOUNTS, PACIFIC OCEAN)

12:00–12:20  Pulyaeva Irina (Yuzmorgeologiya, Gelendzhik, Russia)  
THE LOCAL AND REGIONAL HIATUSES IN FE-MN CRUST GROWTH AND THEIR CONNECTION WITH PALEOOCEANOGRAPHIC EVENTS

12:20–12:40  Xiangwen Ren (First Institute of Oceanography, SOA, China)  
CALCAREOUS NANNOFOSIL BIOSTRATIGRAPHY OF A CO-RICH FERROMANGANESE CRUST FROM MK SEAMOUNT OF MAGELLAN SEAMOUNT CLUSTER

12:40–13:00  Goleva Rita (Institute of Mineral Resources, Moscow, Russia)  
RARE-EARTH ELEMENT GEOCHEMISTRY OF FERROMANGANESE CRUSTS FROM THE FEDOROV GUYOT, MAGELLAN SEAMOUNTS, PACIFIC OCEAN

13:00–14:20 Lunch

14:20–14:40  Konstantinova Natalia (VNIIOkeangeologiya, St. Petersburg, Russia)  
SOURCES AND TEMPORAL CHANGES OF DETRITUS IN FERROMANGANESE CRUSTS FROM THE AMERASIA BASIN OF THE ARCTIC OCEAN BASED ON ISOTOPIC SIGNATURES

14:40–15:00  Dreiseitl Ivo (Interoceanmetal Joint Organization)  
PHYSICAL AND MECHANICAL PROPERTIES OF SEDIMENTS OF THE IOM EXPLORATION AREA (FEATURES OF FORMATION, PATTERNS OF SPATIAL VARIABILITY)

15:00–15:20  Rybalko Alexander (VNIIOkeangeologiya, St. Petersburg, Russia)  
TO THE PROBLEM OF FORMING PLACERS ON THE SOUTHERN COAST OF THE KOLA PENINSULA

15:20–16:00  Smirnov Alexander (VNIIOkeangeologiya, St. Petersburg, Russia)  
PRACTICAL MODELS OF COASTAL-MARINE PLACERS DEPOSIT IN THE SHELF AREAS

16:00  Poster session. Discussion

17:00–21:00  Boat trip and excursion along Neva river