

# SPE Technical Publications **STYLE GUIDE**

2023 Revision



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The Society of Petroleum Engineers (SPE) Technical Publications largely follows the rules of style set forth in *The Chicago Manual of Style* (CMOS; 17th edition); however, there are areas in which SPE differs from CMOS. These differences will be covered in this guide, which also includes a comprehensive glossary and reference examples. This style guide applies to the following publication types: peer-reviewed journals, conference papers, books, reports, and white papers.

***NOTE: US spelling conventions are followed in SPE periodicals, books, and most other technical materials.***

The SPE Technical Publications Style Guide does not offer formatting or policy information. For more information on these topics, visit the following links on SPE.org:

- SPE Publications (<https://www.spe.org/en/publications/>) includes information on SPE's current publications, submission processes, and subscriptions.
- Author Resources (<https://www.spe.org/en/authors/resources/>) includes templates, instruction sets, reference guides, formatting guides, and links to other helpful resources.
- Publication Policies (<https://www.spe.org/en/authors/policies/>) includes information on copyright, plagiarism, permissions, and commercialism.

Authors and editors may also find the following non-SPE resources helpful:

- *The Chicago Manual of Style*, 17th edition. 2017. Chicago, Illinois, USA: University of Chicago Press. <https://doi.org/10.7208/cmos17>.
- Council of Science Editors (CSE). 2014. *Scientific Style and Format: The CSE Manual for Authors, Editors, and Publishers*, 8th edition. Chicago, Illinois, USA: University of Chicago Press
- *Merriam-Webster's Dictionary and Thesaurus*. 2020. Springfield, Massachusetts, USA: Merriam-Webster, Incorporated.
- *IEEE/ASTM SI 10-2010, American National Standard for Metric Practice*. New York, New York, USA: IEEE (11 April 2011).

## SPE-SPECIFIC STYLE EXCEPTIONS

SPE largely follows *The Chicago Manual of Style* (CMOS; 17th edition) for rules of grammar, punctuation, and various other style items generally found in scholarly publishing. The following items are exceptions to these rules or rules that are specific to SPE literature.

### Abbreviations and Associated Rules for Capitalization

- Abbreviate academic and honorary degrees without periods or spaces.
  - Include the word “degree” after most abbreviated academic and honorary degrees (e.g., PhD degree; MS degree; however, use MBA, not MBA degree).
  - Do not capitalize academic degrees when spelled out (e.g., bachelor’s degree).
- Abbreviate and capitalize “equation” and “figure” when followed by a number or designating letter (e.g., Eq. 5, Fig. 6, with plural forms being Eqs. and Figs.).
- Capitalize but do not abbreviate “table,” “appendix,” “column,” or “section” when followed by a number or designating letter (e.g., Table 1, Appendix A, Column 2, Section 4.1).
- Spell out “page” in most instances.
  - Abbreviate as “p.” if necessary in reference citations (e.g., Jones et al. 2015, p. 10).
- Abbreviate and capitalize “number” when it is part of the proper name of a well (e.g., No. 4), but omit the word in other cases (e.g., use Sample 3, not Sample No. 3).
  - Do not use a hashtag symbol (#) as an abbreviation for “number.”
- Capitalize words that precede a designating letter or number, which together act as the given name of a location or component (e.g., Region A, Polymer X, Case 1, Well 4).
- Write the designations one-dimensional, two-dimensional, three-dimensional, and four-dimensional as 1D, 2D, 3D, and 4D. Do not use these abbreviations interchangeably to mean “in *x* dimensions”; instead, write out the complete phrase when used in this manner.
- Use abbreviations MM for million and M for thousand ONLY with cubic feet to express gas volumes. Avoid the use of MM (or M) with such expressions as barrels of oil (MMBO) or barrel of oil equivalent (MMBOE); instead, spell out “million” (or “thousand”).
- Use full term “and” in general body text. Do not use the ampersand (&).
- Use full term “at” in general body text. Do not use the “commercial at” symbol (@).
- Use a capital “X” to indicate magnification (e.g., 500X). Do not use the multiplication symbol (×).

## Units of Measurement

- Abbreviate units of measurement in body text only when used with numerical values.
  - Spell out “pound” or “pounds” in general reference but use abbreviation “lb,” “lbm” (for pounds mass), or “lbf” (for pounds force) when preceded by a numeral (e.g., 5 lbm). Do not use a hashtag symbol (#) as an abbreviation for “pound.”
  - Spell out “inch” or “inches” in general reference but use abbreviation “in.” when preceded by a numeral (e.g., 3 in.). Do not use a double quote mark (”) or double prime (”) to represent inches.
  - Spell out “foot” or “feet” in general reference but use abbreviation “ft” when preceded by a numeral (e.g., 24 ft). Do not use a single quote mark (') or single prime (') to represent feet.
- Use the degree symbol (°) with angles, temperatures [except for metric Kelvin (K)], and compass coordinates (e.g., 20° slope, 65°F, 2°W), but include a space between the value and the degree symbol only for units of API gravity (e.g., 30 °API).
- Use a hyphen (-) in customary units (e.g., md-ft, B/D-psi) and a product dot (·) in metric units (e.g., md·m, m<sup>3</sup>/d·kPa) to indicate multiplication in combined units.

## Punctuation

- Hyphenate compound compass directions when used to form one direction (e.g., south-southwest). Use a slash to represent “to” in a direction (e.g., east/west).
- Punctuate ratios with a colon when using numbers (e.g., 60:20) and with a slash when using words (e.g., steam/oil ratio).
- Use a colon (preferred for titles) or an em dash (acceptable for headings), rather than a comma or semicolon, to set off part of the title; capitalize the first word after the colon or em dash.

## Formatted Lists

- Start each line of a numbered/bulleted list with a capital letter; end each line with a period unless all points are incomplete sentences. Do not end bullets with commas or semicolons.
- Reformat text to paragraph form when items in a numbered/bulleted list are incomplete sentences that complete the introductory sentence.

## Equations

- Treat equations as part of a sentence or paragraph, subject to the same rules of grammar.
  - End a complete sentence introducing an equation with a period or colon and end each equation with appropriate punctuation.
  - Treat mathematical operators as verbs and maintain correct grammatical structure in sentences that contain, precede, or follow equations.
  - Define all symbols used in the paper, either when introducing an equation, in a statement following the equation, in captions of tables and figures, or in a Nomenclature. Symbols should generally be one letter, with distinguishing sub/superscripts as needed.

