Dallas Section

How to Write an SPE Technical Paper Abstract (*and Get it Accepted*)

Terry Palisch

January 26, 2016

Much of the materials presented here are adapted or taken from SPE International "How to Write a Good Technical Paper" Course

Outline

- Introduction
- Calls For Papers
- Abstracts
  - Process Part 1
- Manuscripts (Papers)
  - Process Part 2
- Presentations
- Miscellaneous

Emphasis

Not covered today

Opening Thoughts?

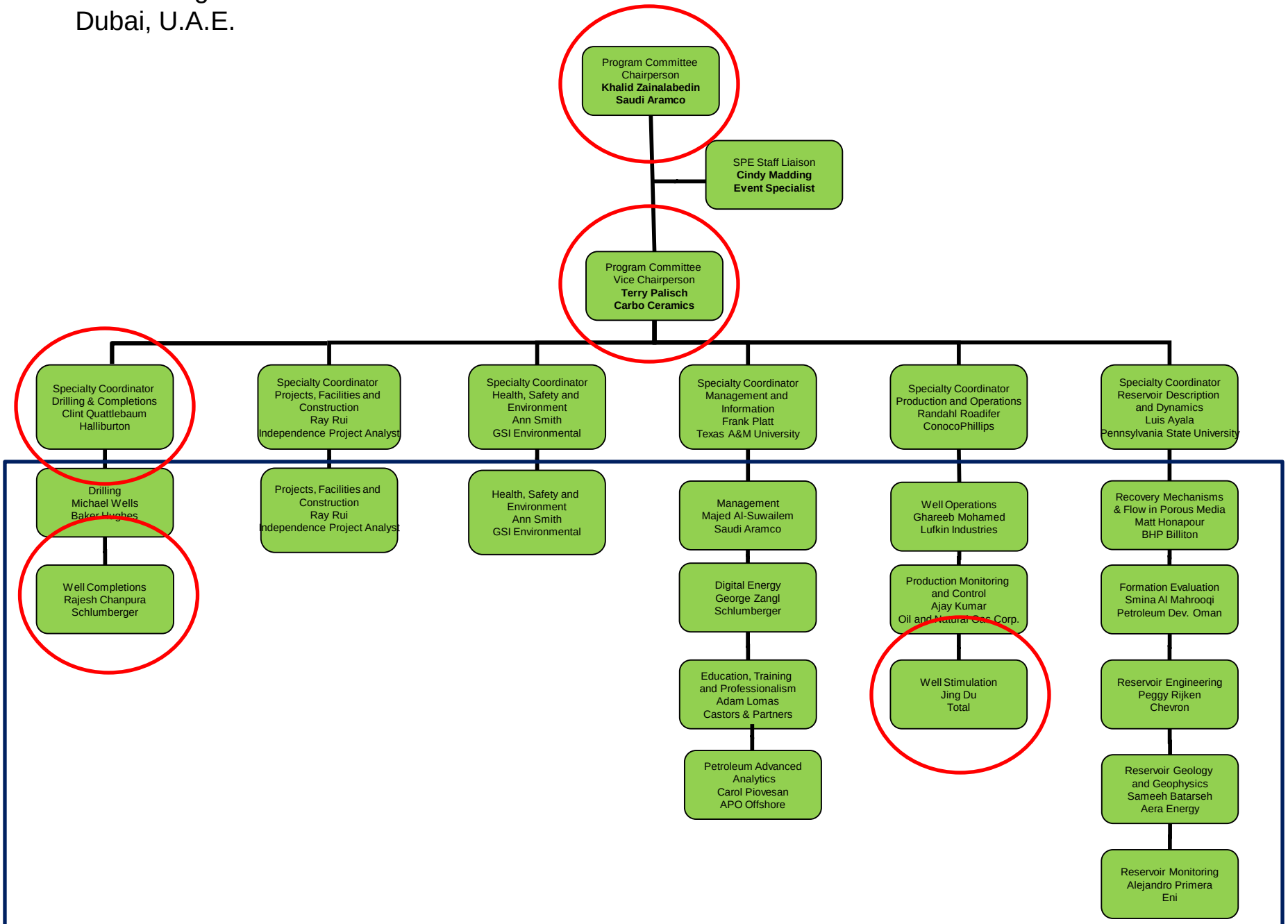
- Have you ever submitted an SPE Paper abstract?
  - Was it accepted?
- Have you ever written an SPE paper?
- If no to the above, why not?
  - What questions/concerns do you have about writing an SPE paper?

