SPWLA NewsLetter

SPWLA Japan Chapter

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SPWLA Newsletter
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General Summary of the Symposium

The Sixth well logging symposium of Japan was successfully held in JNOC-TRC on September 27-28, 2000. Our sincere thanks to all the participants and sponsors for their contributions. This year, the President of our parent society, SPWLA, Dr. Philippe Theys was invited as a keynote speaker of the symposium.

Following is a brief summary of the symposium.

(Participants)
The number of participants was 86, and 40% of them were from oil companies, 34% from service companies, 14% from universities & national research institutes and 12% from geothermal, geo-engineering and other industries. The participants from overseas were 8. The number of participants was almost same as the one of the last year but about 30% less than usual.

(Opening Session)
Following the opening address by our vice president, Mr. Fumio Okitsu and Dr. Noboru Tezuka, vice president of Japan National Oil Corporation, Dr. Philippe Theys, the President of our parent society, SPWLA, delivered a keynote address titled " Data and dollars".

(Technical Sessions)
Fourteen papers were presented in 4 technical sessions. Three papers were canceled due to the accidental affairs of speakers. The session titles and the number of papers were as shown as follows;

(1) New Frontier of the 21st Century : 2
(2) Formation Evaluation : 6
(3) Electrical/Electromagnetic Logging: 2
(4) Acoustic/Borehole Geophysics : 4

We had 6 papers from overseas.

(General Meeting)
The Japan chapter will host the 43rd SPWLA Annual Logging Symposium in 2002. The outline of our plan was introduced by our International Coordinator, Mr. Leslie Nutt.

(Proceedings of the Symposium)
The Proceedings of the Sixth Symposium and back numbers of past symposiums are available for 3000yen each. To get a copy, please contact:

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Opening Address of the Symposium

Wednesday, September 27th 2000

President of SPWLA, Mr. Theys, members and friends of SPWLA, ladies and gentlemen, it is a great honor for me to speak at the opening session of The 6th Well Logging Symposium of Japan, sponsored by SPWLA, Japan Chapter.

Last few years, we have experienced the dynamic restructuring of International oil & gas industry. I understand that this was because each oil & gas company was aiming to be more competitive in the industry, hence to survive in the next century, in the low oil price environment, even though currently industry is enjoying high level of oil price.

And here in Japan, new Government Policy for Energy Security of this country, including the governmental support to the industry through Japan National Oil Corporation, is being discussed at the various levels in this country. Oil & Gas industry is changing. At the same time, E&P Technology is advancing.

In the recent years, the industry has realized the remarkable technological advances, mainly thanks to the advances of Computer and Information Technology, especially in the area of Seismic and Wireline Logging. We are now able to describe the subsurface reservoir conditions more precisely than before, utilizing these new technologies.

TRC has made some contribution to the development of a new generation of LWD tool, “Pulsed neutron LWD”, through the collaborative research project between Schlumberger and JNOC/TRC, which is now under field testing prior to put into the market shortly.

International oil & gas industry, as well as oil & gas producing countries, has the high level of expectation that the technology of Wireline Logging is further improved and advanced.

No doubt that SPWLA and members of SPWLA will play the key role to realize this expectation. In this regard, it is our honor for TRC to have privilege to contribute to the activities of the Japan Chapter of SPWLA since 1997.

Finally, I hope that this two-day conference at TRC will enhance the discussions on the various aspects of Wireline Logging Technology and will stimulate the new ideas to further improve and advance this technology.

Thank you for your attention.

Noboru Tezuka
Vice President,
Japan National Oil Corporation

Invitation to 34th Chapter Meeting

Venue: **Schlumberger K. K.**
2-2-1 Fuchinobe, Sagamihara-shi
Kanagawa-ken 229-0006
Tel (042)759-2115/2111

(See the attached map. Bus service from Fuchinobe Station (JR Yokohama line), will be available before and after the meeting)

Date: **Monday, December 4, 2000**

Program:

14:10 *Bus service from Fuchinobe Station (at North Exit - front of Yokohama Bank)*
14:30 **Chapter Meeting**
14:30 SKK Overview T. Fujinawa
14:45 Presentation
- K. Fujii Sonic Imaging - Fracture identification
- X. Li Advanced Acoustic Impedance Inversions for PPP
- N. Matsumoto Development of a Quartz Pressure Sensor for Extreme Hostile Environment Application

* Presentations in Japanese

17:00 Facility Tour
17:30 Buffet at Conf.4
18:40/19:10 *Bus service to Fuchinobe Station*

About the topics

Title: Sonic Imaging - Fracture identification
Speaker: Kasumi Fujii
Abstract:
For several years we have been developing imaging tools in a single well at higher frequencies that give high resolution than the seismic imaging. The targets are acoustic boundaries such as formation, bed, and fractures around the borehole up to 10 m.
So far, the borehole imager (such as FMI/UBI) and the borehole wave reflections (such as Stoneley analysis) are the commonly used techniques as the fracture identification. Although, these methods give fracture information only around the borehole well. Then, the BARS (Borehole Acoustic Reflection Survey) tool has been developed to image fractures and its extensions distant from the borehole well into the formation.

