SPWLA NewsLetter

SPWLA Japan Chapter

SPWLA Newsletter Contact: S. Shin Schlumberger GeoQuest e-mail: sshin@tokyo.oilfield.slb.com tel: 03-3431-0996 / fax: 03-3431-1779

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Announcement from the Board

Candidates for new board members for 2002-2004 have been finalized. Their name and personal profiles are presented at the end of this newsletter. Approval and introduction of new Board members will take place at 40th General meeting on September 27th.

Invitation to 40th Chapter Meeting

We would like to announce that the forthcoming Chapter Meeting will be held as follows.

Venue: Conference Room(14th floor) in INPEX

Ebisu Neonato, 4-1-18, Ebisu,

Sibuya-ku, Tokyo Tel: 03-5448-1201

Date: Friday, September 27th, 2002

Program:

15:00-15:45 Technical meeting

"A New Interpretation Model Using Nuclear Magnetic Resonance Log for Micritic Limestone Reservoirs in the Mubarraz Field

by Masatoshi Nishi (Schlumberger, Nagaoka)

16:00-17:15 General meeting

- 1) Opening remarks
- 2) Activity Report
- 3) Membership Report
- 4) Financial Report
- 5) Approval of Board members for 2002-2004
- 6) Greeting from a resigned Board member
- 7) Greeting from new Board members
- 8) Presentation of Distinguished Service Award to Past-President, S. Tono
- 9) Closing remarks

17:30- Snack Buffet (Fee:2,000yen)

About the topic of Technical Meeting:

Title: "A New Interpretation Model Using Nuclear Magnetic Resonance Log for Micritic Limestone Reservoirs in the Mubarraz Field"

Speaker: Masatoshi Nishi (Schlumberger)

Shigeaki Asakura, Hitoshi Takezaki, Masahiro Miwa, Masayoshi Suzuki, Osamu Kobayashi, Masatoshi Nishi

Abstract: The Cretaceous Thamama Group, offshore Abu Dhabi consists in part of fine-grained micritic limestone reservoir zones. Recent studies revealed that even the low resistivity zones could produce oil. Production from such zones has been confirmed by extensive core studies and production tests. It is the case that in these reservoirs the traditional Archies equation does not provide realistic water saturation results because of the dominance of the micrite particle, which has a complicated combination of pore systems such as the Micro pore, Mezo pore and Macro pore. In fact, the water saturation derived from the traditional Archies equations differs from the one obtained from TDT[†] and RST[†] measurements, which are independent from Archies theory.

In this paper, the Nuclear Magnetic Resonance Logging Tool (CMR[†]) has been employed to characterize the pore system of the micritic limestone reservoirs, and a new water saturation equation has been constructed so as to provide consistent results with other information such as the core analysis and production tests.

The objectives of this study are:

- 1. To characterize the pore system of the micritic limestone using CMR Logging
- 2. To construct the new saturation equation based on the triple pore system, which is an extension of the Dual Porosity Model
- 3. To re-evaluate the permeability estimator based on the model

Also the new water saturation equation has been tested for its apparent saturation exponent "n" which is observed as variable by the core analysis.

Keywords: Thamama, Mubarraz, water saturation equation, Nuclear magnetic resonance, micritic limestone, saturation exponent