Informal….Ask Questions!!

SPE Experience

- Joined SPE in 1982 (while in university)
  - Became *active* in SPE International ~10 years ago
    - SPE Dallas
- Co-authored over 30 papers (first paper in '94)
- Served on ATCE Technical Committee

2016
ATCE Program Committee
Dubai, U.A.E.



Why Write a Technical Paper?

- Preserve your work and ideas
- Transfer knowledge to others
- Build your reputation (and your employer's)
- Professional obligation!

Why Write an *SPE* Paper?

- Rigor & Exclusivity:
  - Highly selective process

Exclusivity of SPE Papers

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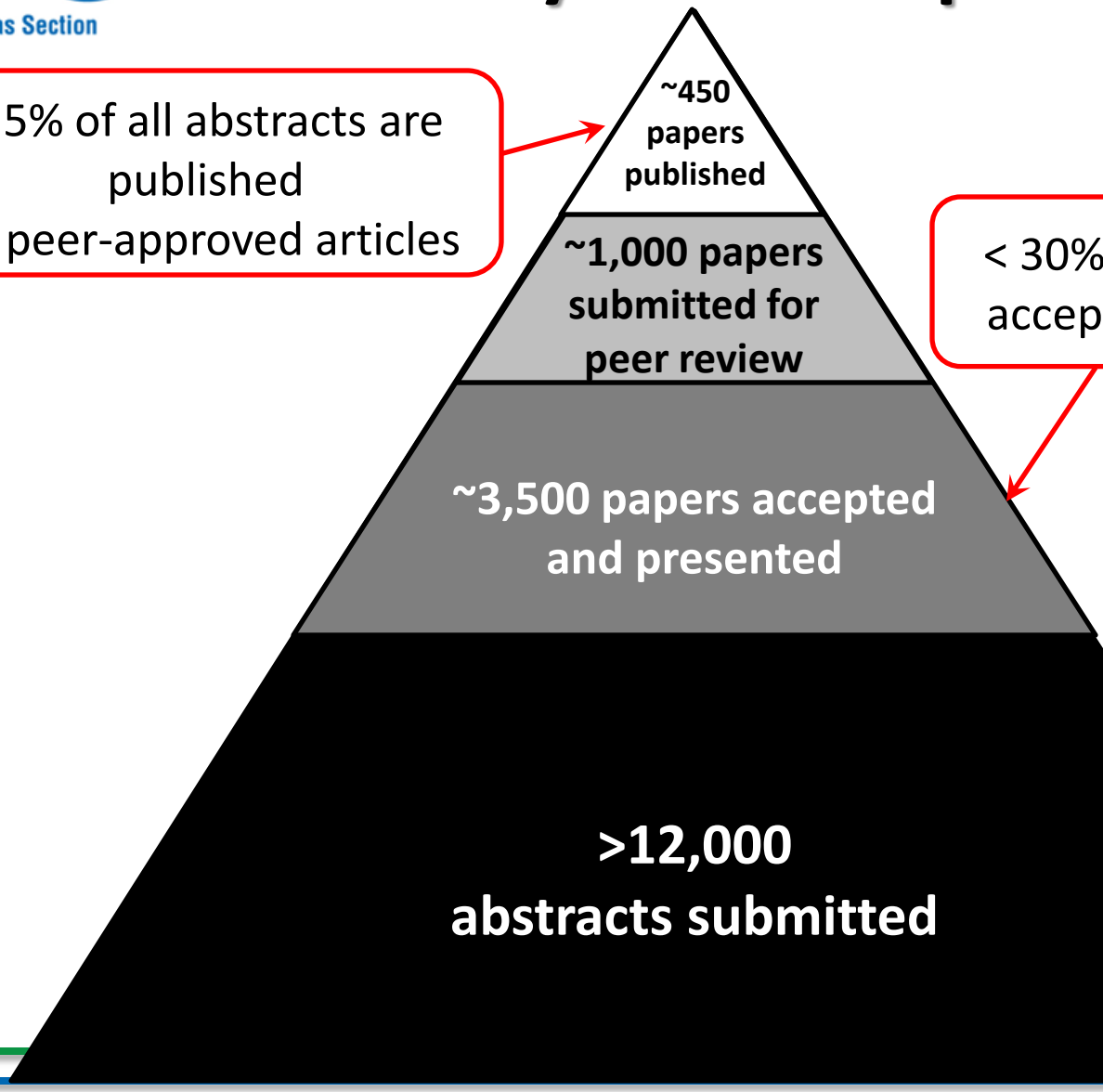
< 5% of all abstracts are published as peer-approved articles



