

PRELIMINARY PROGRAM OF THE GEOHERMAL VOLCANOLOGY WORKSHOP 2019

September 5, 2019

PLENARY REPORT

Type of report (plenary, oral, poster)	Speaker's name	Title of the report
Plenary report	Pavel Izbekov John Eichelberger (Alaska University Fairbanks)	Petrological evidence for depressurization of active magma body at Krafla (Iceland) by drilling activity
Plenary report	Dennis Nielson (DOSECC Exploration Services, LLC, Salt Lake City, Utah, USA)	ICDP Snake River Plain Drilling Project
Plenary report	W. A. Elders (University of California, Riverside, California, 92521, USA)	Exploration and development of supercritical geothermal resources
Plenary report	Yann Avram (Phoenix Geophysics Ltd, Canada)	Magnetotellurics method application for Geothermal exploration
HYDROTHERMAL SYSTEMS OF THE AREAS OF MODERN VOLCANISM		
Oral report	Grimur Bjornsson, Kristjan Sæmundsson (Warm Arctic, Iceland)	Similarities and dissimilarities of low temperature geothermal systems hosted on spreading ridges and island arcs. The Icelandic experience
Oral report	Nevzat Özgür (Süleyman Demirel University, Isparta, Turkey)	Geothermal potential of the continental rift zone of the Büyük Menderes, western Anatolia, Turkey
Oral report	Didenkov Yu.N., Auzina L.I. (Irkutsk National Research Technical University)	Hydrothermal systems of various margins of lithospheric plates
Oral report	Kharitonova N.A., Bragin I.V., Chelnokov G.A., Chudayev OV (Lomonosov Moscow State University, FEGI FEB RAS)	Mobilization, fractionation and forms of water migration of REE in the thermal waters of the Paratunskaya hydrothermal system (Kamchatka)
Poster	Lavrushin V. Yu. (FGBUN Geological Institute, Russian Academy of Sciences)	Isotopic composition of strontium in the mud volcanic systems of the Caucasus region

Poster	Kikvadze O. E. (FGBUN Geological Institute, Russian Academy of Sciences)	The role of magmatogenic and crust components in the composition of the gases of thermomineral waters of Georgia
Poster	Kharitonova N.A., Chelnokov G.A., Bragin I.V., Lyamina L.A. (Lomonosov Moscow State University, FEGI FEB RAS)	Geochemistry of low-enthalpy thermal waters of the Kuldur deposit (Jewish Autonomous Region, Russia)
Poster	Deliemen I.F. (IVS FEB RAS)	Some geomorphological and geological and geophysical aspects of the water recharge of the Bolshe-Banya hydrothermal system
Poster	Nikolaeva A.G. Karpov G.A. (IVS FEB RAS)	Hydrogeochemical data Apapelsky springs (Kamchatka).
Poster	Zippa E.V. (TFGI SB RAS)	Assessment of the deep temperatures and circulating depths of the thermal waters of Jiangxi Province (China)
Poster	Zippa E.V. (TFGI SB RAS)	Nitrogen thermal waters as a stage of geological evolution of the water-rock system: Republic of Buryatia (Russia)
Poster	Shestakova A.V. (Tomsk Polytechnic University)	Geochemistry of carbon dioxide waters of the north-east of Tuva
Poster	Sudarikov S.M., (St. Petersburg Mining University)	Hydrothermal solutions of mid-ocean ridges: problems of study and mastering
Poster	Akbasheva Z.R., Kopylova Yu.G. (Tomsk Polytechnic University)	Processing hydrogeochemical information in Western Tuva using GIS technology
Poster	Drebot V.V. (Tomsk Polytechnic University)	Groundwater geochemistry of the Zun-Torey and Berry-Korey lakes area (Transbaikalia)
Poster	Bragin I. V. (FEGI FEB RAS)	Geochemistry of hydrotherm deposits Talaya, Magadan region
Poster	Norova L.P. (St. Petersburg Mining University)	The main features of the Quaternary hydrogeology of volcanogens
SEISMICITY IN GEOFLUIDIC VOLCANIC AND HYDROTHERMAL SYSTEMS		
Oral report	Roland Gritto (Array Information Technology Berkeley, CA, USA)	Seismic Analysis of Spatio-Temporal Properties of a Fracture Network Generated During an EGS Demonstration Project
Oral report	Lemzikov V.K., Lemzikov M.V., Chernykh E.V. (IVS FEB RAS, P-Kamchatsky)	Determination of the foci of volcanic-tectonic earthquakes during the eruption of the Koryak volcano in 2008-2009. different methods