The presentation will cover the concept of measurement methodology and some field test results of the fracture imaging with the BARS tool.

Title: Advanced Acoustic Impedance Inversions for PPP

Speaker: Xinyuan Li

Abstract:

Inversion of zero-offset VSP data yields full-band reflectivity sequence and an associated impedance profile. These are very important for detection of overpressure formations ahead of the bit.

Bayesian Acoustic Impedance Inversion is a new inversion method. The main feature of the inversion is to minimize a mixed norm cost function based on a conjugate gradient extension for nonlinear functionals. With the inclusion of soft impedance constraints, robust inversion results can be obtained. The constraints can be calculated from the Time-Depth curve or from a sonic log.

This method has been applied on several real data examples and results show that the inverted velocity log is close to the calibrated sonic log. The overpressure formation boundaries also match with the inversion results very well.

Title: Development of a Quartz Pressure Sensor for Extreme Hostile Environment Application

Speakers: N. Matsumoto, Y. Oohashi, M. Miyashita, G. Fujisawa, B.K. Sinha* and M. Niwa (Schlumberger K.K. *Schlumberger-Doll Research)

Abstract:

A new dual-mode quartz pressure sensor HCQG (Hostile environment Crystal Quartz Gauge) is based on the principle of CQG* (Crystal Quartz Gauge) that has been used in the oil and gas industry for the past 10 years. The CQG design is limited to a maximum pressure of 15,000 psi (103 MPa). The maximum pressure limitation is caused by twinning of crystalline quartz that is a precursor to mechanical fracture. The new design for high pressure and temperature applications was obtained by carrying out three-dimensional, finite-element stress analyses of many probe structures. We analyzed probe structure elements with large stress concentrations that are prone to twinning when subjected to high pressures and temperatures. Design modifications to the probe structure enabled us to reduce the stress magnification in those critical areas. Prototypes made with the new design have been successfully fabricated and tested up to 25,500 psi (175 MPa) and 180 °C. This paper will present the development details, resonator characteristics, and performance of HCQG over the entire pressure and temperature ranges.

*Mark of Schlumberger

['94-'95 Annual schedule of Chapter Meetings]

May 23, 1994	*Japan National Oil Corporation*
July 25, 1994	*Japan Petroleum Exploration Co., Ltd.*
September 27, 1994	*Japan Oil Engineering Co., Ltd.*
November 29, 1994	*Technical Research Center, Teikoku Oil Co., Ltd.*
January 23, 1995	*Indonesia Petroleum, Inc.*
March 13, 1995	*Waseda University*
May 29, 1995	*Japan Oil Development Co., Ltd.*
September 21-22, 1995	*Technology Research Center, Japan National Oil Corporation*

['95-'96 Annual schedule of chapter meeting]

November 27, 1995	*Idemitsu Oil Development Co., Ltd.*
January 29, 1996	*Geothermal Energy R& D Co., Ltd.*
March 26, 1996	*Arabian Oil Co., Ltd.*
May 27, 1996	*Japan Petroleum Exploration Co., Ltd.*
September 26-27, 1996	*Technology Research Center, Japan National Oil Corporation*

['96-'97 Annual schedule of Chapter meetings]

November 25, 1996	*Technical Research Center, Teikoku Oil Co., Ltd.*
January 27, 1997	*Indonesia Petroleum, Inc.*
March 26, 1997	*Waseda University*
May 26, 1997	*Japan Oil Development Co., Ltd.*
September 24-25, 1997	*Technology Research Center, Japan National Oil Corporation*

['97-'98 Annual schedule of Chapter meetings]

November 25, 1997	*Idemitsu Oil Development Co., Ltd.*
January 26, 1998	*Geothermal Energy R& D Co., Ltd.*
March 30, 1998	*Schlumberger K.K.*
May 25, 1998	*Japan Petroleum Exploration Co., Ltd.*
September 24-25, 1998	*Technology Research Center, Japan National Oil Corporation*

['98-'99 Annual schedule of Chapter meetings]

November 27, 1998	*Technical Research Center, Teikoku Oil Co., Ltd.*
January 27, 1999	*Indonesia Petroleum, Inc.*
March 31, 1999	*Waseda University*
May 25, 1999	*Tohoku University*
September 29-30, 1999	*Technology Research Center, Japan National Oil Corporation*

['99-'00 Annual schedule of Chapter meetings]

November 29, 1999	*Mitsui Oil Exploration Co., Ltd.*
January 31, 2000	*Idemitsu Oil & Gas Co., Ltd.*
March 27, 2000	*Geothermal Energy R&D Co., Ltd.*
May 22, 2000	*Japan Petroleum Exploration Co., Ltd.*
September 26-27, 2000	*Technology Research Center, Japan National Oil Corporation*

['00-'01 Annual schedule of Chapter meetings]

December 4, 2000	*Schlumberger K.K.*
January 29, 2001	Technical Research Center, Teikoku Oil Co.,Ltd
March 31, 2001	Indonesia Petroleum, Inc.
May 25, 2001	Waseda University
September 29-30, 2001	Technology Research Center, Japan National Oil Corporation

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