< 30% of all abstracts are accepted as manuscripts

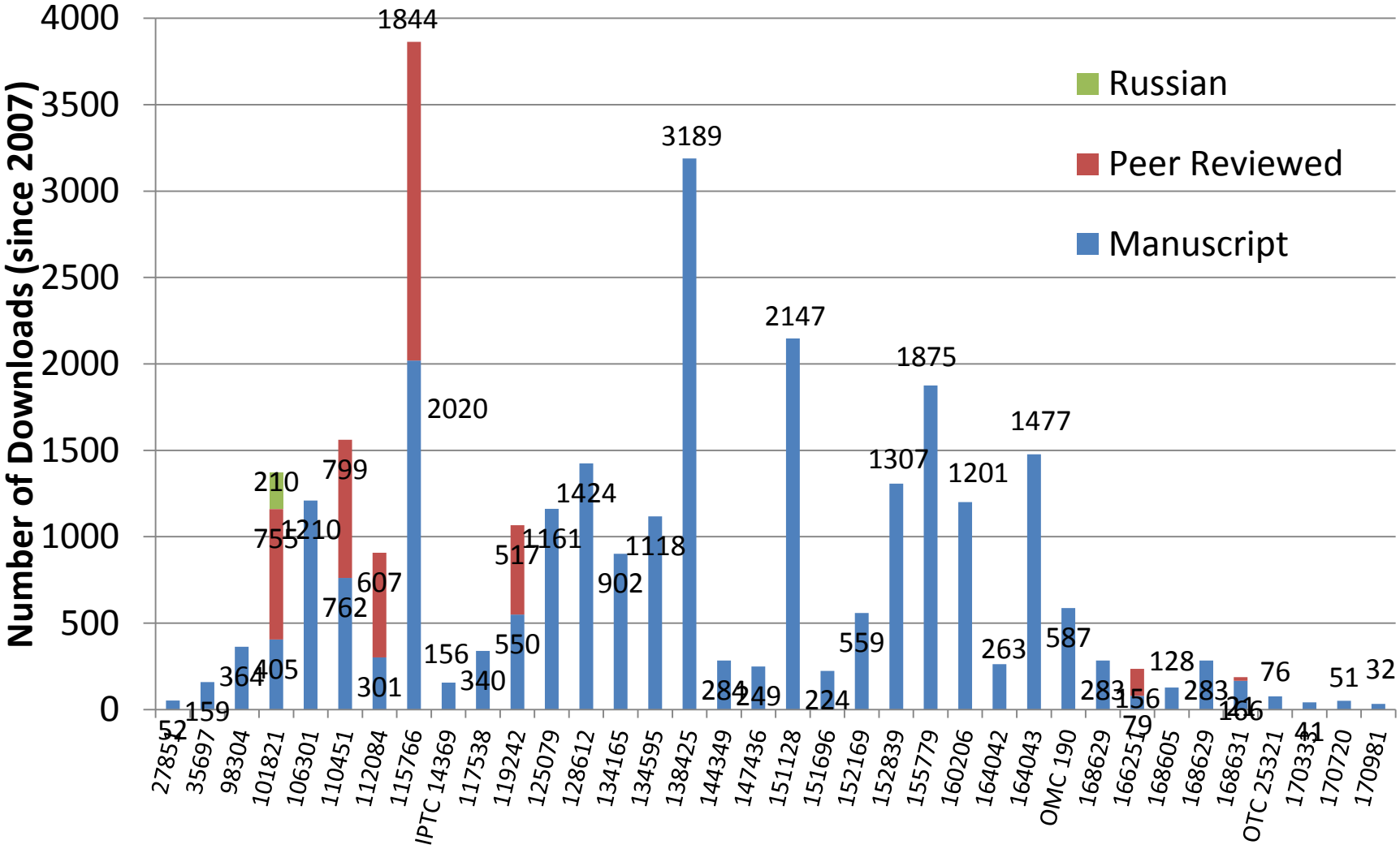
2010 Data

Why Write an *SPE* Paper?

- Rigor & Exclusivity:
  - Highly selective process
- Exposure & Longevity:
  - >35 Technical Conferences Worldwide each year
  - Seven SPE Journals
  - *OnePetro.org* – SPE's Online Manuscript Database

