SPE Workshop: Effective and Efficient Development of Fractured Carbonate Reservoirs
26 – 28 July 2017 | Xi’an, China

To find out more information, please contact us at spekl@spe.org

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Texas A&M University
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Welldog

Supporting Organisation:
Hosted by:

Who Should Attend

This workshop is designed for professionals who are involved in all subsurface disciplines:
• Reservoir Engineers
• Production Engineers
• Petroleum Engineers
• Drilling and Completion Engineers
• Geophysicists
• Geologists
• Geomodellers
• Academics
• Researchers
• Supervisors
• Managers
• Government Representatives
• Energy Policy Makers

Carbonate reservoirs accounts for 52% of the world’s proven oil reserves and 60% of the world’s oil production. Yet, we as an industry still do not understand the flow behaviour and thus the expected ultimate recovery because of the intricate combination of pore, fracture-pore and fracture-cavity elements. One of the largest and most complex of these reservoirs is the Taha Oilfield in China.

Various field studies have demonstrated that the heterogeneous rock fabric in the Taha Oilfield in Tarim Basin defies Darcy’s law and known flow behaviour concepts and theories. It is well understood that the characteristics of fracture-cavity reservoirs are very different from that of pore and fracture-pore reservoirs. When karst caves, fractures and dissolved pores account for much of the productive reservoir volume, discontinuity in the fracture cavity system becomes the dominant feature for well and reservoir development strategies. There are no known techniques to eliminate the rapid production decline associated with such reservoirs.

Session Highlights

• Distinguishing characteristics of fractured karst reservoirs
• Carbonate reservoir characterisation
• Geologic and flow modelling
• Drilling challenges in fractured karst carbonate reservoirs
• Well completion and stimulation in fractured karst carbonate reservoirs
• Waterflooding strategies in fractured karst carbonate reservoirs
• Enhanced Oil Recovery (EOR) in a fracture karst reservoir
• Technology gaps
Workshop Objectives

This workshop will contrast challenges, techniques, methods and technologies applied in fractured carbonate reservoirs, with special attention to the effects of vugs and karsts, on well location and design and on enhancing reservoir productivity and recovery.

Preliminary Workshop Schedule

**WEDNESDAY, 26 JULY 2017**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>0730 – 0900</td>
<td>Registration and Welcome Coffee Break</td>
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<tr>
<td>0900 – 1000</td>
<td>Discussion Leaders and Session Managers Briefing</td>
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<tr>
<td>1000 – 1030</td>
<td>Group Photo/Coffee Break</td>
</tr>
<tr>
<td>1030 – 1230</td>
<td>Session 2: Distinguishing Characteristics of Fractured Karst Reservoirs</td>
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<tr>
<td>1230 – 1330</td>
<td>Session 3: Carbonate Reservoir Characterisation</td>
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**THURSDAY, 27 JULY 2017**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>0800 – 1000</td>
<td>Session 5: Drilling Challenges in Fractured Karst Carbonate Reservoirs</td>
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<tr>
<td>1000 – 1015</td>
<td>Coffee Break</td>
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<tr>
<td>1530 – 1545</td>
<td>Coffee Break</td>
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<tr>
<td>1545 – 1745</td>
<td>Session 4: Geologic and Flow Modelling</td>
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<tr>
<td>1800 – 2100</td>
<td>Welcome Reception/Dinner hosted by Sinopec</td>
</tr>
</tbody>
</table>

Sign up before 23 May 2017 for Super Early Bird Discount!
The Society of Petroleum Engineers (SPE) is a not-for-profit organisation. Income from this event will be invested back into SPE to support many other Society programmes. When you attend an SPE event, you help provide even more opportunities for industry professionals to enhance their technical and professional competence. Scholarships, certification, the Distinguished Lecturer programmes, and SPE’s energy education programmes Energy4me are just a few examples of programmes that are supported by SPE.
GENERAL INFORMATION

Documentation:
- Proceedings will not be published; therefore, formal papers and handouts are not expected from speakers.
- Work in progress, new ideas, and interesting projects are sought.
- Note-taking by attendees is encouraged. However, to ensure free and open discussions, no formal records will be kept.