Oral report	Solomatin A.V., Fedotov S.A. (IVS FEB RAS, P-Kamchatsky)	Geomechanical interpretation of seismicity of Kamchatka: applications for seismic forecast, forecast of volcanic eruptions and hydrocarbon search
Oral report	Kopylova G.N., Boldina S.V., Chubarova E.G. (KF FITS EGS RAS, P-Kamchatsky)	Changes in the water level in wells as an indicator of the geodynamic state of the environment
Poster	Gavrilov VA, Fedoristov OV (IVS FEB RAS)	Development of a system for on-line monitoring of the physical properties of water in well G1 for the forecast of strong earthquakes
Poster	Chernyshev S.D. (IVS FEB RAS, P-Kamchatsky)	Long-term forecast of strong earthquakes in the subduction zone (analytical review)
MAGMATIC FEEDING SYSTEMS OF ACTIVE VOLCANOES		
Oral report	Ivanov V.V. (IVS FEB RAS, P-Kamchatsky)	Distribution of volcanic eruptions in Kamchatka by magnitudes in historical time and in the Holocene: the geological effect of an explosive volcanism and predictive estimates
Oral report	Yu Wang, Tianfu Xu, Jin Na (Jilin University, China)	Reconstruction of Deep Geothermal Reservoir Temperature with Multi-component Geothermal Thermometer and THC Coupling Simulation: A Case Study of a Hot Spring Water in Changbai Mountain of Northeastern China
Oral report	Anton Vetrov (Phoenix Geophysics Ltd, Canada)	Magnetotellurics observations in volcanic and earthquake active area: our experience of an autonomous monitoring station approach on Hawaii
Oral report	Aydarkozhina A. (GIN RAS, Moscow)	Genesis of nitrogen, methane and carbon dioxide in the gases of the thermomineral waters of the Elbrus region
Poster	Coşkun Sarı (Dokuz Eylul University, Izmir, Turkey)	A possible volcanic hazard risk deduced from recent activity of the Gölcük volcano, SW Turkey
Poster	Malik N.A. (IVS FEB RAS)	The temperature and gas composition fumarole Avachinskiy volcano (Kamchatka) in 2013-2019
Poster	Yu. A. Kugaenko, A.O. Volynets (KF FIC EGS RAS)	The igneous feeding system of Tolbachik field of areal volcanism
Poster	Kalacheva E.G. (IVS FEB RAS)	Vulcan-hydrothermal systems of

		the Kuril Islands
Poster	Minyuk P.S. (NEIRI FEB RAS Magadan)	Scientific drilling of the Elgygytgyn crater lake: experience using Atlas Copco CS-14
Poster	John Eichelberger (Alaska University Fairbanks)	Update on the Krafla Magma Testbed, Iceland: Insights into the Ultimate Source Processes in Many Geothermal Systems

September 6, 2019

MODELING OF THE NATURAL REGIME AND EXPLOITATION OF GEOTHERMAL FIELDS OF VOLCANIC AREAS

Type of report (plenary, oral, poster)	Speaker's name	Title of the report
Oral report	Sanaz Saeid, Alexandros Daniilidis, Yang Wang, Denis Voskov, David Bruhn (Delft University of Technology, Netherlands; Stanford University, CA, USA; Helmholtz Center Potsdam GFZ, Germany)	Lifetime and energy prediction of geothermal systems: uncertainty analysis in highly heterogeneous geothermal reservoirs
Oral report	Zhuravlev N. B. (IVS FEB RAS, P-Kamchatsky)	Development of thermo-hydrodynamic model of the Upper Paratunsky geothermal field
Oral report	Usacheva O.O. (IVS FEB RAS, P-Kamchatsky)	Development of a 3D thermo-hydrodynamic model of the Mutnovsky hydrothermal system
Oral report	Shulyupin A. N., Chernev I. I., Varlamova N. N. (IGD FEB RAS, Khabarovsk, Geotherm P-Kamchatsky JSC)	Problems of managing steam lift in the development of deposits of thermal waters of volcanic regions
Poster	Beatriz Martínez Montesinos, Boris Kaus (Geosciences, Johannes Gutenberg University, Mainz, Germany)	Simulating fluid injection in 3D poro-visco-elasto-plastic rocks
Poster	Ustyugov D.L. (St. Petersburg Mining University)	Creating a permanent mathematical models of groundwater deposits in areas with intensive man-made pressure on the hydrosphere
Poster	Bochkarev I. (KamSTU, P-Kamchatsky)	TOUGH2-EOS1 Thermo-hydrodynamic model analysis for 5-point operation of a single-layer geothermal reservoir
Poster	Ovchinnikov V. (KamSTU, P-Kamchatsky)	TOUGH2-EOS2 analysis of thermo-hydrodynamic model of