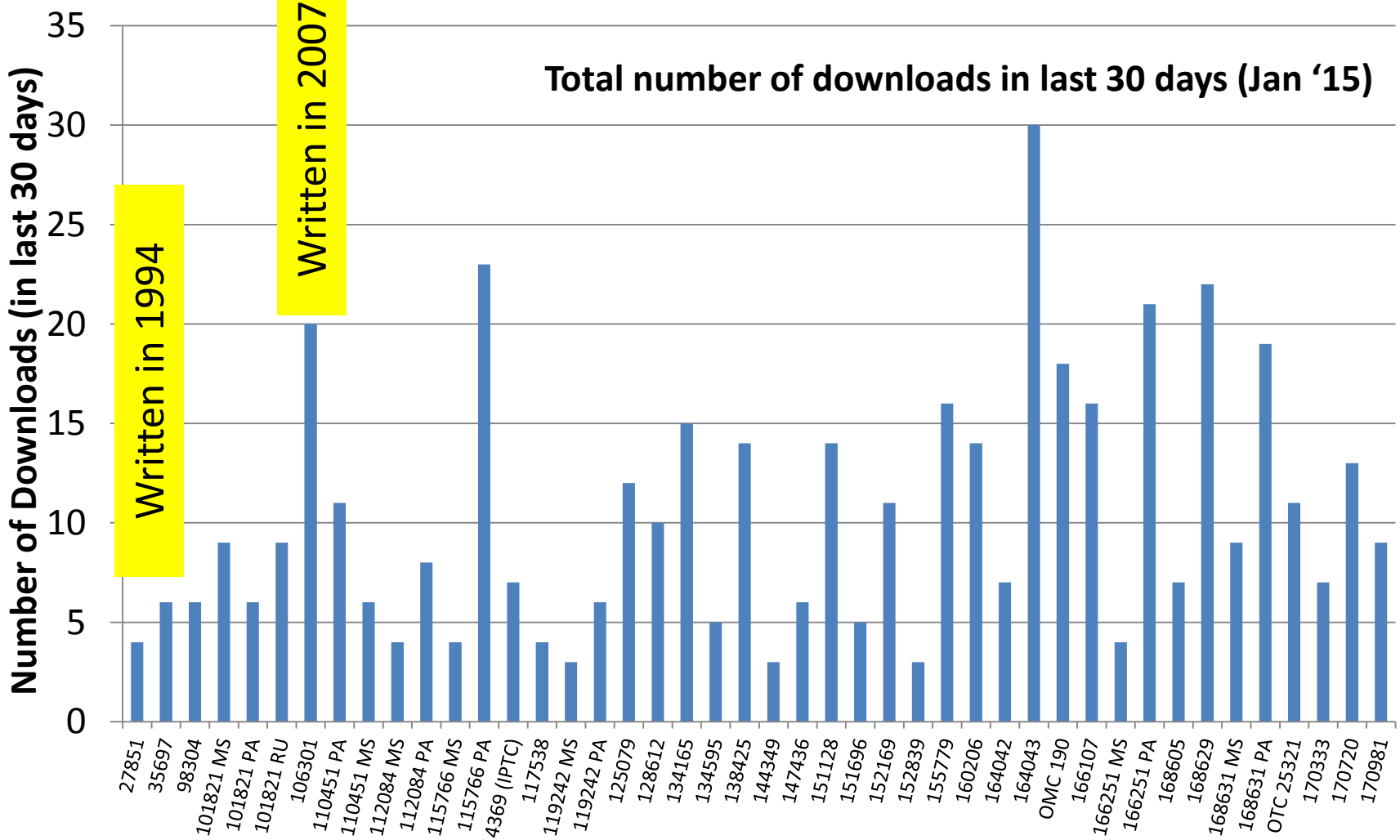
Exposure

Nearly 30,000 downloads!



Terry Palisch papers

Future Exposure - Longevity



Terry Palisch papers

OnePetro.org Facts and Figures

- SPE is responsible for OnePetro
- Multiple societies / Publishing partners
  - Including SPE, SEG, SPWLA, etc
- Over 150,000 papers
  - 69,000 SPE papers
- ~3.5 million downloads each year
  - Over 3500 SPE papers added annually

Why Write an *SPE* Paper?

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  - Seven SPE Journals
