

## The Sixth Well Logging Symposium of Japan

Following the successful symposium of last year, we hold "The Sixth Well Logging Symposium of Japan" in same venue and same season.

The symposium will be held at **JNOC-TRC, Chiba on September 27-28, 2000**. All persons involved with well logging, formation evaluation and borehole geophysics are invited to present their activities and exchange information.

**Abstract is due no later than May 15, 2000.** Please refer to "Call for Abstracts" attached for detail information. Your contribution is expected. Let's submit Abstract !

## SPWLA日本支部 第6回検層シンポジウム

時下ますますご清栄のこととお慶び申し上げます。

本年もSPWLA日本支部主催の第6回検層シンポジウムを平成12年9月27日、28日の両日に石油公団・石油開発技術センターにおいて開催するはこびとなりました。

本シンポジウムはFormation EvaluationやBorehole geophysicsをはじめ、検層技術を専門とされる皆様の技術・情報の交流の場として、諸活動の発表を広く歓迎致します。

講演を希望される方は添付の"Call for Abstracts"をご参照の上、Abstractを5月15日までに提出下さい。皆様のご応募をお待ちしております。



**The Sixth Well Logging Symposium of Japan**  
TRC-JNOC, Chiba September 27-28, 2000  
CALL FOR ABSTRACTS

**Sponsored** by Japan Chapter of Society of Professional Well Log Analysts  
**Cosponsored** by Technology Research Center, Japan National Oil Corporation  
**Supported** by Japanese Association for Petroleum Technology  
Society of Exploration Geophysicist of Japan  
Geothermal Research Society of Japan  
Society of Petroleum Engineers, Japan Section  
Subsurface Instrumentation Division of MMIJ

The Sixth Well Logging Symposium of Japan will be held at the Technology Research Center-Japan National Oil Corporation, Chiba on September 27-28, 2000. All persons involved with the Oil, Gas, Geothermal Energy and Geoengineering industry and research institutes are invited to submit abstracts of original papers for presentation at the symposium and publication in its proceedings

**NOTE TO AUTHORS:** Complete a separate form in typescript for each abstract submitted. Type abstract on a single sheet of A4 paper. It should contain 200 to 400 words in English. Avoid the use of equations, trademarks, literature references, and supplementary text. Notification of acceptance will be made in **June 2000**. If accepted, a complete manuscript or extended abstract in English will be required for the proceedings by **July 31, 2000**.

**ABSTRACT IS DUE NO LATER THAN MAY 15, 2000**  
**-Submission by e-mail is preferable!-**

Submit abstracts to : Makoto Miyairi  
JAPEX Research Center  
1-2-1 Hamada, Mihama-ku, Chiba 261  
Telephone:+81(43)275-9311 Fax:+81(43)275-9316  
e-mail : [miyairi@rc.japex.co.jp](mailto:miyairi@rc.japex.co.jp)

Title of Paper: .....  
Author(s): .....  
Corresponding Author: .....  
Company: .....  
Address: .....  
Tel: ..... Fax:..... e-mail: .....  
Has the paper been presented before(Yes or No) .....  
Where? .....when?.....How(Oral or Published).....

Subject classified as (check ):

- |  |   |
|--|---|
| <input type="checkbox"/> Acoustic/borehole seismic               | <input type="checkbox"/> Electrical/electromagnetic logging     |
| <input type="checkbox"/> Borehole imaging                        | <input type="checkbox"/> Nuclear logging                        |
| <input type="checkbox"/> Cased-hole/production logging           | <input type="checkbox"/> Measurements while drilling            |
| <input type="checkbox"/> General formation evaluation techniques | <input type="checkbox"/> Petrophysical properties/relationships |
| <input type="checkbox"/> Fractured reservoirs                    | <input type="checkbox"/> Computer applications                  |
| <input type="checkbox"/> Geological applications                 | <input type="checkbox"/> Geoengineering Applications            |
| <input type="checkbox"/> Geothermal Applications                 | <input type="checkbox"/> Other area of formation evaluation     |

## 第31回支部例会のご案内

今回は、GERD（地熱技術開発株式会社）にホストをお願いしました。まず、GERDの大里氏に「坑井を利用した可聴周波数領域コントロールソースEMイメージング」の最新の成果について紹介して頂きます。続いて、NEDOの深部地熱プロジェクトにおいてJAPEXとGERDで共同開発した高温用（400℃）PTSD検層ツールの紹介をして頂きます。講演内容の概要については、英文をご覧下さい。多数の参加をお待ちしております。

場所： 新場橋区民館  
中央区日本橋兜町11-9  
(別添地図参照)