Workshop Deliverables:
- The committee will prepare a full report containing highlights of the Workshop and the report will be circulated to all attendees.
- PowerPoint presentations will be posted online and provided to attendees after the Workshop. Provision of the materials by Discussion Leaders will signify their permission for SPE to do so.

Commercialism:
In keeping with the Workshop objectives and the SPE mission, excessive commercialism in posters or presentations is not permitted. Company logos must be limited to the title slide and used only to indicate the affiliation of the presenter.

Attendance Certificate:
All attendees will receive a Workshop attendance certificate. This certificate will be provided in exchange for a completed Attendee Survey Form.

Continuing Education Units:
This Workshop qualifies for SPE Continuing Education Units (CEU) at the rate of 0.1 CEU per hour of the Workshop.

Travel/Visa:
Attendees are advised to book their airline tickets early. All travelers traveling to China must be in possession of a passport valid for at least six (6) months on arrival, and must hold a visa issued by the appropriate Chinese officials prior to departure from your home country. Please check with your travel agent or the China Embassy on regulations relating to visa before your departure. Official invitation to apply for China visa for this event are available from the China Centre for International Science and Technology Exchange (CISTE) through the Society of Petroleum Engineers (SPE) upon request in writing, to confirmed registrants.

Dress Code:
Business casual clothing is recommended. The Workshop atmosphere is informal.

Registration Fee:
- Non-Residential Registration fee includes all workshop sessions, coffee breaks, luncheons and dinners on Wednesday and Thursday. Accommodation is NOT included.
- Residential Registration fee includes 3 nights accommodation with daily breakfast (Check-In: Tuesday, 25 July 2017 and Check-Out: Friday, 28 July 2017), all workshop sessions, coffee breaks, luncheons and dinners on Wednesday and Thursday.

Registration Policy:
- Registration fee MUST be paid in advance for attending the Workshop.
- Full fixed fee is charged regardless of the length of time the registrant attends the Workshop, and cannot be prorated or reduced for anyone.

Attention Nonmembers
Join Our Worldwide Membership!
Nonmember full workshop attendees can join SPE at no additional cost.
Look for your exclusive offer by email shortly after the event.

SPONSORSHIP SUPPORT INFORMATION

Sponsorship support of the event helps offset the cost of producing workshops and allows SPE to keep the attendance price within reach of operation-level individuals, those who benefit most from these technical workshops.

Supporters benefit both directly and indirectly by having their names associated with a specific workshop. While SPE prohibits any type of commercialism within the workshop room itself, the Society recognises that supporting companies offer valuable information to attendees outside the technical sessions.

SPONSORSHIP CATEGORIES
Sponsorship categories are offered on a first-come basis. Please contact SPE to enquire and verify the availability of categories. Existing supporters have the opportunity to renew the same level of support for annual workshops.

SPONSORSHIP BENEFITS
In addition to onsite recognition, SPE will recognise sponsors on the SPE website and in all printed materials for the workshop. Based on the category selected, supporting companies also receive logo visibility on promotional workshop items.

FOR MORE INFORMATION
For a detailed list of available sponsorship opportunities, including benefits and pricing, contact Karen Khooi at kkhooi@spe.org.
### REGISTRATION FORM

**Society of Petroleum Engineers**

**Effective and Efficient Development of Fractured Carbonate Reservoirs**

**26-28 July 2017 | Xi’an, China**

### Membership

- **SPE Member:**
  - Yes
  - No

**Membership No. ______________________________________________**

**Name: __________________________________________________________________________________________________________________**

(First / Forename)   (Middle)   (Last / Family Name)

**Position: __________________________________________________________________________________________________________________**

**Company: _________________________________________________________________________________________________________________**

**Address: __________________________________________________________________________________________________________________**

Town/City: ______________________________ Zip/PostalCode:_______________________________ Country: _________________________________

Tel:____________________________________ Fax:________________________________________ Email: ____________________________________

Would you be willing to give a brief (10-15 minutes) presentation _______(Yes/No)? If yes, please attach the topic with a short abstract of your proposed presentation. One of the Programme Committee members will contact you to discuss your presentation.

