平成 22 年 11 月 30 日

メタンハイドレート資源開発国際シンポジウムが開催されました

平成 22 年 11 月 15 日（月）～11 月 17 日（水）の 3 日間の日程で、「メタンハイドレート資源開発国際シンポジウム：マリックから南海トラフへ」が国立オリンピック記念青少年総合センターにて開催されました。本シンポジウムは (独)石油天然ガス・金属鉱物資源機構（理事長：河野 博文）とカナダ天然資源省（Natural Resources Canada）との共催で開催されました。

開発研究において世界のトップランナーと認識されている日本で国際シンポジウムを開催し、メタンハイドレート資源開発研究コンソーシアム（MH21）がこれまで挙げてきた成果を広く公表することにより、メタンハイドレート開発における日本のプレゼンスを国内外に示すことを目的とされました。

初日（11 月 15 日）は、基調講演に引き続き、日本国外（米国、インド、韓国など）のメタンハイドレート開発に対する取り組みの発表が行われました。2 日目・3 日目（11 月 16 日・17 日）には、2007、2008 年に(独)石油天然ガス・金属鉱物資源機構がカナダの協力を得てカナダ Mallik 地域にて世界で初めて減圧法により連続したメタンガス生産に成功した陸上産出試験の詳細結果発表や、これまで MH21 が挙げてきた成果についての発表に加え、今後実施を予定している日本周辺海域における海洋産出試験についての発表が報告されました。本シンポジウムは英語を正式言語としましたが、3 日目（11 月 17 日）には、一般聴講者向けの日本語セッションも並行して開催されました。

今回のシンポジウムへの参加者は 329 名、うち海外から 76 名の参加があり、参加国数は 22 カ国でした。

添付資料：プログラム
ポスターセッションプログラム

■ 問合せ先

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以上

Program at a Glance

Day 1: November 15, 2010 — National Olympic Memorial Youth Center, International Exchange Building

	(International Conference Hall)
9:30	Registration
	Plenary Opening Session
10:30	Opening Remarks and Report from the Organizers *Kenji Ohno*, JOGMEC / *David Boerner*, NRCan
11:00	Keynote Speech (1) Japan: Objective and Accomplishment of Japan Methane Hydrate R&D Program
11:45	Keynote Speech (2) Canada: Four Decades of Gas Hydrate R&D at the Mallik site, Mackenzie Delta, NWT, Canada
12:30	(Lunch Break)
14:00	Session A: International Efforts on Gas Hydrate Resource Development
	(Reception Hall)
18:00	Conference Dinner

Day 2: November 16, 2010 — National Olympic Memorial Youth Center, International Exchange Building

	(International Conference Hall)
9:00	Session B: Mallik 2007-2008 Accomplishment
12:30	(Lunch Break)
13:30	Session C: Nankai Trough
16:30	Panel Discussion: "Roadmap to the Methane Hydrate Resources; Dialog between Industry and Academia"
	(Reception Hall)
18:15	Mallik Night (Cocktail Reception)

Day 3: November 17, 2010 — National Olympic Memorial Youth Center, Central Building

	Room 310	Room 311	Room 309
10:00	Session D1: Mallik & Nankai Trough Production Test (1)	Japanese Session: What is Methane Hydrate?	Poster Preparation
11:00	Session D2: Mallik & Nankai Trough Production Test (2)	Japanese Session: Exploration of Methane Hydrate	Poster Session
12:00		(Lunch Break)	
13:30	Session E1: Geology, Geophysics, and Petrophysics	Japanese Session: Development of Methane Hydrate	Poster Session
15:30	Session E2: Laboratory Testing and Numerical Simulators	Japanese Session: Environmental Impact of Methane Hydrate Development	Poster Session
17:30	Closing Session	-	-
18:00	(Adjournment)		

Day 4: November 18, 2010

Optional

Laboratory Tour in Methane Hydrate Research Center, AIST Hokkaido Center, Sapporo

Morning: Fly to New Chitose Airport (Sapporo) from Haneda Airport (Tokyo)
Introduction and Laboratory Tour (15:15-17:30)