日時： 2000年3月27日（月）16:00～

プログラム： 16:00～17:15

(1) 坑井を利用した可聴周波数領域コントロールソースEMイメージングの最新の成果  
大里和己（GERD）

(2) PTSDメモリーツールの紹介  
宮入 誠・大崎 豊（JAPEX），兵藤正美（GERD）

17:30～ 懇親会（会場：GERD）

## Invitation to 31th Chapter Meeting

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

**Venue** : Shinbabashi-kuminkan  
11-9 kabutocho, Nihonbashi  
Chuoh-ku, Tokyo  
(See the map attached)

**Date** : On Monday, March 27, 2000

**Program** :

16:00 “Recent Results of Audio-frequency Controlled-source EM Imaging in Borehole.”  
by Kazumi Ohsato (GERD)

“High Temperature PTSD Memory Tool”  
by Makoto Miyairi/Yutaka Ohsaki(JAPEX), Masami Hyodo(GERD)

17:30 Snacks Buffet in GERD

## **About the topics**

**Title :** Recent Results of Audio-frequency Controlled-source EM Imaging in Borehole

**Speaker :** Kazumi Ohsato (GERD)

**Abstract :**

Audio-frequency controlled-source EM imaging (surface to borehole or crosshole) is becoming to be realized for many applications (oil, geothermal, metal mining, and civil engineering). I introduce our recent results using a geothermal exploration system that has been developed under New Energy and Industrial Technology Development Organization (NEDO) and a metal mining exploration system that has been developed under Metal Mining Agency of Japan (MMAJ).

(1) Geothermal Application: NEDO has been undertaking the Deep Seated Geothermal Resources Survey Project in Kakkonda (Iwate, Japan) since 1992. The pilot survey well WD-1a reached 3,729 m and over 500 degrees C in FY1995. In FY1996, NEDO drilled a sidetracking well WD-1b and hit several high permeability zones. We developed a new exploration technique using borehole to surface electromagnetic tomography system named VEMP (Vertical ElectroMagnetic Profiling) under this project (Miura et al., 1995). We applied it to a test survey at the open-hole section (2,250 to 2,850 meters) of WD-1b in 1997. We measured magnetic fields (horizontal fields toward transmitters and vertical fields) at six frequencies (1,4,16,32,64 and 128Hz) at 13 depth levels in the hole. For interpretation of the data, we have developed 2.5-D FEM non-linear least square inversion code including robust weighting for the field data and applied to the field data. The inverted results were compared with the geology, seismic, micro-earthquake, and logging data

(2) Metal Mining Application: The new EM data acquisition system using surface-to-borehole EM tomography technique has been developed for the detail survey of mineral exploration as a project of Metal Mining Agency of Japan. The system is consisted of tri-axial air-loop sources with a frequency range of 8Hz to 14kHz and tri-axial borehole receiver. In 1999, we have conducted the second field test using new tri-axial borehole magnetometer system with tri-axial air-loop sources at the Richmond Field Station (RFS), California, USA. To reconstruct the resistivity image using the system, we applied 2.5-D iterative Born inversion technique of the magnetic field data. The inverted results using the field data obtained from 12 vertical sources, 15 receivers, and 3 frequencies were compared with the induction logging data.