ELECTION OF THE BOARD MEMBERS

BOARD MEMBERS FOR 2002-2004

President Arihara Norio

First Vice President Fumio Okitsu

Vice President, Technology Makoto Miyairi

Vice President, Membership Masashi Takayama

Secretary Shigemi Matsuda

Treasurer Masaru Nakamizu

Director Makoto Sato

Director Shougo Okamoto

Director Masashi Fujiwara

Director Hiroaki Niitsuma

Director Hiroshi Oda

Director Shigeaki Asakura

Director Tatsuki Endo

Director Jiro Watanabe

Director Haruya Nakata

Director Hideki Saito

PERSONNAL PROFILES

- **N. ARIHARA**, candidate for Director, is the Professor of Waseda University, Department of Mineral Resources Engineering. He graduated from Kyoto University with a M.S. degree in Aeronautical Engineering and Stanford University with a Ph.D. in Petroleum Engineering to manage the geothermal project. After that, he joined Arabian Oil Company, Tokyo as a Senior Reservoir Engineer in both Tokyo and Saudi Arabia. He was assigned to a Director of Reservoir Engineering Laboratory of Japan National Oil Corp., Technical Research Center. He then moved to Schlumberger K.K., where he has worked on the Reservoir Modelling Project in both Tokyo and Austin (Texas). In 1992, he moved to present University as a Professor, is teaching Petroleum Engineering and Geothermal Reservoir Engineering. He has just become a member of the SPWLA.
- **F. OKITSU**, candidate for First Vice President, is an independent petroleum consultant. He graduated from Kyoto University with M.S. degree in Geology and Mineralogy. He joined Arabian Oil Company Ltd. in 1961. Since then, he has worked as an Exploration Geologist and a Log Analyst in various fields. In 1995, he retired from Arabian Oil Company Ltd. and founded the present position.
- M. MIYAIRI, candidate for Vice President, Technology is a senior research manager in charge of research planning for JAPEX Research Center. He graduated from Tohoku University in 1972 with B.S. degree in Geophysical Engineering. Since joining Japan Petroleum Exploration Co., Ltd. (JAPEX), he has engaged in formation evaluation and reservoir characterization of oil and geothermal reservoirs and development of high temperature downhole tools as researcher and research group manager prior to his current assignment. In 1981 and 1982, he worked in Los Alamos National Laboratory as Collaborated Researcher for Hot Dry Rock program, in 1987, he received Ph.D in downhole instrumentation from Tohoku University. He is a member of SPWLA, SEG-J, JAPT and GRS/J.
- M. TAKAYAMA, candidate for Vice President, Membership, is a Senior Geologist of Exploration Division for Japan Petroleum Exploration Co., Ltd. (JAPEX). He received his B.S. degree in 1984, and M.S. in Petrology in1986 from Kyoto University. Since joining JAPEX, he has been engaged in several projects, dealing with formation evaluation. From 1996 to 1999, he worked as a Senior Geologist at the Technical Department of JNOC. After returning to JAPEX, he served as his current assignment. He is a member of SPWLA and JAPT.
- **S. MATSUDA**, candidate for Secretary, is a GeoQuest location manager for Japan , Korea, and Taiwan at Schlumberger K. K. He graduated from Hokkaido University with B.Sc. degree in Mineral Resources field. Since joining Schlumberger in 1986, he had worked as a Field Engineer in charge of logging in north Yamen (1987), and in Iran (1991). Afterthat, he worked as General Field Engineer in various field. In 1997, he placed his assignment in Japan GeoQuest, then, has been appointed to his current position in 2002. Moreover, he is a committee member of SEG-J International Symposium.
- M. NAKAMIZU, candidate for Treasurer, is a Chief Researcher for Information Center for Petroleum Exploration and Production. He graduated from Niigata University with M.S. degree in Geology. He has spent 11 years with Japan National Oil Corp. in various fields. He engaged in technical evaluation and project investigation for oil exploration and development. Between 1984 and 1986, he worked for Japan China Oil Development Co. (affiliate company of JNOC). Also, he worked for the Middle East Representative office at JNOC for 2 years. After working as R&D Division Director, for JNOC Technology Research Center, he moved to his current position at ICEP. He is a member of SPWLA.