Program

Day 1: November 15, 2010 — National Olympic Memorial Youth Center, International Exchange Building

9:30 - 10:30	Registration
Plenary Opening Session (International Conference Hall)	**Chair** *Tatsuo Saeki, Fred Wright*
10:30 - 11:00	**Opening Remarks and Report from the Organizers** *Kenji Ohno (JOGMEC), David Boerner (NRCan)*
11:00 - 11:45	**Keynote Speech (1)** **Objective and Accomplishment of Japan Methane Hydrate R&D Program** *Yoshihiro Masuda (Project Leader of MH21 Research Consortium)*
11:45 - 12:30	**Keynote Speech (2)** **Four decades of gas hydrate R&D at the Mallik site, Mackenzie Delta, NWT, Canada** *Scott Dallimore (NRCan), Koji Yamamoto (JOGMEC)*
12:30 - 14:00	Lunch Break
Session A1 : International Efforts on Gas Hydrate Resource Development (1) (International Conference Hall)	**Chair** *Koji Yamamoto, Scott Dallimore*
14:00 - 15:00	**United States of America (U.S. National Strategy in Gas Hydrate Research and Development, Gulf of Mexico Gas Hydrate Joint Industry Project - International Deepwater Natural Gas Hydrate Research Collaboration)** *Ray Boswell (NETL), John Balczewski (Chevron), Timothy Collett(USGS)*
15:00 - 15:25	**India** **India Gas Hydrate Program: Recent Advances and the Road-Ahead** *Malcolm V Lall (DGH)*
15:25 - 15:50	Coffee Break
Session A2 : International Efforts on Gas Hydrate Resource Development (2) (International Conference Hall)	**Chair** *Tadaaki Shimada, Scott Dallimore*
15:50 - 16:15	**Korea** **Gas Hydrate R/D Program and Recent Developments in Korea** *Sung-Rock Lee (Gas Hydrate R&D Organization)*
16:15 - 16:40	**Germany** **German Research Initiative on Submarine Gas Hydrates: Storage of CO2 and Production of Natural Gas** *Klause Wallmann (IFM-Geomar)*
16:40 - 17:05	**UNEP(United Nations Environment Programme Global Assessment of Methane Hydrates)** **Frozen Heat: Global Outlook on Methane Gas Hydrates** *Yannick Beaudoin (UNEP/Grid-Arendal)*
17:05 - 17:20	**New Zealand** **The Gas Hydrate Petroleum System on the Hikurangi Margin, New Zealand: Gas Source, Migration, Emplacement, and Reservoir** *Ingo Pecher (GNS Science)*
17:20 - 17:35	**Taiwan** **Recent Developments of Gas Hydrate Investigations in Taiwan** *Char-Shine Liu (Institute of Oceanography)*
17:35 - 17:45	Remarks
17:45	Adjournment
Reception (Reception Hall)	
18:00 - 20:00	Conference Dinner

Program

Day 2: November 16, 2010 — National Olympic Memorial Youth Center, International Exchange Building