**Important:** Registrants for SPE Workshops are accepted on the basis of information submitted by each registrant.

**Technical Disciplines (Check One)**

- [ ] Drilling
- [ ] Completions
- [ ] Management and Information
- [ ] Projects, Facilities and Construction
- [ ] Drilling
- [ ] Economics
- [ ] Geology
- [ ] Geophysics
- [ ] Management
- [ ] Operation
- [ ] Production
- [ ] Reservoir
- [ ] Surveillance
- [ ] Other: ____________________

List background and experience. (Use additional paper if required).

List your expectation for the Workshop, so that the committee can tailor a portion of the Workshop to answering attendees’ concerns. (Use additional paper if required).

### Registration Fees

Please tick appropriate box

<table>
<thead>
<tr>
<th>Super Early Bird Registration BY 23 May 2017</th>
<th>Early Bird Registration BY 23 June 2017</th>
<th>Registration AFTER 23 June 2017</th>
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<tbody>
<tr>
<td>[ ] SPE Member</td>
<td>[ ] Nonmember</td>
<td>[ ] SPE Member</td>
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<tr>
<td>US$ 1,600.00</td>
<td>US$ 1,800.00</td>
<td>US$ 1,800.00</td>
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<tr>
<td>[ ] Nonmember</td>
<td>US$ 1,700.00</td>
<td>US$ 1,900.00</td>
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<tr>
<td>US$ 1,800.00</td>
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<td>US$ 2,150.00</td>
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<tr>
<td>US$ 2,150.00</td>
<td>US$ 2,250.00</td>
<td>US$ 2,350.00</td>
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</tbody>
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**Workshop (Non-Residential)**

- [ ] US$ 1,600.00
- [ ] US$ 1,800.00
- [ ] US$ 1,700.00
- [ ] US$ 1,900.00
- [ ] US$ 1,800.00
- [ ] US$ 2,000.00

**Workshop (includes 3-night accommodation)**

- [ ] US$ 1,950.00
- [ ] US$ 2,150.00
- [ ] US$ 2,050.00
- [ ] US$ 2,250.00
- [ ] US$ 2,150.00
- [ ] US$ 2,350.00

**Registration Fee:**

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**Currency Preference:**

- [ ] U.S. Dollars
- [ ] Chinese Yuan

**Payment by Telegraphic Transfer**

- Telegraphic Transfer (Bank details will be provided on the tax invoice).

**Payment by Credit Card**

- Credit Card Payment will be in U.S. Dollars only
- American Express
- MasterCard
- Visa
- Diners Club

**Card Number**

**Expiry Date (mm/yy)**

**Security Code** (3 digits on back of card / 4 digits on the front of Amex)

- **Credit Card Billing Address & Zip/Postal Code**

- **Name of Card Holder**

Signature

**Note:** Forms will not be processed and space cannot be guaranteed unless accompanied by payment for total amount due.

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**Cancellation Policy:**

- a) A processing fee of USD150.00 will be charged for cancellation received thirty (30) days prior to the first day of the workshop.
- b) 25 % refund will be made for cancellation received between twenty nine (29) - fifteen (15) days prior to the first day of the workshop.
- c) No refund on cancellation received fourteen (14) days prior to the first day of the workshop.
- d) No refund will be issued if a registrant fails to show up on-site.

**This form may be used as a company invoice.**

Mail completed registration form with remittance and any supporting material to:

**Society of Petroleum Engineers**

Level 35, The Gardens South Tower, Mid Valley City

Lingkaran Syed Putra, 59200 Kuala Lumpur, Malaysia.

Tel : 60.3.2182.3000      Fax : 60.3.2182.3030

E-mail: spekl@spe.org