## Figures, Tables, Equations, and Algorithms

- Number figures, tables, equations, and algorithms in consecutive order using the designators Fig., Table, Eq., and Algorithm with Arabic numerals.
  - Designate all illustrations and nontabular material as “Fig.” Do not use designators such as Scheme, Chart, Exhibit, Graph, or Photo.
  - Cite figures, tables, equations, and algorithms in consecutive order (i.e., do not cite Fig. 5 in the text before Figs. 1–4).
  - Use lowercase letter designators to differentiate multipart tables, figures, and equations (e.g., Tables 1a and 1b; Figs. 1a, 1b, and 1c; Eqs. 1a through 1d).
  - Use the letter designation of the appendix separated by a hyphen when numbering figures, tables, equations, and algorithms within that appendix (e.g., Fig. A-1, Table A-1, Eq. A-1, Algorithm A-1).
  - Cite the appendix and associated figure, table, equation, or algorithm number (e.g., Appendix A, Fig. A-1) if citing an appendix element in the main body text.

## Dates and Time

- Use the day month year format to express dates (e.g., 5 May 2017). Do not use commas in dates in the day month year format.
- Use numerals, not words, to express times and dates (exceptions are noon, midnight, and names of days and months).
- Use commas when expressing a combination of day of the week, date, and time (e.g., Thursday, 31 April 2014, at 6 p.m.).
- Use either the 24-hour clock or the 12-hour clock consistently to express time/time ranges. Do not switch between the two in the same work.
  - Use the 24-hour clock without colons (e.g., 1300, 0800–0930). Include applicable time zone abbreviations for clarity (e.g., CST, GMT, EST).
  - Include “a.m.” or “p.m.” designations with use of the 12-hour clock (e.g., 6 a.m., 3 p.m.)
    - Include a.m. or p.m. after each time in a range only if the range begins in one and ends in the other (e.g., from 10 a.m. to 2 p.m.).
    - Include a.m. or p.m. only after the second time if the range is contained entirely in morning or afternoon (e.g., from 2 to 6 p.m.).

## Numbers

- Use country codes with all phone numbers. The country code for the US and Canada is 1. Use periods rather than hyphens, parentheses, or slashes to separate parts of phone numbers.
- Use whole numbers if the number expresses a unit of measurement or ratio (e.g., 1%, 6 km, 3 in., 20°C, 2:1; not one percent, six kilometers, three inches, 20 degrees Celsius, or two to one).
- Use whole numbers for dates, street addresses, currency, and times of day (e.g., 5 May, 55 Park Avenue, USD 3, 2 p.m.).
- Use “1.0” or the term “unity” when using the number “1” or the word “one” in text can lead to confusion (e.g., for mobility ratios other than unity).
- Use “0.0” or the term “zero” when using the number “0” in text can lead to confusion.
- Write physical dimensions in numerals and add a multiplication symbol between the dimensions without any additional spacing; specify the unit afterward (e.g., 84×84×5 ft).

## APPENDIX A: PREFERRED SPELLINGS OF COMMON TERMS

SPE will default to these spellings for consistency and clarity across its technical publications.

<b>A</b>	bandwidth	caprock
a posteriori	-based (hyphenated suffix)	carry-over (noun)
a priori	baseline	Cartesian
aboveground (adj.)	bean up (verb phrase)	casedhole (adj.)
acknowledgment	beanup (noun)	casing head (noun)
adviser	bicenter	casinghead (adj.)
afterflow	bleedoff (noun)	catalog
afterproduction (adj.)	blowdown	centerline
alongside	blowout (noun, adj.)	changeover (noun, adj.)
analog	borehole	channeling
analysis (singular)	bottomhole (adj.)	chokeline (noun)
analyses (plural)	bottomwater (noun, adj.)	clean out (verb)
anti- (joined prefix, with exceptions)	break down (verb)	cleanout (noun, adj.)
appendices (plural)	breakdown (noun, adj.)	clean up (verb)
appendix (singular)	break through (verb)	cleanup (noun, adj.)
axisymmetric	breakthrough (noun)	cloudpoint
	brownfield (noun, adj.)	co- (joined prefix, with exceptions)
	bubblepoint (noun, adj.)	coalbed
<b>B</b>	build up (verb)	coal gas (noun)
backflow	buildup (noun, adj.)	coal-gas (adj.)
backflush	bullheading	coastline
backpressure (noun, adj.)	buoyant	coauthor (noun only)
backproduction (noun, adj.)	bypass	cofferdam
backrake	byproduct	coiled tubing (noun)
backup (noun, adj.)		coiled-tubing (adj.)
backwash		cokriging
ballout (noun)	<b>C</b>	
	capillary pressure	



coreflood (noun, adj.)

cost-effective

counter- (joined prefix, except counter-ion)

criterion (singular)

criteria (plural)

crossbed

crossfault

crossflow

crosslink (noun, verb)

crossplot

cross section (noun)

cross-sectional (adj.)

crosswell (adj.)

cutoff (noun, adj.)

## D

data (plural)

database

data set

datum (singular)

de-aeration

deep water (noun)

deepwater (adj.)

dewpoint (noun, adj.)

disk (disc in zoology and botany)

dogleg

dot-com

down- (joined prefix)

drainhole

drawdown

drawworks

drill bit (noun)

drill-bit (adj.)

drill collar

drill-in fluid

drill off (verb phrase)

drilloff (noun, adj.)

drillout (noun, adj.)

drillpipe

drillship

drillsite

drillstem

drillstring

-drive (joined suffix)

## E

e-business

ebook

e-commerce

edge water (noun)

edgewater (adj.)

electric line

electrical submersible pump

electro- (joined prefix, with exceptions)

email

endpoint

engine room

extra- (joined prefix in most uses)

extranet

## F

fail-safe

fallback (noun)

falloff

farm out (verb phrase)

farmout (adj.)

feedwater (noun)

Fiberglas (trade name)

fiberglass (generic term)

fiber-optic (adj.)

fieldwide (adj.)

fill up (verb)

fill-up (noun, adj.)

filter cake (noun)

filter-cake (adj.)

fireflood

fire tube (noun)

fire-tube (adj.)

firsthand

five-spot (noun, adj.)

flood front

floodwater

flowback (noun, adj.)

flow chart

flowline (noun, adj.)

flow loop

flowmeter

flow rate

-fold (joined suffix, unless used with hyphenated number or numeral, e.g., 100-fold; twenty-five-fold)

follow-up (adj., noun)

frac pack (noun)

frac-pack (adj.)

fracturing (not *fracking*)

-free (hyphenated suffix)

freestanding

fresh water (noun)

freshwater (adj., adv.)