Session B1 : Mallik 2007 - 2008 Accomplishment (1) (International Conference Hall)	**Chair** *Masanori Kurihara, Scott Dallimore*
9:00 - 9:30	**Objectives and Operation Overview of the 2007/2008 Mallik Gas Hydrates Production Tests** *Koji Yamamoto (JOGMEC)*
9:30 - 10:00	**Geophysical Study and Well Location Selection in the Mackenzie Delta** *Tatsuo Saeki (JOGMEC), Gilles Bellefleur (NRCan)*
10:00 - 10:30	**Reservoir Response Observation by Geophysical Logging and Monitoring Program** *Satoshi Noguchi, Tetsuya Fujii(JOGMEC), Kasumi Fujii (Schlumberger)*
10:30 - 11:00	Coffee Break
Session B2 : Mallik 2007 - 2008 Accomplishment (2) (International Conference Hall)	**Chair** *Kiyofumi Suzuki, Fred Wright*
11:00 - 11:30	**Analysis of 2007/2008 Mallik Methane Hydrate Production Test Results through History Matching Simulation** *Masanori Kurihara (Japan Oil Engineering)*
11:30 - 12:00	**Geomechanics and Well Completion Studies for the 2007/2008 Mallik Methane Hydrate Production Test** *Koji Yamamoto (JOGMEC)*
12:00 - 12:30	**JOGMEC/NRCan/Aurora Mallik 2007-2008 Gas Hydrate Production Research Program: Lessons Learned** *Scott Dallimore (NRCan)*
12:30 - 13:30	Lunch Break
Session C1 : Nankai Trough (1) (International Conference Hall)	**Chair** *Jiro Nagao, Junichi Iritani*
13:30 - 14:00	**Delineation of Methane Hydrate Concentrated Zones in the Eastern Nankai Trough** *Tatsuo Saeki (JOGMEC)*
14:00 - 14:30	**Character of the Gas Hydrate Bearing Turbidite Sediments** *Kiyofumi Suzuki (National Institute of Advanced Industrial Science and Technology)*
14:30 - 15:00	**Resource Assessment of Methane Hydrate in the Eastern Nankai Trough** *Tadaaki Shimada (JOGMEC)*
15:00 - 15:30	Coffee Break
Session C2 : Nankai Trough (2) (International Conference Hall)	**Chair** *Norio Tenma, Satoshi Noguchi*
15:30 - 16:00	**Prediction of Performances of Methane Hydrate Production Tests in the Eastern Nankai Trough** *Masanori Kurihara (Japan Oil Engineering)*
16:00 - 16:30	**Marine Production Test Plan in the Eastern Nankai Trough** *Koji Yamamoto (JOGMEC)*
16:30 - 18:00	**Panel Discussion** **"Roadmap to the Methane Hydrate Resources; Dialog between Industry and Academia"** *Kensaku Tamaki (U.Tokyo), Timothy Collett(USGS), John Balczewski (Chevron), Ray Boswell (NETL), Jiro Nagao (AIST), Masanori Kurihara (JOE)* *Facilitated by Scott Dallimore and Koji Yamamoto*
18:00	Adjournment
Reception (Reception Hall)	
18:15 - 20:15	Mallik Night (Cocktail Reception)

Day 3: November 17, 2010 [AM] National Olympic Memorial Youth Center, Central Building

Meeting Room 1 (Room.310)		Meeting Room 2 (Room.311)		Meeting Room 3 (Room.309)	
Session D1 : Mallik & Nankai Trough Production Test (1) Chair: *N.Arata, S.Noguchi*		**Japanese Session:** Community Outreach (1)		**Poster Session**	
10:00 - 10:15	**Development of a Mechanical and Thermal Earth Model for the 2007/2008 Mallik Gas Hydrates Production Tests** *R. Birchwood (Schlumberger)*	10:00 - 10:10	**Open Remarks of Japanese Session** *Yoshihiro Masuda (Project Leader of MH21)* 日本語セッション 開会挨拶 増田昌敬 (MH21 プロジェクトリーダー)	10:00 - 11:00	**Poster Preparation**
10:15 - 10:30	**Development of a Monitoring System for the AURORA/ JOGMEC/NRCAN Mallik Gas Hydrate Production Test Program** *K.Fujii (Schlumberger)*				
10:30 - 10:45	**Geomechanical Study of the Mallik Methane Gas Production Field Trials** *K.Soga, S.Uchida (U.Cambridge), A.Klar(Technion U.)*	10:10 - 11:10	**What is Methane Hydrate?** *Hideo Narita (AIST)* メタンハイドレートとは何か 成田　英夫 (AIST)		
10:45 - 11:00	**Hydrate phase transition dynamics in porous media** *B. Kvamme (University of Bergen)*				
Session D2 : Mallik & Nankai Trough Production Test (2) Chair: *T.Furukawa, T.Ukita*		**Japanese Session:** Community Outreach (2)		**Poster Session**	
11:00 - 11:15	**Seafloor Stability** *T.J.Kvalstad (NGI)*	11:10 - 12:10	**Exploration of Methane Hydrate** *Tadaaki Shimada (JOGMEC)* メタンハイドレートの探鉱手法 島田　忠明 (JOGMEC)	11:00 - 12:00	**Poster Session**
11:15 - 11:30	**Completion Design and Technical Issues-1st Methane Hydrate Offshore Production Test in the Nankai Trough-** *M.Matsuzawa (JOGMEC)*				
11:30 - 11:45	**Environmental Impact Assessment Study on Japan's Methane Hydrate R&D Program** *S.Nagakubo, N.Arata (JOGMEC)*				
11:45 - 12:00	**The Characterization of Hydrate Bearing Sediments** *C.J. Santamarina (Georgia Institute of Technology)*				
12:00 - 13:30	Lunch Break				