  - *OnePetro.org* – SPE's Online Manuscript Database
- Fulfill SPE's Mission:

"To collect, disseminate, and exchange technical knowledge concerning the exploration, development and production of oil and gas resources, and related technologies for the public benefit; and to provide opportunities for professionals to enhance their technical and professional competence"

Who Benefits When You Write?

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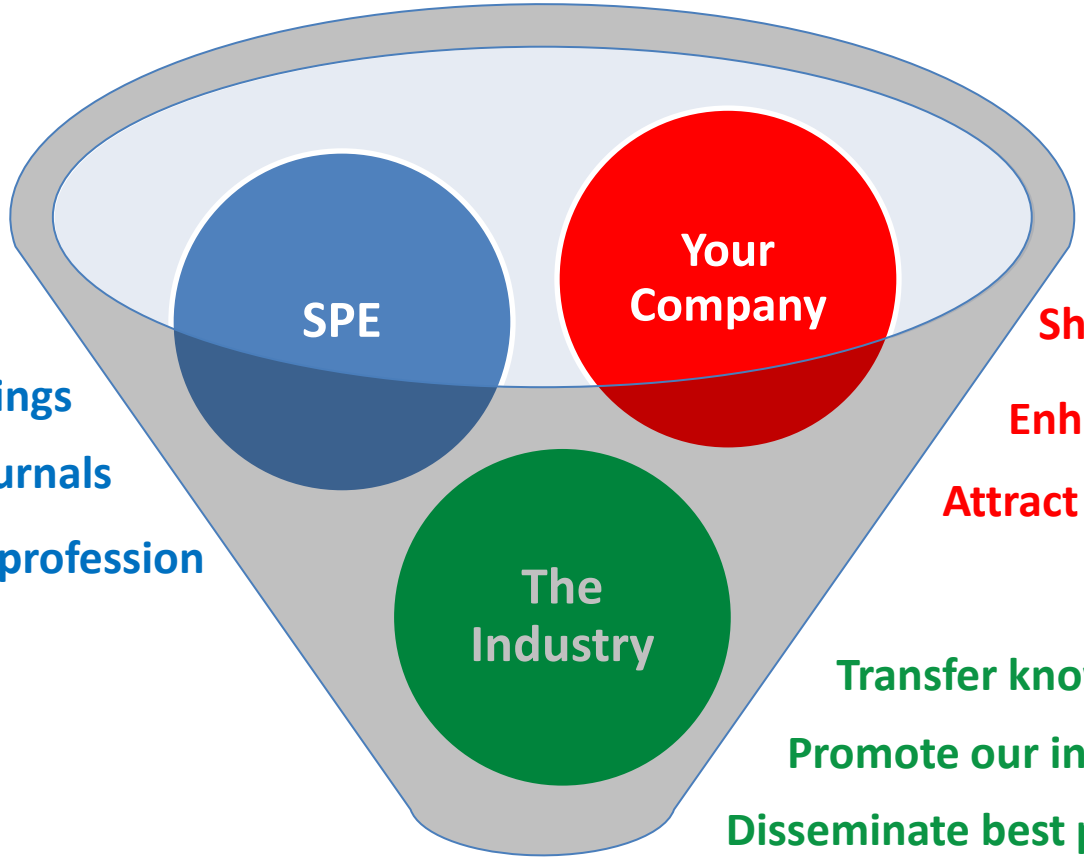