		5-point operation of a single-layer geothermal reservoir
Poster	Kubatchenko I. (KamSTU, P-Kamchatsky)	Analysis of thermo-hydrodynamic model of 5-point operation of a multi-layer geothermal reservoir
Poster	Nikitenko I. (KamSTU, P-Kamchatsky)	TOUGH2-EOS1 analysis of the formation and operation conditions of a 3D geothermal reservoir
Poster	Khudayan M. (KamSTU, P-Kamchatsky)	Simulation of steam and condensate geothermal tanks in the "heat pipe" mode
Poster	Leshchenko S. (KamSTU, P-Kamchatsky)	Development of an information system to support geothermal databases
Poster	Likhachev S. (KamSTU, P-Kamchatsky)	Thermohydrodynamic modeling of the conditions for extracting thermal energy from a vertical crack
Poster	Tyan I. (KamSTU, P-Kamchatsky)	TOUGH2-EWASG modeling operation of gas-saturated (CH ₄) highly mineralized (Na-Cl) geothermal reservoir
PROBLEMS OF USING GEOTHERMAL ENERGY IN VOLCANIC AREAS FOR HEAT AND ELECTRICITY SUPPLY		
Oral report	Vorozheykina L.A., Asaulova N.P., Obora N.V. (JSC Heat of the Earth)	Distribution of productive faults and horizons, hydrochemical zonality at Paratunsky geothermal fields
Oral report	Chermoshentseva A. A., Shulyupin A. N., Varlamova N. N. (KamchatGTU, IHD FEB RAS, Khabarovsk)	Mathematical modeling of steam and water flows during the development of geothermal resources
Oral report	Maguskin MA, Kiryukhin A.V. , Dvigalo V.N. (IVS FEB RAS, P-Kamchatsky)	Analysis of vertical deformations of the earth's surface during exploitation of the Mutnovsky geothermal field
Oral report	Kudryashov V.A. (Regional Center for Energy Development and Energy Saving, P-Kamchatsky)	Heat supply to the main cities of Kamchatka from geothermal sources
Poster	Puzankov M.Yu., Kiryukhin AV, Zhuravlev NB, Slotsov I.B. (IVS FEB RAS, SPSU Institute of Earth Sciences)	Preliminary Analysis of sludge from the productive zones of well RE-10 (Paratunskoye geothermal field)
Poster	Dorothee Mertmann (Institut für Geowissenschaften und Geographie, Martin-Luther-Universität Halle-Wittenberg, Germany)	Current State of Geothermal Energy Use in Germany
Poster	Khvashevskaya A.A. (Tomsk Polytechnic University)	Nitrogen thermal waters deposit Ush-Beldyr (Republic of Tuva)