Day 3: November 17, 2010 [PM] National Olympic Memorial Youth Center, Central Building

Meeting Room 1 (Room.310)		Meeting Room 2 (Room.311)		Meeting Room 3 (Room.309)	
Session E1 : Geology, Geophysics, and Petrophysics Chair: *N.Inada, Y.Nakatsuka*		**Japanese Session:** Community Outreach (3)		**Poster Session**	
13:30 - 13:45	**Historical Review on the Detection of Bottom Simulating Reflectors, Offshore Japan** *M.Hayashi (JOGMEC), T.Inamori (JGI), T.Saeki, S.Noguchi (JOGMEC)*	13:30 - 15:00	**Development of Methane Hydrate** *Koji Yamamoto (JOGMEC)* **メタンハイドレートの開発方法** 山本　晃司 (JOGMEC)	12:00 - 15:00	**Poster Session**
13:45 - 14:00	**Investigation by Deep Piston and Gravity Coring of R/V Marion Dufresne, Eastern Margin of the Japan Sea** *R. Matsumoto (U. Tokyo) , M.Tanahashi (AIST)*				
14:00 - 14:15	**3-D Internal Architecture of Methane Hydrate Bearing Turbidite Channels in the Eastern Nankai Trough, Japan** *S. Noguchi, N. Oikawa (JOGMEC)*				
14:15 - 14:30	**Stratigraphic and Structural Controls on Distribution of a Methane Hydrate Concentrated Zone, "Alpha", in the Eastern Nankai Trough, Japan** *T. Furukawa, M. Tamaki, O. Takano (JOGMEC)*				
14:30 - 14:45	**Rock Physics Model of Methane Hydrate Bearing Sediments** *T.Inamori (JGI)*				
14:45 - 15:00	**Well Log Interpretation of Methane Hydrate Bearing Sediments in the Eastern Nankai Trough, Japan** *K.Akihisa (JOGMEC)*				
15:00 - 15:30	Coffee Break				
Session E2 : Laboratory Testing and Numerical Simulators Chair: *Y.Nakatsuka, S.Noguchi*		**Japanese Session:** Community Outreach (4)		**Poster Session**	
15:30 - 15:45	**Characterization of Methane-Hydrate-Bearing Sediment Pore Size Distribution and Hydraulic Permeability Using Proton Nuclear Magnetic Resonance Measurement** *H.Minagawa,Y.Sakamoto,T.Komai,N.Tenma,H.Narita(AIST)*	15:30 - 16:30	**Environmental Impact of Methane Hydrate Development** *Sadao Nagakubo (JOGMEC)* **メタンハイドレート開発による環境への影響** 長久保定雄 (JOGMEC)	15:30 - 17:00	**Poster Session**
15:45 - 16:00	**Construction of the 3D Reservoir Models for the Eastern Nankai Trough Methane Hydrate Reservoirs** *A.Sato,H.Ouchi,M.Kurihara(JOE),H.Narita,J.Nagao,K.Suzuki(AIST), Y.Masuda(U.Tokyo),T.Saeki,K.Yamamoto,S.Noguchi(JOGMEC)*				
16:00 - 16:15	**Laboratory Scale Investigation on Dissociation Behavior of Artificial MH Bearing Sediments** *T.Kawamura,T.Tetsu,T.Tsubaki,Y.Yamamoto(AIST)*				
16:15 - 16:30	**Validation of Numerical Simulator MH21-HYDRES by Comparison to Dissociation Experiments using Hydrate-Bearing Cores** *Y.Konno,H.Oyama,Y.Jin,J.Nagao(AIST)*	16:30 - 16:40	**Wrap Up of Japanese Session** *Yoshihiro Masuda (Project Leader of MH21)* **日本語セッションまとめ** 増田　昌敬 (MH21 プロジェクトリーダー)		
16:30 - 16:45	**Triaxial Compressive Properties of Artificial Methane-Hydrate-Bearing Sediments** *K.Miyazaki,A.Masui,K.Aoki,N.Tenma,Y.Sakamoto(AIST), T.Yamaguchi(Toho U.)*				
16:45 - 17:00	**Development of the Geo-Mechanical Simulation Code 'COTHMA'** *N. Tenma, M.Kakumoto, Y. Sakamoto, K. Miyazaki, K. Aoki (AIST), J. Mori (WJEC)*				
Closing Session (Room.310)		**Adjournment**			
17:30 - 18:00	**Closing Remarks** *Kenji Ohno (JOGMEC), David Boerner (NRCan)*				
18:00	**Adjournment**				