Enhance meetings

Improve journals

Promote our profession

Showcase innovation

Enhance reputation

Attract customers

Transfer knowledge

Promote our industry

Disseminate best practices

YOU!!!

Do I Have What it Takes?

- A good topic?
  - Case History, project, process, workflow, lab study, etc
- A willingness to share your knowledge?
- The time?
  - To write the abstract & paper and make the presentation
  - The manuscript could take many days/weeks to write
- Company approval?
  - To publish the paper and data
  - You and your co-authors
  - To travel to conference to present

The Process

How does it all start?

Program Committee: **Event Technical Scope Defined**

Program Committee: **Call for Papers**

Author: **Abstract Submission**

Program Committee: **Abstracts Rated & Program Selected**

Author: **Paper Writing Instructions**

Author: **Submit Paper for Proceedings**

Author: **Present Paper At Conference**

OnePetro

Peer Review

Journal Article

Find a Conference

- Calls for Papers at SPE website
  - www.spe.org
  - Events Calendar – sort by region, calls open, topic
- Choose conference that matches your topic/timing
- Everything is submitted online

Writing the Paper Proposal (Abstract)

- Before you start
  - Note the timeline for submission
  - Consider co-authors
  - Reconsider company approval and timeline
- Does your idea relate to the Meeting Scope?
- MEET THE DEADLINES!!!

What is an Abstract?

- Clear, concise summary of topic/paper
- Communicates to reviewer why your abstract should be accepted
  - Make it good – you only get one chance
  - No one will ask for clarification
- Treat it like your resume/CV

Four Parts of the Abstract NEW!

- Objectives/Scope
  - 25-100 Words

Background/Intro

- Methods, Procedures, Process – overall approach
  - 75-125 Words

Statement of Problem

- Results, Observations, Conclusions
  - 100-225 Words

What will you show/prove/etc?

- Novel/Additive Information
  - 25-100 Words

Who will benefit?

Elements of a Good Abstract

- Good title
- Clear and concise
- No grammatical or spelling errors – PROOFREAD!
  - Use proper, clear English unless otherwise specified
- State significant new information
  - "This paper will discuss/present……"
- State who will benefit from reading this paper
  - "This paper will be useful to those who……"

http://www.spe.org/authors/docs/prepare_paper.pdf

Title: Characteristics

- *Critical to abstract* acceptance
  - Employ “buzz-words” of the day (shale, completion, case history, unconventional, popular reservoir names, etc)
  - Don’t be afraid to be provocative
- Focuses reader’s attention on paper content

TP's "Top Four" Downloaded *Papers

- SPE 115766 – *Slickwater Fracturing, Food for Thought*
- SPE 138425 – *Improving Production in the Eagle Ford Shale with Fracture Modeling, Increased Conductivity and Optimized Stage and Cluster Spacing Along the Horizontal Wellbore*
- SPE 151128 – *Hydraulic Fracture Optimization in Unconventional Reservoirs*
- SPE 155779 – *Hydraulic Fracture Design and Well Production Results in the Eagle Ford Shale: One Operator's Perspective*

*Since 2007

Improve Your Chance of Acceptance

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DO…

- Get an E&P co-author
- Organize your thoughts
- Use simple, direct sentences
- Use common terminology
- Present at technically sound story
- Clearly demonstrate relevance to reviewer
- Have a colleague review
- Proofread your proposal!!