**Title :** High Temperature PTSD Memory Tool

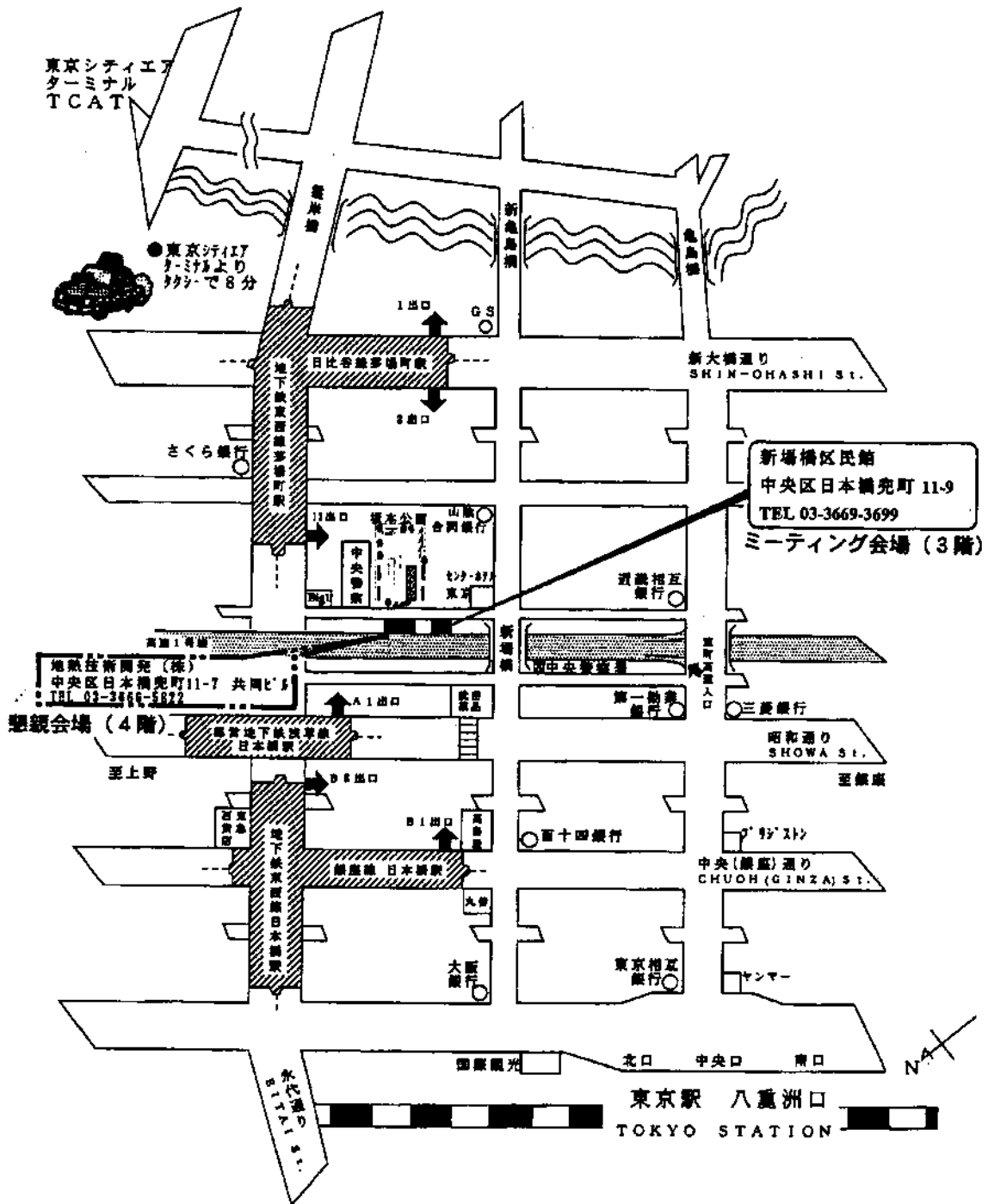
**Speaker :** Makoto Miyairi / Yutaka Ohsaki (JAPEX) , Masami Hyodo (GERD)

**Abstract :**

JAPEX and GERD have developed high-temperature production well logging tool for geothermal wells under the contract of NEDO. The tool called PTSD Memory tool consist of three independent probes which are Pressure/Temperature, Spinner Flowmeter and Fluid Density. Simultaneous measurement is easily achieved as you like by just connecting each probe mechanically.

The temperature rate of 400°C is a world leading performance and no special logging cable is necessary for operation. The fluid density measurement make it possible to evaluate steam-water, two-phase flow, which had not been achieved in geothermal wells.

# 新場橋区民館 案内図



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

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

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

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

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

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

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

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

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

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

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

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

### SPWLA日本支部への入会案内

SPWLA (Society of Professional Well Log Analysts, 本部：米国ヒューストン, 設立：1959年) は検層解析の専門家及びそれに興味を有する人の技術向上・情報交換と親睦を目的とした学術団体で、世界で約3700名の会員と米国内23, 米国外15の支部を有し、年6回の学術雑誌 (THE LOG ANALYST) の発行と年1回の国際検層シンポジウム, そして多くのセミナー, ワークショップを開催しています。

日本支部は平成6年5月23日に設立総会を開催し発足しました。会員は現在115名で、2カ月に一回の割合で支部ミーティング (公開講演会) や年に一度の日本検層シンポジウムを開催し、会員相互の親睦を図ると共に技術情報の交換を行っています。

今日、検層技術は、石油、地熱、土木、学術ボーリングなど幅広い分野で利用されています。SPWLA日本支部では、検層を利用される各分野の技術者の情報交換の場として、今後も活動が続けていきますので、興味のある方は是非ご入会いただきたく、ご案内申し上げます。

#### 記

#### 入会方法：

(1) 別添の入会調査票に必要事項記入の上、ご返送下さい。SPWLA入会申込書をお送りいたします。SPWLAに入会することにより、自動的に支部会員に登録されます。

(2) 支部ミーティングには出席したいが、SPWLAへの入会は希望されないという方。この場合は現在の支部規約では、会員とは認められませんが、準会員として会報配布リストに登録いたしますので、別添の入会調査票にご記入の上ご返送下さい。なお、支部ミーティングへの参加は、会員/非会員を問わず自由です。

#### 添付資料：入会調査票

## 入会調査票

- (1) SPWLAに入会を希望する（はい、いいえ）。
- (2) 会報配布リストに登録を希望する（はい、いいえ）。

(3) 登録情報

氏 名           ：

所属／役職      ：

連絡先住所      ：

電 話           ：

F A X           ：

e-mail          ：

以上、ご記入の上、下記までFAXまたはe-mailにてご返送下さい。

返送先：東京都港区浜松町1—18—16  
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