Poster Session Day 3: November 17, 2010

P-1 **The effect of particle-size distribution on methane hydrate formation in sediments**

Toshiyasu Ukita (Japan Oil, Gas and Metals National Corporation)

P-2 **Evidence of Ice Formation During Hydrate Dissociation by Infrared Spectroscopy**

Yusuke Jin (National Institute of Advanced Industrial Science and Technology)

P-3 **Organic compounds formed by radiation in methane and ethane hydrates**

Atsushi Tani (Osaka University)

P-4 **Observation of Dissociation Behavior of Hydrate-Bearing Cores by X-ray CT and Comparison with Numerical Simulation**

Takao Ebinuma (National Institute of Advanced Industrial Science and Technology)

P-5 **Micro Imaging of Hydrate-Bearing Sediments using a X-ray Computed Tomography**

Yusuke Jin (National Institute of Advanced Industrial Science and Technology)

P-6 **Skeleton rheology and methane hydrate dissociation**

Vladimir I. Kondaurov (Moscow Institute of Physics and Technology)

P-7 **Model of incomplete phase transitions of gas hydrates in porous media**

Vladimir I. Kondaurov (Russian Academy of Sciences)

P-8 **Lab-scale production test using depressurization technique on natural gas hydrate-bearing sediments sub-sampled from pressure cores - Preliminary Results -**

Joo Yong Lee (Korea Institute of Geoscience and Mineral Resources)

P-9 **Experimental results for long term CO2 injection into sediments under super-cool condition**

Yojiro Ikegawa (Central Research Institute of Electric Power Industry)

P-10 **Enhancement of Methane Hydrate Dissociation by Ultrasonic Irradiation**

Shinichi Tokaji (Kajima Corporation)

P-11 **Controlled dissociation of methane hydrates simulating production**

Simon Falser (National University of Singapore)

Program

P-12 Integrated Thermal System for Gas Production from Methane Hydrate Zone and Generating Electricity

Kyuro Sasaki (Kyushu University)

P-13 Thermodynamic Constraints on Overpressure Caused by Hydrate Dissociation

Ran Holtzman (Massachusetts Institute of Technology)

P-14 Predictions of Gas Production from Hydrate Reservoirs: Simulations of Marine Methane Hydrate Deposits in the Gulf of Mexico and the Alaska North Slope

Brian J. Anderson (National Energy Technology Laboratory)

P-15 Laboratory Study on Hydraulic Fracturing in Unconsolidated Sands

Takatoshi Ito (Tohoku University)

P-16 Experimental Study on the Permeability Reduction by Fine Migration in Unconsolidated Sediments

Yoshihiro Konno (National Institute of Advanced Industrial Science and Technology)

P-17 Features of solid-water flows in sand sediment layers by micro-scale lattice Boltzmann simulations