Improve Your Chance of Acceptance

DON'T…

- Be commercial – trade, company or product names
  - *This is the "Kiss of Death"*
- "Overwrite"….keep it simple
- Use poor grammar, broken sentences
- Use poor English
- Miss the deadline!!!

Examples

- Review Abstract Examples

SPE 115766

Slickwater Fracturing – Food for Thought

T. T. Palisch, SPE, CARBO Ceramics; M. C. Vincent, SPE, Insight Consulting; P. J. Handren, SPE, Denbury Resources

Abstract

The evolution of fracturing technology has provided the industry with numerous advances, ranging from sophisticated fluid systems, to tip screen out designs, to propagation modeling. Interestingly, these advances have typically been focused on 'conventional' designs which utilize a cross-linked fluid system. However, as the development of unconventional (tight gas, shales, coal-bed methane etc) or underpressured reservoirs has increased, so has the demand for innovative hydraulic fracture designs. The most recent of these design changes has been the popular method of placing proppant with slickwater, linear gel or hybrid treatments.

Although our industry has significant expertise in fracture design, most of our experience has been in conventional cross-linked fluid systems. However, there are many aspects of cross-linked fluid design that either do not apply to slickwater treatments, or in some cases are exactly opposite.

This paper will begin by reviewing the motivation, benefits and concerns with slickwater fracturing, and discuss why this seemingly 'old' method has regained popularity over conventional cross-linked designs in many reservoirs. In addition, the authors will detail some of the important theories related to slickwater fracturing, including fracture width and complexity, proppant transport and settling, and conductivity requirements. In each case, emphasis will be placed on the different strategy that must be employed compared to cross-linked fluid designs, and highlight the mistakes or misunderstandings that are frequently made.

Where appropriate, lab testing, field measurements, reference material and other resources are presented to support the observations made by the authors. This paper will serve as a resource to any engineer or technician who is designing/pumping slickwater fracs, or who is considering this technology for potential application. By applying the concepts presented in this paper, engineers will be able to appropriately evaluate the potential benefits of using this technique in their completions, as well as draw on the experiences of others to take full advantage of this technology.

SPE 147436

Evaluating the Long Term Benefits of Improved Fracture Treatments

K. Blackwood, SPE, Highmount Energy; J. Flowers, SPE, Laredo Energy; P. Handren, SPE, Denbury Resources Inc; C. Pope, SPE, Complete Shale; T. Palisch, SPE, M. Chapman, SPE, J. Godwin, SPE, CARBO Ceramics, Inc.

Abstract

It is understood that improved hydraulic fracture treatments increase production rates from most reservoirs. However, are these gains short lived, or do they yield incremental recovery? Is the improved productivity related to recovery of additional reserves or merely an acceleration of existing reserves?

Frequently, the impacts of design improvements are demonstrated by improved initial production (IP) rates or perhaps evaluated base on 6- to 12-month cumulative production increases. Field development decisions are often made based on these initial results, never again to be reviewed for long term corroboration. Rarely are the rate, reserves, and economic impact of these design changes evaluated and documented over longer production periods. As such, while a particular design change may pay out in two or three months, the question remains as to whether the enhancement represents merely a short term acceleration of production or in fact an increase in hydrocarbon recovery.