## G

gamma ray log (no hyphen)

gas cap

gas field (noun)

gasfield (adj.)

gasflood

gas lift (noun, adj.)

gauge

gray (not “grey”)

gridblock

gridpoint

groundtruthing

groundwater (noun, adj.)

guar

guidepile

## H

half-length

half-life (noun, adj.)

half-width

heavyweight

heterogeneous

hindcast

hold down (verb)

holddown (noun)

hold up (verb)

holdup (noun, adj.)

homogeneous

hookload (noun)

hookup (noun, adj.)

hot-water (adj.)

huff 'n' puff

## I

index (singular)

indices (plural)

in situ (adv.)

in-situ (adj.)

infill

injection well

inter- (joined prefix)

Internet

intranet

## J

jack up (verb)

jackup (adj.)

judgment

## K

kerosene

keypunch

keyseat

kick off (verb phrase)

kickoff (noun)

knockout (noun, adj.)

knowledge base

## L

laboratory (not “lab”)

leak off (verb)

leakoff (noun, adj.)

life cycle

liftoff (noun)

lightweight

line pipe

lock up (verb phrase)

lockup (noun)

log-normal

long-reach

long-standing

## M

macromodel

main-bore (adj.)

main bore (noun)

make up (verb)

makeup (noun, adj.)

man-hour

man-year  
media (plural)  
medium (singular)  
meter (not “metre”)  
micro- (joined prefix)  
mid- (joined prefix,  
with exceptions)  
Mid-Continent (SPE section)  
milled-tooth bit  
mineback (noun)  
mis-tie(s)  
mixed-wet  
modeled  
modeling  
moonpool  
motherbore  
mudcake  
mud filtrate (noun)  
mudline  
mud motor  
mud-weight (adj.)  
multi- (joined prefix,  
with exceptions)  
multiphase flow

## N

naphtha  
net-pay  
non- (joined prefix,  
with exceptions)

## O

off-bottom  
offline (adj.)  
offset  
offshore  
off-site (adj., adv.)  
off-take (noun)  
oil field (noun)  
oilfield (adj.)  
oilflood  
oil well (noun)  
oilwell (adj.)  
oil-wet  
OnePetro  
online (adj.)  
on-site (adj., adv.)  
on-stream (adj.)  
open flow  
open hole (noun)  
openhole (adj.)  
outcrop  
over- (joined prefix)

## P

pack off (verb phrase)  
packoff (noun)  
padeye  
particle-size distribution  
pay out (verb)  
payout (noun)

phase out (verb phrase)  
phaseout (noun)  
phenomenon (singular)  
phenomena (plural)  
pick up (verb phrase)  
pickup (noun, adj.)  
pinchout (noun)  
pinch out (verb phrase)  
pipeline  
plaster of Paris  
plugback  
Poisson’s ratio  
poly- (joined prefix)  
pore-water fluid  
Portland cement  
post- (hyphenated prefix)  
pre- (joined prefix,  
with exceptions)  
preventative  
printout (noun)  
pro- (joined prefix,  
with exceptions)  
pseudo- (joined prefix)  
pseudosteady state (noun)  
pseudosteady-state (adj.)  
pulse-loading  
pumpdown  
pumphead  
pumpoff (adj.)

**Q**

quasi- (joined prefix,  
except quasi-equilibrium)

**R**

radii (plural)

radius (singular)

ramp up

rate-pressure

rathole

re- (joined prefix)

read out (verb phrase)

readout (noun)

real time (noun)

real-time (adj.)

relative permeability

rigsite

roller-cone bit

runtime

**S**

salt water (noun)

saltwater (adj., adv.)

sandface

sandout

sandpack

sand screen

scaleup (noun, adj.)

screenout (noun, adj.)

seabed, seafloor

sealbore

seastate (noun, adj.)

seawater

seismic (adj.)

seismics (noun)

self- (hyphenated prefix)

semi- (joined prefix,  
with exceptions)

setup (noun)

shaly

shoreline

short-term

shut down (verb phrase)

shutdown (noun)

shut in (verb)

shut-in (noun, adj.)

shut off (verb)

shutoff (noun, adj.)

sidetrack

sidewall

slackoff

slickline

slickwater

slimhole

slimtube

slow down (verb phrase)

slowdown (noun)

slug catcher

smartwater

space out

speed up (verb phrase)

speedup (noun)

splash plate

standalone (adj.)

standby (adj.)

stand off (verb)

standoff (noun, adj.)

standpipe

start up (verb)

startup (noun, adj.)

steady state (noun)

steady-state (adj.)

steam chest

steamdrive (noun, adj.)

steamflood

step-out (adj.)

stepout (noun)

stepwise

stick/slip

stock tank (noun)

stock-tank (adj.)

stopcock

straightedge

straightline (adj.)

strata (plural)

stratum (singular)

streamtube

sub- (joined prefix)

sulfate

sulfide

sulfur

super- (joined prefix)

swage (not “swedge”)

sweepout (noun, adj.)

## T

tail pipe

thermopowered

thin-section  
(noun in laboratory tests)

throughput

through-tubing (adj.)

tieback (noun, adj.)

tie line (noun)

tie-line (in mathematics)

time frame (noun)

timeline

timestep (noun)

timetable

tool face

tool joint

topdrive

tophole (adj.)

towout (noun, adj.)

traveltime

tricone

trunkline

tubinghead (adj.)

twistoff

type curve (noun)

type-curve (adj.)

## U

ultra- (joined prefix)

ultradeepwater

un- (joined prefix)

under- (joined prefix)

under way

up- (joined prefix)

updip

uphole/upstream

## V

V-door

vendor

viscoelastic

vortex (singular)

vortices (plural)

## W

wash out (verb phrase)

washout (noun)

waste water (noun)

wastewater (adj.)

water block

water blocking

water cut (noun)

water-cut (adj.)

waterdrive

waterflood

waterfrac

water-wet

web

website

well-being

wellbore

wellblock

wellhead

wellpoint

wellsite

wellstream

well test

-wide (joined suffix)

wind field (noun)

windfield (adj.)

wind speed (noun)

wireline

-wise (joined suffix)

workboat (noun)

workflow

workforce

work group

work over (verb)

workover (noun, adj.)

work string

worldwide

World Wide Web

## X

X-ray

## APPENDIX B: ABBREVIATIONS

Abbreviations, acronyms, and initialisms are often used in SPE literature and should be defined regardless of how well-known they may be within the industry or a specific discipline. When an abbreviation is used, spell out the term at first use, place the abbreviation in parentheses after it, and then continue use of the abbreviation only.

*NOTE: In general, limit the use of abbreviated terms to those used five or more times in the text and avoid abbreviating terms used only once. If a term is more recognizable in its abbreviated form and expansion of the term within the text will affect readability or understanding, consider adding a footnote to expand the term for clarity.*

*NOTE: At the author's discretion, spell out the abbreviated term again if used as the title of a section or subsection, if used in a figure or table caption, or if its subsequent use is several pages after its first use.*

*NOTE: In books, redefine the term at its first use in each chapter, then continue use of the abbreviation throughout the remainder of that chapter.*

### Oil Industry Abbreviations

The following is a list of oil industry abbreviations and their expanded meanings that are commonly found in SPE literature. This list is not meant to be comprehensive to the industry or the literature, as SPE recognizes that there may be more than one expanded meaning for any abbreviation.