Paul E. Brumby (University of Tokyo)

P-18 Removal of Pore Clogging Particles by Ultrasonic Vibration

Kenichiro Tsuyuki (Kajima Corporation)

P-19 Sand Production Behavior from Methane Hydrate Bearing Artificial Core

Hiroyuki Oyama (National Institute of Advanced Industrial Science and Technology)

P-20 The Workflow for Evaluation of Fault Re-Activation during Methane Hydrate Production Test in Nankai Trough

Koji Yamamoto (Japan Oil, Gas and Metals National Corporation)

P-21 The monitoring of the gas hydrate production test at Mallik

Takao Inamori (JGI, Inc.)

P-22 Seismic Methods for Delineation of Gas Hydrates

Kalachand Sain (National Geophysical Research Institute)

P-23 Delineation of Sand Bodies within a Submarine Canyon Offshore Sado Island, Japan

Toshiko Furukawa (Japan Oil, Gas and Metals National Corporation)

P-24 Geophysical Surveys over Methane Hydrate Bearing Zone in the Nankai Trough, offshore JAPAN

Eiichi Asakawa (JGI, Inc.)

P-25 Estimating attenuation in methane hydrate bearing sediments using Q-versus offset method

Kwangho Lee (The University of Tokyo)

P-26 AVO analysis of a weak bottom simulating reflection on the Hikurangi Margin

Ingo Pecher (GNS Science)

P-27 Mallik 2L-38 - Hydrate Saturation from Resistivity Anisotropy

Doug Murray (Schlumberger Oilfield Services)

P-28 Mallik 2L-38 - Applications of Elemental Capture Spectroscopy

Doug Murray (Schlumberger Oilfield Services)

P-29 Gas Hydrate Formation in the Arctic Shelf

Inna E. Balanyuk (Institute of Oceanology Russian Academy of Sciences)

P-30 Numerical simulation of dissociation of methane hydrate in response to depressurization in sediment by periodic uplifts

Shusaku Goto (National Institute of Advanced Industrial Science and Technology)

P-31 Analyses of Biomarker Distributions in the Methane Hydrate Bearing Sediments in the Eastern Nankai Trough

Miki Amo (Japan Oil, Gas and Metals National Corporation)

P-32 PCATS: Pressure Core Analysis and Transfer System

Peter Schultheiss (Geotek Ltd.)

P-33 Geotechnical Properties of Seabed Ground in East Nankai Trough and Development of Its Constitutive Equation

Shin'ya Nishio (Shimizu Corporation)

Program

P-34 Long term seabed deformations from methane hydrate exploitation

Jun Yoneda (Yamaguchi University)

P-35 A Chemo-Thermo-Mechanically Coupled Simulation of the Subsurface Ground due to Gas Hydrate Dissociation

Sayuri Kimoto (Kyoto University)

P-36 Environmental Characterization of the Eastern Nankai Trough and Environmental Impact Assessment Studies with MH Development

Nao Arata (Japan Oil, Gas and Metals Nationmal Corporation)

P-37 Environmental risk assessment of methane hydrate development

Itsuka Yabe (Japan Oil, Gas and Metals National Corporation)

P-38 Environmental Monitoring Systems for Offshore Methane Hydrate Production Tests

Sadao Nagakubo (Japan Oil, Gas and Metals National Corporation)

P-39 An Observation of Methane Plume Behavior and the Numerical Analysis

Tetsuo Yamazaki (Osaka Prefecture Univ.)

P-40 Measurement method for methane plume by ADCP

Rei Arai (Osaka Prefecture Univ.)

P-41 Modeling of Chemosynthetic Community around Cold Seepages

Tetsuo Yamazaki (Osaka Prefecture Univ.)

P-42 DNA markers associated with methane leakage from the deep sea floor in the eastern Nankai Trough

Kouki Yoshida (Taisei Co)

P-43 Development of Models for Methane Leakage and Discharge of Treated Production Water

Shunji Sukizaki (MBRIJ Co., Ltd.)

Only first authors are written on Poster Session Program.