- M. SATO, candidate for Director, is currently working at the E&P Section Energy Business Development Division of Mitsui & Co., Ltd. Prior to this appointment, he was a Director of Geophysics Laboratory, Technology Research Center of Japan National Oil Corporation after working as an Assistant Director in the Technical Department and as an Assistant Director in the Second Project Department of the same organization. Having graduated with a B.Sc. from Tohoku University in 1982, he joined the Japan National Oil Corporation. He was with the Technical Department until 1986 when he moved to the Geophysics Department of Japan Petroleum Exploration Co. Two years later, he returned to JNOC and joined the Geological Survey Department.
- **S. OKAMOTO**, candidate for Director, is Senior Geologist of Teikoku Oil Co., Ltd. He received his B. Sc. Degree (1991) and M. Sc. degree in geology (1993) from Osaka City University. He joined Teikoku Oil Co. Ltd. in 1993 and has worked as a petroleum geologist in Japan and Egypt.
- M. FUJIWARA, candidate for Director, General Manager (Indo-China) of Projects & New Ventures Div., Mitsui Oil Exploration Co., Ltd.(MOECO). He received his Bachelor of Engineering degree in Mining Geology from Akita University in 1974 and joined MOECO in 1974. He has been involved in exploration geology for more than 25 years mainly in South East Asia. He also had seconded as an exploration geologist to Arakan Oil Development Company (Rangoon) from 1974 to 1976, Jambi Oil Development Company (South Sumatra, Indonesia) from 1979 to 1981, South East Asia Petroleum Exploration Company (Tokyo) from 1982 to 1990 and Unocal Thailand (Bangkok) from 1992 to 1994. After returning to MOECO, he engaged in technical evaluation on the new exploration opportunities in South America, Central Asia, Middle East and South East Asia. He was assigned with the current position in July 2002. He is a member of JAPT, AAPG and SPWLA.
- **H. NIITSUMA**, candidate for Director, is professor of Department of Resources Engineering, Faculty of engineering, Tohoku University, Sendai, Japan, since 1988. He received a Dr. Degree from Tohoku University in 1975. His recent research activities are on multicomponent seismic measurement and signal processing, borehole measurement, and on characterization of geothermal reservoir. He is a member of SPWLA, SEG, IEEE, SEG-J, MMIJ and other Institutes.
- **H. ODA**, candidate for Director, is a research geologist of National Institute of Advanced Industrial Science and Technology (AIST), in charge of geological evaluation of coals as source rocks using organic petrologial, geochemical, and geophysical techniques. He graduated from Kyushu University in 1994 with B.Sc. degree in coal geology, University of Tokyo in 1996 with M.Sc. degree in sedimentary geology. Since joining Geological Survey of Japan in 1997, he had worked as a research geologist in Mineral and Fuel Resources Dept. (1997-1998) in charge of geologial and geochemical survey of coals and methane hydrate. And he seconded, as a research geologist, to Japan National Oil Corporation (JNOC) in Technology Research Center (TRC) in charge of exploration project of methane hydrate offshore Japan, and development project on simulation models of sedimentary processes for carbonate and clastic reservoirs (1998-2000). He was assigned in National Institute of Advanced Industrial Science and Technology with the current position in 2000. He is a member of SPWLA and JAPT.
- S. ASAKURA, candidate for Director, is a manager of GeoQuest Schlumberger in charge of Japan, Korea and Sakhalin. He graduated from Kyoto University in 1976 with B.Sc. degree in Geophysical Prospecting. Since joining Schlumberger in 1976, he has worked as a field engineer in Brunei, Indonesia, Malaysia and Japan. After the Log Analyst School in Paris (1981), he worked as a log analyst in Singapore and Tokyo (Reservoir Modeling Group). Various positions as a manager and in marketing function, he was assigned in Tokyo with the current position in 1998. He is a member of SPWLA.

- **T. ENDO**, candidate for Director, is the Marketing Manager for Schlumberger K. K. He graduated from Sophia University with a B.Sc. in Physics in 1981. Since joining Schlumberger, he has worked in various assignments as a Field Engineer in Indonesia, Japan and Norway, a Log Analyst in Brazil, a Marketing staff in Schlumberger/NTT joint venture, a Manufacturing staff and as an Engineering Project Manager for Borehole Seismic tool in Schlumberger K.K. prior to his current assignment. He is a member of SPWLA, SPE, SEG and SEG-J.
- **J. WATANABE**, candidate for Director, is a Sales Manager of Geophysical Surveying Co., LTD. He graduated from Akita University in 1981. Since joining Geophysical Surveying Co., LTD. in 1981, he has worked as a wireline logging engineer. In 1981 and 1992, He has been engaged in a lot of wireline survey at the oil and geothermal field. He was transferred to his present position in 1992. He is a member of SPWLA and SEG-J.
- **H. NAKATA**, candidate for Director, is Director and General Manager of Department of Technology, GERD (Geothermal Energy Research and Development Co., Ltd.). He received his B. Sc. degree from Waseda University Tokyo, Japan in 1977 and on the same year, joined Chishitu-Keisoku (Geological Measurement) Co., Ltd. as a staff engineer. In 1981, he joined Geothermal Energy Research and Development Co., Ltd., worked several years as a Staff Engineer and Chief Engineer. Since assigned as Manager of Department of Research and Development in 1991, he took various positions as Managers at Marketing and Business Development and Technology, prior to his current assignment. He is a registered Consulting Engineer (Geology, Applied Science, Japan) and earned Ph.D. from Kyusyu University, Japan.
- **H. SAITO**, candidate for Director, is a Deputy General Manager of Engineering Geophysics R&D Dept., Tsukuba Technical Research and Development Center, OYO Corporation. He received his B.Sc. degree from Hokkaido University in 1980, and since joining OYO Corporation the same year, he has been involved with the field of exploration geophysics for 22 years. From 1989 to 1991, he was appointed as Visiting Scientist of the Earth Resources Laboratory in Massachusetts Institute of Technology, where he had been engaged with research and development of seismic tomography. He returned back to OYO Corporation as Manager of Seismic Group in Engineering Geophysics Research Center, and of the Engineering Geophysics Group in Tohoku Branch Office, prior to the present position he took in 1999. In 2001, he received his Ph.D. degree from Hokkaido University.