1D	one dimensional	BOE	barrel of oil equivalent
2D	two dimensional	BOP	blowout preventer
3D	three dimensional	BPR	backpressure regulator
4D	four dimensional	BS&W	basic sediment and water
AC	alternating current	Capex	capital expenditure
AOS	alpha olefin sulfonate	CBL	cement bond log
ASP	alkali/surfactant/polymer	CBM	coalbed methane
BHA	bottomhole assembly	CDF	cumulative distribution function
BHP	bottomhole pressure	CFD	computational fluid dynamics
BHT	bottomhole temperature	CHOPS	cold heavy-oil production with sand

CPU	central processing unit	GOM	Gulf of Mexico
CRT	cathode ray tube	GOR	gas/oil ratio
CT	computed tomography	GOM	Gulf of Mexico
CWE	cold water equivalent	GPS	global positioning system
DC	direct current	GPU	graphics processing unit
DFIT	diagnostic fracture injection test	GR	gamma ray
DFN	discrete fracture network	GWC	gas/water contact
DLS	dogleg severity	HCl	hydrochloric acid
DVLO	Derjaguin-Landau-Verwey-Overbeek	HCPV	hydrocarbon pore volume
ECD	equivalent circulating density	HEC	hydroxyethyl cellulose
EnKF	ensemble Kalman filter	HPAM	hydrolyzed polyacrylamide
EOR	enhanced oil recovery	HPG	hydroxypropyl guar
EOS	equation of state	HP/HT	high-pressure/high-temperature
E&P	exploration and production	HSE	health, safety, and environment
EU	European Union	HSSE	health, safety, security, and environment
EUR	estimated ultimate recovery	ICD	inflow control device
FBHP	flowing bottomhole pressure	ICP	inductively coupled plasma
FEED	front end engineering design	ID	inside diameter (or inner diameter)
FPSO	floating production, storage, and offloading	IFT	interfacial tension
FTIR	Fourier transform infrared	IOC	international oil company
FTP	file transfer protocol	IOS	internal olefin sulfonate
FVF	formation volume factor	ISC	in-situ combustion
GC	gas chromatography	JIP	joint industry project
GIIP	gas initially in place	JT	Joule-Thomson
GOC	gas/oil contact	KB	kelly bushing

KCl	potassium chloride	OIIP	oil initially in place
KGD	Kristianovich-Geertsma-de Klerk	OOIP	oil originally in place (or original oil in place)
KOP	kickoff point	Opex	operational expenditure
LACT	lease automatic custody transfer	OS	operating system
LAN	local area network	OWC	oil/water contact
LCM	lost circulation material	P&A	plug and abandonment
LNG	liquefied natural gas	P&ID	pipng and instrumentation diagram
LPG	liquefied petroleum gas	PCP	progressing cavity pump
LWD	logging while drilling	PDC	polycrystalline diamond compact
MAE	mean absolute error	PDF	probability density function
MAPE	mean absolute percentage error	PI	productivity index
MD	measured depth	PKN	Perkins-Kern-Nordgren
MDRT	measured depth from rotary table	PLT	production logging tool
MDSS	measured depth subsea	POOH	pull out of hole
MDT	modular dynamics test	PSO	particle swarm optimization
MW	molecular weight	PTA	pressure transient analysis
MWD	measurement while drilling	PV	pore volume
NMR	nuclear magnetic resonance	PVT	pressure/volume/temperature
NOC	national oil company	QA	quality assurance
NPV	net present value	QC	quality control
NTG	net/gross ratio	R&D	research and development
OBM	oil-based mud	ReLU	rectified linear unit
OCTG	oil country tubular goods	REV	representative elementary volume
OD	outside diameter (or outer diameter)	RIH	run in hole
OIP	oil in place	RMS	root mean square



RMSE	root mean square error	TVDSS	true vertical depth subsea
ROP	rate of penetration	UAE	United Arab Emirates
ROS	residual oil saturation	UK	United Kingdom
ROV	remotely operated vehicle	URL	uniform resource locator
SAGD	steam-assisted gravity drainage	US	United States
SARA	saturates, asphaltenes, resins, and aromatics	UV	ultraviolet
SCADA	supervisory control and data acquisition	VDL	variable density log
SCAL	special core analysis	vs.	versus
SEM	scanning electron microscope (or scanning electron microscopy)	WAG	water alternating gas
SG	specific gravity	WAN	wide area network
SOR	steam/oil ratio	WBM	water-based mud
SP	self-potential	WHP	wellhead pressure
SS	subsea	WOB	weight on bit
TAN	total acid number	WOC	water/oil contact
TD	total depth	WOR	water/oil ratio
TDS	total dissolved solids	XPS	X-ray photoelectron spectroscopy
TOC	total organic carbon	XRD	X-ray diffraction
TVD	true vertical depth	XRF	X-ray fluorescence
		YP	yield point

## Abbreviations for SPE Publications

The following are the official abbreviations for SPE publications for use in references.

<i>J Can Pet Technol</i>	<i>Journal of Canadian Petroleum Technology</i>
<i>J Pet Technol</i>	<i>Journal of Petroleum Technology</i>
<i>Oil and Gas Fac</i>	<i>Oil and Gas Facilities</i> ®
<i>SPE Drill &amp; Compl</i>	<i>SPE Drilling &amp; Completion</i>
<i>SPE Drill Eng</i>	<i>SPE Drilling Engineering</i>
<i>SPE Econ &amp; Mgmt</i>	<i>SPE Economics &amp; Management</i>
<i>SPE Form Eval</i>	<i>SPE Formation Evaluation</i>
<i>SPE J.</i>	<i>SPE Journal; Society of Petroleum Engineers Journal</i>
<i>SPE Prod &amp; Fac</i>	<i>SPE Production &amp; Facilities</i>
<i>SPE Prod &amp; Oper</i>	<i>SPE Production &amp; Operations</i>
<i>SPE Prod Eng</i>	<i>SPE Production Engineering</i>
<i>SPE Proj Fac &amp; Const</i>	<i>SPE Projects, Facilities &amp; Construction</i>
<i>SPE Res Eng</i>	<i>SPE Reservoir Engineering</i>
<i>SPE Res Eval &amp; Eng</i>	<i>SPE Reservoir Evaluation &amp; Engineering</i>

## Abbreviations for Organizations

The following are abbreviations for some of the organizations that may be mentioned in SPE literature.

