GENERAL INSTRUCTIONS FOR THE PREPARATION OF SPWLA SYMPOSIUM PAPERS

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This paper was prepared for presentation at the SPWLA 63rd Annual Logging Symposium held in Stavanger, Norway, June 10-15, 2022.

# ABSTRACT

All papers are to be submitted electronically in Adobe PDF format to Stephanie Turner at [stephanie@spwla.org](mailto:stephanie@spwla.org).

Compose your PDF file using the “High-quality print” option.

**The deadline for draft paper submission is March 28, 2022.**

**The deadline for final paper submission is April 25, 2022.**

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# INTRODUCTION

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The deadline for draft paper submission is **March 28, 2022,** and the deadline for final paper submission is **April 25, 2022**. **Please do not use security coding (passwords) when sending the PDF file.** We recommend that you submit earlier so that there is time to make any corrections if the committee finds issues with the formatting. A manuscript with formatting issues will be returned for revision if time permits or removed from the program if time does not permit corrections.

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# GENERAL INSTRUCTIONS

The page size in the file must be US letter (8.5 by 11 in.), in “portrait” layout. Maximum paper length is 30 pages, including all text and figures. Again, we strongly recommend that all figures and tables be embedded in the text, but we realize that figures may need to follow the text in some cases. The extended number of pages allows authors to add images that are easy to read and large enough for clarity

# MANUSCRIPT ORGANIZATION

* Title (centered over both columns)
* Author(s) and affiliation(s) (centered over both columns)
* Copyright statement
* Abstract (400 words maximum)
* Text (including figures and tables)
* Conclusions
* Acknowledgments, if needed
* Nomenclature (divided into two lists: Abbreviations and Symbols
* References
* About the Author(s)
* Appendix, if needed
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# PAGE LAYOUT

*Page Size.* Manuscripts should be formatted for 8.5- by 11-in. paper. **European A4 paper size is not acceptable**.

*Margins*.The **left** margin on **odd** numbered pages should be 1.25 in. (30 mm), right margin .75 in. (20 mm); **right** margin on **even** numbered pages should be 1.25 in., left

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# TYPESTYLE AND SIZE

*Typestyle (Font).* A proportionally spaced, serif font, Times or Times Roman, is preferred. If this is not possible, use the closest approximation available. (This is Times New Roman, 10-point.). Arial (or a similar sans serif font) should be used for figure captions and table titles.

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Please follow this format and spacing for all headings.

**TITLE**

The title should be centered and typed in **ALL CAPS**, bold, 14-point, single-spaced.

**HEADINGS**

These should be on a separate line, left‑justified, easily distinguished from each other, and clearly separated from the main body of the text by a line. The heading should be in bold, **ALL CAPS,** 10-point type, 12-pitch spacing.

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Subheadings are subordinate to headings. The first subheading should be on a separate line immediately above the text. Bold, **Initial Cap**, 10-point, 12-pitch line spacing.

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*Figures*. All figures (graphs, line drawings, photographs, etc.) should be cited in the body of the paper and should be numbered sequentially. In well logs and cross-plot displays, each axis should be clearly labeled and include the corresponding measurement units. Legends should also include the corresponding measurement units. When referring to specific figure numbers in the text, the word “Figure 1” is spelled out when it is the first word of the sentence and abbreviated to “Fig. 1” when found elsewhere within the sentence.

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*Equations.* Equations should be numbered consecutively, beginning with (1) throughout the entire paper. The number should be enclosed in parentheses and set flush right in the column on the same line as the equation. It is this number that should be used when referring to equations within the text. Equations should be referenced within the text as Equation (x) when at the beginning of the sentence and Eq. (x) when found elsewhere within in the sentence. Describe all the variables involved in the equation and the assumptions behind them. Use an equation editor to generate the equation, e.g., Microsoft Word.

1. The symbols used in the equation should be defined either just prior to or following the text of the equation.
2. Complex inline equations, such as, are best generated using an equation editor, while simpler ones, such as *x* + *y*, can use the same font as the text.

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Abbreviations, acronyms, and symbols should be defined the first time they are used in the text. If your paper contains abbreviations, acronyms, and symbols, then a Nomenclature section should appear before the References section and should be split into two lists: Abbreviations and Symbols. Units of measurement are not required to be listed in the Abbreviations list. Avoid extensive use of abbreviations or commercial acronyms. Lowercase all definitions unless a proper name.

# SAMPLE Nomenclature

**Abbreviations**

ECS = elemental capture spectroscopy

PEF = photoelectric factor

RCA = routine core analysis

TOC = total organic carbon

XRD = X-ray diffraction

**Symbols**

*σw =* bulk conductivity of the brine, S/m

*σc =* bulk conductivity of the clay network, S/m

*σp =* bulk conductivity of the pyrite, S/m

*σk =* bulk conductivity of the kerogen, S/m

# REFERENCES

All published work cited in the text must be listed in the References section. Do not cite internal or proprietary documents that the reader cannot obtain or access. Personal communications can be referred to in a reference.

The References section must be in **ALPHABETICAL** order by the first author and then chronological; where there are two or more papers by the same author(s) in the same year, add lowercase letters after the year, e.g., Jones, 1989a; Jones, 1989b. In the References section, use the following format: author, year, title, volume, number, and page range. Follow these guidelines:

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Refer to the following examples:

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Timur, A., 1982, Advances in Well Logging, Paper SPE-

10947, *Journal of Petroleum Technology*, **34**(6), 1181–

1185. DOI: 10.2118/10947-PA.

*Conference Papers*

White, C.D., and Horne, R.N., 1987, Computing Absolute Transmissibility in the Presence of Fine-Scale Heterogeneity, Paper SPE-16011 presented at the SPE Symposium on Reservoir Simulation, San Antonio, Texas, USA, 1–4 February. DOI: 10.2118/16011-MS.