This paper will review the production results from several tight gas and unconventional reservoirs in which hydraulic fracture designs were upgraded to premium proppant, for which the results were documented in previous SPE papers. Areas evaluated include wells in the Cotton Valley-Taylor and Haynesville Lime of East Texas, the Haynesville Shale of North Louisiana and the West Texas Canyon Sand; all were evaluated and documented shortly after implementation. Raw production differences will be reviewed along with decline curve analyses, using updated production to evaluate both near and long term recovery impacts.

In addition to (re)evaluating for technical success, economic evaluations are provided to determine whether the design improvements truly resulted in favorable economic outcomes, as suggested in the original evaluations. When possible, these new evaluations will be compared to original recovery forecasts to ascertain whether the original conclusions still hold.

This paper should be of interest to anyone who evaluates the benefits of fracture design changes in their completions, and will provide insight on the accuracy of initial evaluations compared to actual long term production. It will also further investigate the benefits of improved fracture designs.

SPE 168631

New Technology Yields Ultra High-Strength Proppant

Terry Palisch, SPE, Brett Wilson, Bob Duenckel, SPE, CARBO Ceramics

Abstract

Nearly all of the proppant available on the market today can be classified into one of three tiers – sand, resin-coated sand and ceramic. The products contained in these three tiers have served the industry well and have typically covered the broad spectrum of applications required by completions engineers. However, with the development of deeper reservoirs as well as the ongoing look at geothermal and steam-flood applications, there now exists a gap in proppant technology. No conventional proppant can provide the required conductivity at the 20,000 psi closure stresses (and higher) anticipated in the Lower Tertiary formations in the deep Gulf of Mexico. Similarly, no conventional proppant can adequately withstand the harsh chemical conditions in many geothermal and steam-flood applications.

A new proppant has been developed and commercialized to meet these challenges, achieving twice the baseline conductivity of any conventional proppant at these high stresses, and providing additional advantages with increased durability and longevity. This paper will review the step change advancements achieved by this new proppant, including technology improvements in both raw materials and manufacturing process. It will present properties never seen before regarding proppant shape, sizing and strength. Extensive laboratory testing has been completed to demonstrate the superior performance in harsh conditions, and will be presented.

The paper will also present the expected applications for this product, including areas where increased production rates, superior EUR, lower erosivity and reduced equipment wear are a premium. Field applications are beginning as of this writing.

This paper should be beneficial to all engineers and technologists currently working in stress applications greater than 15,000 psi, or other harsh conditions such as steam-flooding and geothermal applications.

Other Cautions…

- Submitting an abstract to multiple venues is prohibited
  - The Abstract will be kicked out of both venues
  - If you want to do this, be sure to make substantial changes to the abstract and authors….use caution

- SPE now has a plagiarism checker
  - Primary suspect is usually “self plagiarism”
    - Copying from your own paper

Submitting Your Abstract

- SPE abstract submission process
  - Follow the instructions
  - Include names & emails of co-authors
- Submit online ➔ follow link from event page or email
  - Word of advice….DO NOT wait until the last minute to first login for the first time!!
- Review www.spe.org

Did I Make the Cut?

- Program Committee rates, ranks and selects papers
  - Objective and impartial
- There are three potential responses
  - Abstract accepted for paper and Presentation
  - Abstract accepted for paper and Alternate/Poster
  - Abstract not accepted – do not despair!
- If an Alternate…
  - Still write paper, goes into OnePetro
  - May be promoted to presentation

Summary

- Many good reasons to write an SPE paper
  - Yourself, your employers and your colleagues
- Abstract is critical to acceptance
  - Good title, concise, grammatically correct
  - Co-authors from E&Ps and case studies are beneficial
- Proofread!!!
- MEET THE DEADLINES!!

What Will You Write?

- ATCE 2016 is in Dubai
  - Call for Papers deadline was yesterday
  - May extend – still deciding
- ATCE 2017 – San Antonio
- ATCE 2018 – Dallas!
- ATCE 2019 – Calgary

Dallas Section

Questions?

"SPE is YOU…..YOU are SPE"

- Egbert Imomoh, 2013 SPE President

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