API	American Petroleum Institute
AIME	American Institute of Mining, Metallurgical, and Petroleum Engineers
AAPG	American Association of Petroleum Geologists
ACS	American Chemical Society
AGA	American Gas Association
AGU	American Geophysical Union
ASTM	American Society for Testing and Materials
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
AIChE	American Institute of Chemical Engineers
EIA	Energy Information Administration
GTI	Gas Technology Institute
IADC	International Association of Drilling Contractors
IEA	International Energy Agency
ISO	International Organization for Standardization
NACE	National Association of Corrosion Engineers
SEG	Society of Exploration Geophysicists
SME	Society for Mining, Metallurgy, and Exploration
SPWLA	Society of Professional Well Log Analysts
TMS	The Minerals, Metals, and Materials Society
US DOE	US Department of Energy
USGS	US Geological Survey

## APPENDIX C: UNITS AND SYMBOLS

### Common Units

acre	(spell out) [ha]	cubic feet per pound mass	ft <sup>3</sup> /lbm [m <sup>3</sup> /kg]
acre-feet	acre-ft [m <sup>3</sup> ]	cubic feet per second	ft <sup>3</sup> /sec [m <sup>3</sup> /s]
ampere	A	cubic yard	cu yd
Ångstrom	Å [nm]	cycles per second	cycles/sec [Hz]
API gravity	° API [g/cm <sup>3</sup> ]	darcy; darcies	(spell out)
atmosphere	atm [Pa]	dead-weight ton	DWT [Mg]
bar	(spell out) [Pa]	dyne(s)	(spell out) [mN]
barrel(s)	bbbl	electron volt	eV [J]
barrels of fluid per day	BFPD [m <sup>3</sup> /d fluid]	foot; feet	ft [m]
barrels of liquid per day	BLPD [m <sup>3</sup> /d liquid]	feet per minute	ft/min [m/s]
barrels of oil per day	BOPD [m <sup>3</sup> /d oil]	feet per second	ft/sec [m/s]
barrels of water per day	BWPD [m <sup>3</sup> /d water]	foot-pound	lbf-ft or ft-lbf [J]
barrels per day	B/D [m <sup>3</sup> /d]	gallon(s)	gal [m <sup>3</sup> ]
barrels per minute	bbbl/min [m <sup>3</sup> /s]	gallons per minute	gal/min [m <sup>3</sup> /s]
billion cubic feet	Bcf [10 <sup>9</sup> m <sup>3</sup> ]	gallons per day	gal/D [m <sup>3</sup> /d]
billion cubic feet per day	Bcf/D [10 <sup>9</sup> m <sup>3</sup> /d]	gram	g
British thermal unit	Btu [kJ]	hectare	ha
capture unit	c.u.	hertz	Hz
centipoise	cp [Pa·s]	horsepower	hp [kW]
cubic centimeter	cm <sup>3</sup> [mL] (not “cc”)	horsepower-hour	hp-hr [J]
cubic feet per barrel	ft <sup>3</sup> /bbbl [m <sup>3</sup> /m <sup>3</sup> ]	inch(es)	in. [cm]
cubic feet per day	ft <sup>3</sup> /D [m <sup>3</sup> /d]	inches per second	in./sec [cm/s]
cubic feet per minute	ft <sup>3</sup> /min [m <sup>3</sup> /s]	kilopound (1,000 lbf)	klbf [N]

kilowatt hour	kW-hr [J]	pounds per square inch	psi [kPa]
kip(s)	(spell out) [N]	reservoir barrel	res bbl [res m <sup>3</sup> ]
kips per square inch	ksi [Pa]	reservoir barrel per day	RB/D [res m <sup>3</sup> /d]
knot(s)	(spell out) [m/s]	revolutions per minute	rev/min
liter	L	revolutions per second	rev/sec
micron	μm	shots per foot	shots/ft (or spf)
mile(s)	(spell out) [km]	square feet	ft <sup>2</sup> [m <sup>2</sup> ]
millidarcy	md	square mile	sq mile [km <sup>2</sup> ]
milliliter	mL	standard cubic feet per barrel	scf/bbl
milliseconds	ms	standard cubic feet per day	scf/D [std m <sup>3</sup> /d]
million electron volts	MeV [MJ]	standard cubic foot	scf [std m <sup>3</sup> ]
million cubic feet	MMcf	stock-tank barrel	STB [stock-tank m <sup>3</sup> ]
mils per year	mil/yr [ m/a]	stock-tank barrels per day	STB/D [stock-tank m <sup>3</sup> /d]
ohm	Ω	stoke	St [m <sup>2</sup> /s]
ounce	oz [cm <sup>3</sup> ]	thousand cubic feet	Mcf
parts per million	ppm	trillion cubic feet	Tcf [10 <sup>12</sup> m <sup>3</sup> ]
porosity units	p.u.	volt	V
pounds force	lbf [N]	volume percent	vol%
pounds mass	lbm [kg]	watt	W
pound per cubic foot	lbm/ft <sup>3</sup> [kg/m <sup>3</sup> ]	weight percent	wt%
pound per gallon	lbm/gal [kg/m <sup>3</sup> ]		
pounds of proppant added	ppa		

## Dimensionless Numbers

The following dimensionless numbers are often used in SPE literature.

Bo or  $N_{Bo}$  Bond number

Da or  $N_{Da}$  Damköhler number

De or  $N_{De}$  Deborah number

Eo or  $N_{Eo}$  Etovos number

Eu or  $N_{Eu}$  Euler number

Fr or  $N_{Fr}$  Froude number

Kn or  $N_{Kn}$  Knudsen number

Pe or  $N_{Pe}$  Péclet number

Pr or  $N_{Pr}$  Prandtl number

Re or  $N_{Re}$  Reynolds number

Sc or  $N_{Sc}$  Schmidt number

Sh or  $N_{Sh}$  Sherwood number

We or  $N_{We}$  Weber number

## APPENDIX D: REFERENCE STYLE EXAMPLES AND CITATIONS

- SPE style uses an author/date format for referencing, similar but not identical to Chicago style. Include these elements (as applicable) in each reference:
  - Author(s) names—last name, first initial, and middle initial
  - Year of publication
  - Title of work
  - For books (as applicable): edition, volume, series, chapter, pages, name and location of publisher
  - For journals or other periodicals (as applicable): name of publication, volume, issue, page numbers, publication date, DOI
  - For conference papers (as applicable): name, location and date(s) of conference, type of presentation, DOI
- Compile references into a single list in alphabetical order as follows:
  - Alphabetize by first author’s last name.
  - When two or more references have identical first author last names, alphabetize by single-author references first, then by coauthor last name, regardless of number of coauthors, for multiauthor references.
  - When two or more multiauthor references have identical first author last names and publication year, add “a,” “b,” etc. after the year.
  - When two or more references have identical full authorship, list chronologically, beginning with the earliest publication year.
  - When two or more references have identical full authorship and publication year, add “a,” “b,” etc. after the year to distinguish between the references, and alphabetize by title.
  - If no author or editor is provided, alphabetize by title.
- Omit a reference entirely if the information provided is so vague that the reader could not locate the referenced information. Personal communications, nonspecific website addresses, and unpublished results are not acceptable references. If such a source is necessary to the text, cite it in a footnote or as a parenthetical insertion in the text and not in the reference list.