*Meeting Paper Included in a Printed Proceedings Volume*

Priest, J., Frost, E., and Quinn, T., 2010, Short-Time-Span Petrophysical and Formation Properties Variation, Paper VV, *Transactions*, *SPWLA 51st Annual Logging Symposium,* Perth, Australia, 19–23 June.

Wang, H., Wu, P., Rosthal, R., Minerbo, G., and Barber, T., 2008, Modeling and Understanding the Triaxial Induction Logging in Borehole Environment with Dip Anisotropic Formation, *SEG International Exhibition and Annual Meeting Technical Program Expanded Abstracts*, 309–313. DOI: 10.1190/1.3054811.

*Books, PhD Theses, and Reports*

Lake, L., 1989, *Enhanced Oil Recovery*, Prentice Hall,

Englewood Cliffs, New Jersey. ISBN: 978-0132816014.

*Chapter in a Book*

Somasundaran, P., 1975, Interfacial Chemistry of Particulate Flotation, Chapter 1, *in* Somasundaran, P., and Grieves, R.B., editors, *Advances in Interfacial Phenomena of Particulate/Solution/Gas Systems*, 1–15, Symposium Series, AIChE, New York City.

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# “ABOUT THE AUTHORS” SECTION

Each author should include a brief biographical sketch. These should be in the same order as the author listing at the beginning of the paper. Quality photos are encouraged, provided the overall length of the article does not exceed 30 pages.

# ARTWORK PREPARATION

**Table 1—**Example of a Table Inserted Across Both Columns of the Page

(Font types and styles for variables should be consistently used across the text, equations, tables, and figures.)

|  |  |  |  |
| --- | --- | --- | --- |
| **Zones** | **BCA @ *Fsd* >= 0.50** | **BCA @ *Fsd* >= 0.30** | **Thomas-Stieber @ *Fsd* >= 0.30** |
| **Breccia Gas** | –92 | –49 | –11 |
| **Breccia Oil** | –22 | –3 | 0 |
| **Dykes** | –7 | –8 | –8 |

*Identification, Figure Captions, and Table Titles.* All figures and tables should be identified by a number (“**Fig. 1—” or “Table 1—”**) in bold, 8-point Arial font in a caption underneath the figure or a title above the table. Number all figures and tables in sequential order and follow with a brief but descriptive caption or title.

*Location*. Illustrations and tables should be placed within the body of text, if at all possible (see Fig. 1 below), but it is recognized that, in some instances, it will be necessary to place them at the end of the paper.

*Multiple Figures per Page*. Authors are responsible for arranging multiple figures on each page within or across the columns where appropriate, or if it is not possible, then at the end of the paper. All lettering must be legible.

*Image Quality*. Authors are encouraged to produce high-resolution figures before they are inserted into the paper. All digital images should have a resolution of at least 300 dots per inch (dpi) to produce a high-quality print resolution, but 600 dpi is preferred. Line art must be at least 600 dpi (1,200 preferred). Illustrations originally used for oral presentations should be simplified: remove colored backgrounds and unnecessary detail or decoration. The style, font, and format used in the illustrations should be consistent throughout the manuscript. Graphs should have a white background, and the axis labels and units should be legible.

# USE OF COLOR

*Use of Color in Digital Transactions Volume*. The Transactions Volume will include the pdf files, with figures exactly as submitted by the author. Figures may be in color or black and white at the author’s discretion. However, the author should perform a test print in black and white to ensure legibility, as many readers will print the paper in black and white.

**Fig. 1—**Example of a graphic illustration inserted within a single column (notice the 8-point Arial font). All captions end in a period. Font types and styles for variables should be consistently used across the text, equations, tables, and figures.

**Table 2—**Example Table Within a Single Column

A picture containing graphical user interface

Description automatically generated

(Table titles are Initial Capped for all words four letters or more. Note there is NO period at the end of a table title.) Font types and styles for variables should be consistently used across the text, equations, tables, and figures.

**Fig. 2—**Log example inserted across both columns. Use fonts and curve sizes/colors that are visible and legible. All measurement units should be consistently used in the text, figures, and tables. All symbols and acronyms should be defined and consistently used in the paper, including font types and font sizes.

Example of an equation placed within a single column for Eq. 1. Please note the equation number is flush right:

(1)

# COMMERCIALISM

The use of or reference to trademarks, commercial service names, and names of employers should be avoided. At most, a single reference to a specific tool or service name is acceptable; however, the discussion and descriptions after that should be in generic terms. Please remember that the goal of the Symposium is to promote technical advancement and exchange. Accordingly, commercially oriented papers are strongly discouraged.

*Logos*. **Commercial (Company) logos are not to be used in manuscripts.** Manuscripts will be rejected if company logos are present.

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# CHANGES AND ADDITIONS

Please resubmit a paper to Stephanie Turner at [stephanie@spwla.org](mailto:stephanie@spwla.org) if changes are needed after the original submission. No changes or additions will be accepted after the **April 25, 2022 deadline.**

# SUMMARY

We continue our commitment to provide a high-quality Transactions Volume. Please address any suggestions for improvement to Stephanie Turner at the SPWLA Business Office ([stephanie@spwla.org](mailto:stephanie@spwla.org)) or Carlos Torres-Verdin, SPWLA Vice President Technology at

[vp-technology@spwla.org](mailto:vp-technology@spwla.org)

Thank you for your cooperation.

# APPENDIX: PETROPHYSICAL MODEL

This Appendix describes the petrophysical model assumed in the paper and provides a detailed derivation of the associated equations.