Poster	Kopylova Yu.G. (Tomsk Polytechnic University)	The chemical composition of the thermal waters of the natural complex Tarys (Republic of Tuva)
MAGMATIC FRACTURING AS AN ANALOGUE OF THE DEVELOPMENT OF HYDROCARBON RESERVOIRS WITH HARD-TO-RECOVER RESERVES		
Oral report	Korovina TA (JSC Koretest Service, Tyumen)	Organic minerals - indicators of anomalous thermobaric parameters of tectonic processes in a volcanogenic oil and gas producing formation in Western Siberia
Oral report	Kiryukhin PA (EPAM, St. Petersburg)	Identification of plane-oriented clusters of earthquakes and producing zones using a Frac-Digger programs and Frac-Digger2
Oral report	Lushpeev V.A., Bayramova A. (SPSU Institute for Earth Sciences)	Simulation of steam-thermal effects on the layers of the Bazhenov Formation
Oral report	Stephan de Hoop, Yang Wang, Denis Voskov (Delft University of Technology, Netherlands)	High-enthalpy geothermal simulation with fractured networks
Poster	Abramov V. Yu. (Hydrogeological and geo-ecological company GIDEK (ZAO GIDEK) Moscow)	On the possible role of supercritical water and other supercritical gases in the formation of oil fields
Poster	Prischepa OM, Zharkov AM, Nefedov Yu.V. (St. Petersburg Mining University)	Estimation of prospects for oil and gas potential of the Predsedaban deflection
Poster	Voronin P.O. (IVS FEB RAS)	TOUGH2-EWASG-modeling of CH ₄ accumulation in heterogeneous volcanogenic-sedimentary reservoirs
Poster	Romanov, EA (JSC Koretest Service, Tyumen)	On the role of tectonics in the formation of oil source sediments (on the example of the Bazhenov formation)
Poster	Korovin A.V. (JSC Koretest Service, Tyumen)	Methodical solutions to the problem of laboratory study of the filtration model of pore-fractured type reservoirs on core
Poster	Sabine Klarner, Olaf Klarner (Klarenco LLC, Germany)	Identification of paleovolcanic rocks and production faults on seismic data
Poster	Bayramova A. (St. Petersburg State University Institute of Earth Sciences)	T2-VOC modeling of oil recovery from a fractured block reservoir
Poster	Suslik D. (KamSTU, P-Kamchatsky)	TOUGH2-ECO2N modeling of CO ₂ injection into a highly mineralized water-bearing formation

Poster	Polyakov R. (KamSTU, P-Kamchatsky)	T2-VOC modeling of NAPL propagation in the aeration zone
Poster	Tashbolotov A. (KamSTU, P-Kamchatsky)	T2-VOC simulation of 1D oil displacement
Poster	Trifonov N.S. (TF INGG SB RAS)	Geochemistry of brines of the Yurubcheno-Tokhomskoy oil and gas accumulation zone
Poster	Ivanova I.S. (TF INGG SB RAS)	Strontium distribution in the groundwater of the Sredneobsky basin (Tomsk region)
Poster	Domrocheva E.V. (TF INGG SB RAS)	Hydrogeological conditions of the Kuzbass Tutuiskaya area
MECHANISM OF GEYSER FUNCTIONING AND CYCLICITY IN HYDROTHERMAL SYSTEMS, DIAGENETIC CHANGES IN ROCKS AS A RESULT OF HYDROTHERMAL CIRCULATION		
Oral report	Juliet Newson (Iceland School of Energy, Reykjavik University, Iceland)	Current status of the geysers activity in New Zealand and Iceland
Oral report	Cergeeva A.V. (IVS FEB RAS, P-Kamchatsky)	Secondary minerals in the geysers of Kamchatka
Oral report	Rychkova T.V. (IVS FEB RAS, P-Kamchatsky)	TOUGHREACT-modeling of the formation of permeable channels of geysers in rhyolite tuffs
Oral report	S. Hurwitz (USGS Menlo Park CA, USA)	Current status of the geysers activity in Yellowstone Natl. Park, USA
Poster	Polyakov A.Yu. (IVS FEB RAS)	Development of a NCG sampling system from the bottom of geyser channels
Poster	Marcondes Lima da Costa (Federal University of Pará, Brazil)	Bauxites associated with volcanic buildings: a discussion of their origin
Poster	Lepokurova O.E. (TF INGG SB RAS)	Mechanisms of formation of soda groundwater in the south-east of Western Siberia
Poster	Vorozheykina E.A. (Tomsk Polytechnic University)	Features of the chemical composition of carbon springs of the Trans-Baikal Territory

September 7, 2019

Section name - Field Trip №1

Dike fields and thermal mineral springs of Koryaksky volcano

Brief description of the section

<http://www.kscnet.ru/ivs/conferences/GeothermVolc2019/1-CircularEN.pdf>

September 8, 2019

Section name - Field Trip №2

Mutnovsky and Paratunsky geothermal areas

Brief description of the section

<http://www.kscnet.ru/ivs/conferences/GeothermVolc2019/1-CircularEN.pdf>

September 9, 2019

Section name - Field Trip №1 or №2

Brief description of the Field Tour section (reserve day in case of bad weather on September 07 or 08, 2019)