- List no more than three author names in a reference. If a reference has more than three authors, list only the first three authors followed by “et al.” No comma should be used between the third author’s last initial and “et al.”

**Examples:** Two authors: Smith, A. and Jones, B.

Three authors: Smith, A., Jones, B., and Kent, C.

More than three authors: Smith, A., Jones, B., Kent, C. et al.

- Always include the digital object identifier (DOI) name associated with a reference if one is available. Always write the DOI name as a hyperlink. Create DOI hyperlinks by adding <https://doi.org/> to the front of the DOI number.
- **Example:** Reference DOI name 10.2118/123456-PA as <https://doi.org/10.2118/123456-PA>

## Section D-1: Books

### Book with Author, Editor, or Neither Attributed

Green, D. W. and Willhite, G. P. 2018. *Enhanced Oil Recovery*, second edition. Richardson, Texas, USA: Society of Petroleum Engineers.

Miskimins, J. ed. 2019. *Hydraulic Fracturing: Fundamentals and Advancements*. Richardson, Texas, USA: Society of Petroleum Engineers.

*Platts’ Oilgram Regulatory Insight*, second edition, 2. 1976. New York City, New York, USA: McGraw-Hill Book Co. Inc.

### Book with Author and Translator Attributed; Foreign Title (Work Translated/Not Translated)

Snyyvek, J. B. 1968. *Petroleum Science*, second edition, trans. L. Friedman. Cambridge, Massachusetts, USA: Oilfield Science Series, Elsevier (1977).

Darcy, H. P. G. 1856. *The Public Fountains of the City of Dijon (Les Fontaines publiques de la ville de Dijon)*, trans. P. Bobeck. Dubuque, Iowa, USA: Kendall Hunt Publishing Co. (2004)

Leibenzon, L. S. 1934. *Mechanics in Oil Production, Part II* (in Russian). Moscow, Russia: Gorgeonefteizdat.



## Book in a Series

Ertekin, T., Sun, Q., and Zhang, J. 2019. *Reservoir Simulation: Problems and Solutions*, Vol. 28. Richardson, Texas, USA: SPE Textbook Series, Society of Petroleum Engineers.

## Chapter in a Book

Dewhurst, D. N., Piane, D., Claudio, E. et al. 2018. Microstructural, Geomechanical, and Petrophysical Characterization of Shale Caprocks. In *Geological Carbon Storage: Subsurface Seals and Caprock Integrity*, ed. S. Vialle, J. Ajo-Franklin, J. W. Carey, Chap. 1, 1–30. Washington, DC, USA: Geophysical Monograph Series, American Geophysical Union.

## Reprint

Barceló, D. and Hennion, M.-C. (1997). 2003. *Trace Determination of Pesticides and Their Degradation Products in Water*. Amsterdam, The Netherlands: Elsevier Science B.V.

Muskat, M. 1949. *Physical Principles of Oil Production*. Columbus, Ohio, USA: McGraw-Hill (repr. Springer, 1981).

## Section D-2: Conferences and Proceedings

### Conference/Meeting or Proceedings Paper

Aslam, U., Perez Cardenas, L. H., and Kimushin, A. 2021. Application of an Integrated Ensemble-Based History Matching Approach—An Offshore Field Case Study. Presented at the SPE Trinidad and Tobago Section Energy Resources Conference, Virtual, 28–30 June. <https://doi.org/10.2118/200908-MS>.

Ugueto, G. A., Wojtaszek, M., Huckabee, P. T. et al. 2021. An Integrated View of Hydraulic Induced Fracture Geometry in Hydraulic Fracture Test Site 2. Presented at the SPE/AAPG/SEG Unconventional Resources Technology Conference, Houston, Texas, USA, 26–28 June. <https://doi.org/10.15530/urtec-2021-5396>.

Erdogan, K. and Aktepe, S. 2017. Can New Seismic Imaging Technologies Reduce Exploration Risks? *Proc.*, 22nd World Petroleum Congress, Istanbul, Turkey, 9–13 July, 10 pages. WPC-22-1981.

Fang, C., Dong, H., Zhang, T. et al. 2021. Mathematical Models of Overparameterized Neural Networks. In *Proceedings of the IEEE*, Vol. 109, No. 5, 683–703. Piscataway, New Jersey, USA: IEEE. <https://doi.org/10.1109/JPROC.2020.3048020>.

### **Oral Presentation, not Included in Conference Proceedings**

Detienne, J. L. and Po, V. 2005. PWRI Design for Soft Sand Formations. Oral presentation given at the SPE Advanced Technology Workshop on Produced Water Re-injection, Biarritz, France, 20–24 June.

### **Section D-3: Journal Papers and Periodicals**

#### **Submitted Article, Accepted/Not Yet Published**

Ao, X., Wu, H., Wang, R. et al. Forthcoming. The Investigation of Proppant Particle-Fluid Flow in a Vertical Fracture with a Contracted Aperture. *SPE J.* (accepted 23 June 2021).

*In-Text Citation Examples:* (Ao et al., forthcoming) or Ao et al. (forthcoming)

#### **Published Article or Article in Press**

Ofei, T. N., Kalaga, D. V., Lund, B. et al. 2021. Laboratory Evaluation of Static and Dynamic Sag in Oil-Based Drilling Fluids. *SPE J.* **26** (3): 1072–1091. <https://doi.org/10.2118/199567-PA>.

Huang, X., Zhang, L., Zhang, R. et al. 2021. Numerical Simulation of Gas-Liquid Two-Phase Flow in the Micro-Fracture Networks in Fractured Reservoirs. *Journal of Natural Gas Science and Engineering* **94**: 104101. <https://doi.org/10.1016/j.jngse.2021.104101>.

Rystad: US Producers See Cost to Supply LNG to Asia Increase. 2021. *Oil and Gas Journal* **119** (7): 38.

Zhong, Z., Esteban, L. Rezaee, R. et al. 2021. The Pressure Dependence of the Archie Cementation Exponent for Samples from the Ordovician Goldwyer Shale Formation in Australia. *SPE J.* (in press; posted 30 June 2021). <https://doi.org/10.2118/206710-PA>.

#### **Article in an Online Periodical or Company Website**

Mohaghegh, S. D. 2021. In Petroleum Data Analytics, Artificial Intelligence Avoids the Black Box. *Data Science and Digital Engineering* (18 June), <https://jpt.spe.org/in-petroleum-data-analytics-artificial-intelligence-avoids-the-black-box>.

Schlumberger. 2021. Schlumberger's DrillPlan Solution Received 2021 OTC Spotlight on New Technology Award, <https://www.slb.com/resource-library/article/2021/drillplan-solution-receives-2021-otc-spotlight-on-new-technology-award> (accessed 12 July 2021).

#### **Non-Journal Article/Whitepaper with Author and Translator Attributed**

Borisov, J. P. 1964. Oil Production Using Horizontal and Multiple Deviation Wells, trans. J. Strauss. Bartlesville, Oklahoma, USA: R&D Library, Phillips Petroleum Co. (1984).

## Foreign Language Article (Translated/Not Translated)

Verigin, N. N. 1952. On the Pressurized Forcing of Binder Solutions into Rocks in Order to Increase the Strength and Imperviousness to Water of the Foundations of Hydrotechnical Installations (in Russian). *Akademija Nauk SSR Izvestija Odt. Tehn. Nauk* **5**: 674–687.

Einstein, A. 1906. Eine neue Bestimmung der Moleküldimensionen (A New Determination of the Molecular Dimensions). *Ann. Phys.* **19** (2): 289–306.

## Section D-4: Unique SPE-Specific Examples

### SPE Manuscripts (Non-Conference), Not Found on OnePetro

Pickup, G. A. and Christie, M. A. 2009. Top-Down Reservoir Modelling: From Material Balance to Reservoir Simulation. Paper SPE-12606-MS available from SPE, Richardson, Texas, USA.

### SPE Paper Published in Transactions (1921–1995)

Harris, P. C. and Reidenbach, V. G. 1987. High-Temperature Rheological Study of Foam Fracturing Fluids. *J Pet Technol* **39** (5): 613–619. <https://doi.org/10.2118/13177-PA>.

Harris, P. C. and Reidenbach, V. G. 1987. High-Temperature Rheological Study of Foam Fracturing Fluids. In *Transactions of the Society of Petroleum Engineers*, Vol. 283, Part I, 613–619. Richardson, Texas, USA: Society of Petroleum Engineers.

Do not use the following format:

Tracy, G. W. 1955. Simplified Form of Material Balance Equation. *Trans., AIME*, **204**: 243–255.

### Comment/Discussion on a Published Paper

Peaceman, D. W. 1990. Further Discussion of Productivity of a Horizontal Well. *SPE Res Eng* **5** (3): 437–438. <https://doi.org/10.2118/18298-PA>.

Takacs, G. 2021. Comment on SPE-204215-PA, Complete Simulation and Fault Diagnosis of Sucker-Rod Pumping. *SPE Prod & Oper* **36** (2): 277–290 (comment follows paper). <https://doi.org/10.2118/204215-PA>.

## **SPE Distinguished Lecture/Distinguished Author Series**

Schein, G. 2005. The Application and Technology of Slickwater Fracturing. Paper SPE 108807 presented as a Distinguished Lecture during the 2004–05 season.

Saggaf, M. M. 2008. A Vision for Future Upstream Technologies. Distinguished Author Series, *J Pet Technol* **60** (3): 54–98. <https://doi.org/10.2118/109323-JPT>.

## **JPT Article (Paper Highlights)**

Carpenter, C. 2021. Work Flow History Matches Numerical Simulation Models of Fractured Shale Wells. *J Pet Technol* **73** (4): 60–61. <https://doi.org/10.2118/0421-0060-JPT>.

***NOTE: JPT Paper Highlights are synopses of non-peer-reviewed conference papers written by SPE staff. Authors should perform due diligence in obtaining and referencing the original work for inclusion in books or journal papers.***

## **Section D-5: Miscellaneous**

### **Blog**

Energy Information Administration (EIA). 2021. EIA Product Highlight: Southern California Daily Energy Report. Today in Energy, 12 July 2021, <https://www.eia.gov/todayinenergy/detail.php?id=48657> (accessed 12 July 2021).

### **Brochure**

Merck. 2021. Milli-Q® IQ 7003/05/10/15 Integrated Ultrapure & Pure Water Systems. Brochure, Darmstadt, Germany: Merck KGaA.

### **Congressional Hearing—Testimony**

Happer, W. 2009. Climate Change. Oral testimony given before the 111th Congress Full Committee hearing “Update on the Latest Global Warming Science,” US Senate Environment and Public Works Committee, Washington, DC, USA, 25 February.

Dharan, B. G. 2004a. Prepared testimony for the US House Committee on Financial Services, 108th Congress, Second Session. Improving the Relevance and Reliability of Oil and Gas Reserves Disclosures, 31–50. Hearing, 21 July 2004 (Serial No. 108–105), Shell Games: Corporate Governance and Accounting for Oil and Gas Reserves, [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=108\\_house\\_hearings&docid=f:96549.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=108_house_hearings&docid=f:96549.pdf) (downloaded 14 January 2010).

## **Court Case**

El Paso Firemen and Policemen's Pension Fund v. Stone Energy Corporation. 2006. Case 6:05-cv-02088-TLM-MEM, Doc. 61 (W.D. La. 14 June 2006), [http://securities.stanford.edu/filings-documents/1035/SGY05\\_01/2007817\\_r01x\\_0502088.pdf](http://securities.stanford.edu/filings-documents/1035/SGY05_01/2007817_r01x_0502088.pdf) (downloaded 22 June 2010).

Groucho Marx Prods. v. Playboy Enters. 1977. No. 77, Civ. 1782 (S.D. N.Y. 30 December 1977).

## **Database**

*NOTE: Journal, magazine, or newspaper articles accessed through a database should be referenced as a journal, magazine, or newspaper article.*

Thoms, K. J. 2001. They're Not Just Big Kids: Motivating Adult Learners. ERIC database, <http://www.eric.ed.gov/> (accessed 1 January 2001).

National Petroleum Council. 1984. NPC Public Database, <http://www.netl.doe.gov/technologies/oil-gas/Software/database.html> (accessed 23 May 1990).

Lemmon, E. W., Huber, M. L., and McLinden, M. O. 2007. NIST Standard Reference Database 23: Reference Fluid Thermodynamic and Transport Properties-REFPROP, Version 8.0. Gaithersburg, Maryland, USA: Standard Reference Data Program, National Institute of Standards and Technology.

## **Film/Video or Other A/V Recording**

Taylor, G. I. 1972. Low Reynolds number flows. VHS produced by Educational Services Incorporated under the direction of the National Committee for Fluid Mechanics Films. Chicago, Illinois, USA: Encyclopaedia Britannica Educational Corporation.

## **Lecture, Short Course, or Course Notes**

Caicedo, M. and Mora P. 2004. Temas de propagacion de ondas. Lecture, Universidad Simón Bolívar, Caracas (25 June 2014).

Kamal, M. M. 1998. What You Can and Cannot Obtain from Today's Well Testing Technology. Presented as an SPE Distinguished Lecture during the 1997–1998 season; February 1998 lecture presented in Perth, Australia.

Canadian Society of Petroleum Geologists (CSPG). 2006. Coal Bed Methane: An Integrated Approach to Reservoir Characterization and Production. CSPG CSEG SWLS Short Course SCPRE 10 presented 12 May 2006, Calgary, Alberta, Canada.

Thomsen, L. 2002. Understanding seismic anisotropy in exploration and exploitation. Lecture Notes, SEG/EAGE Distinguished Instructor Short Course No. 5, Tulsa, Oklahoma, USA.

## Legal Citation

US Code of Federal Regulations. 1996. 33 CFR § 155.1010, Oil or Hazardous Material Pollution Prevention Regulations for Vessels, Subpart D—Tank Vessel Response Plans for Oil—Purpose [CGD 91-034, 61 FR 1081]. <http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=eddbedaf9c9739d0c0ce79d3ea762279&rgn=div8&view=text&node=33:2.0.1.5.24.4.161.1&idno=33> (accessed May 2012).

2 Colorado Code of Regulations § 404-1:1202.d.(2) (2007).

**NOTE: Use of Bluebook standard for legal citations is acceptable.**

## Patents—US and International

Cardenas, R. L., Carlin, J. T., and Flournoy, K. H. 1974. Surfactant Oil Recovery Process for Use in Formations Containing High Concentrations of Polyvalent Ions Such as Calcium and Magnesium. US Patent No. 3,799,264.

Moses, V. and Harris, R. E. 1994. Acidising Underground Reservoirs. International (PCT) Patent No. WO 94/25731.

Lund, A., Lysne, D., Larson, R. et al. 2004. Method and system for transporting a flow of fluid hydrocarbons containing water. US Patent No. 6,774,276; International (PCT) Patent No. WO/2000/025062; Norwegian Patent No. NO 311,854.

## Personal Communications

**NOTE: May be cited only as footnotes. Do NOT include in reference list.**

\* Personal communication with J. Doe. 2006. Dallas, Texas, USA: Exxon Mobil Corp.

## PhD Dissertation or MS Thesis

Flemal, R. C. 1967. *Sedimentology of the Sespe Formation, Southwestern California*. PhD dissertation, Princeton University, Princeton, New Jersey, USA (May 1967).

## Photograph

Xell. 2015. Barge at the Danube, Wachau, Austria (21 August 2005), [http://commons.wikimedia.org/wiki/File:Danube\\_oil\\_tanker.jpg](http://commons.wikimedia.org/wiki/File:Danube_oil_tanker.jpg) (accessed 25 June 2014)

Kerr, I. H. 1935. Straw Stacks, March Thaw, <http://www.art2life.ca>.

Jansen, F. 1994. 8 O’Clock (1920). In *German Expressionist Woodcuts*, ed. S. Weller, Plate 12. New York City, New York, USA: Dover Publications.

## Photograph (Uncredited)

Navajo “Olla” Woven container with “Pitch” Coating. Undated file photo, Gilcrease Museum, Tulsa, Oklahoma, USA.

## Podcast

Zijlstra, M. 2007. Lingua Franca. ABC Radio National podcast, <http://www.abc.net.au/rn/linguafranca/> (accessed 25 May 2007).

Lucier, G. 2006. Engineering in the Biotech Era. PSU Experts From the Field podcast presentation, 28 September 2006, <http://www.engr.psu.edu/NewsEvents/podcasts.aspx> (downloaded 23 June 2011).

## Preprint

Kingma, D. P. and Ba, J. 2014. Adam: A Method for Stochastic Optimization. arXiv:1412.6980. <https://arxiv.org/abs/1412.6980> (preprint; last revised 30 January 2017).

## Published Company or Government Report

Shell Oil. 1975. Enhanced Recovery. Internal Report, Shell Oil Company, Houston, Texas, USA.

Doscher, T.M. 1982. Scaled Physical Model Studies of the Steam Drive Process. Final report, Contract No. DE-AT03-77ET 12075, US DOE, Washington, DC, USA (November 1982).

## Recommended Practices and Standards

*API RP 61, Recommended Practice for Evaluating Short-Term Proppant-Pack Conductivity*, first edition. 1989. Washington, DC, USA: API.

*ASTM A370-05, Standard Test Methods and Definitions for Mechanical Testing of Steel Products*. 2005. West Conshohocken, Pennsylvania, USA: ASTM International. <https://doi.org/10.1520/A0370-05>.

*GB/T 13173.6-1991, Determination of Foaming Power for Synthetic Detergents—Ross-Miles Method* (in Chinese). 1991. Beijing: Standardization Administration of China (SAC).

## Software/Applications

Adobe Dreamweaver CS4, Version 10.0. 2008. San Jose, California, USA: Adobe Systems Inc.

Chu, K. T. and Prodanovic, M. 2008. Level Set Method Library (LSMLIB), <http://ktchu.serendipityresearch.org/software/lsmlib/index.html> (accessed 1 November 2008).

Schlumberger. 2005. Eclipse Reservoir Engineering Software, <http://www.slb.com/content/services/software/resent/>.



## Technical/Educational Course

CSPG\*. 2006. Coal Bed Methane: An Integrated Approach to Reservoir Characterization and Production. CSPG CSEG SWLS Short Course SCPRE 10 presented 12 May 2006, Calgary, Alberta, Canada.

\* instructor's name OR sponsoring entity

## Unpublished Report

Li, C. 1999. Experimental Investigation and Theoretical Analysis of the Shale Water Activity at Downhole Conditions. Annual report, Drilling Research Program, University of Texas, Austin, Texas, USA (unpublished).

## User Guide/Manual

Gray, H. E. 1974. Vertical Flow Correlation in Gas Wells. In *User Manual for API 14B Subsurface Controlled Safety Valve Sizing Computer Program*, Appendix B. Washington, DC, USA: API.

CMG. 2006. GEM Advanced Compositional Reservoir Simulator, Version 2006 User Guide. Calgary, Alberta, Canada: CMG.

## Website

Pinnacle Technologies. 2007. FracproPT, <http://www.fracpro.com/fracpropt.html> (accessed 14 April 2008).

Ambler, S. W. 2006. Enterprise Modeling Anti-Patterns, <http://www.agilemodeling.com/essays/enterpriseModelingAntiPatterns.htm> (accessed 5 March 2006).

United States Geological Survey (USGS). 1995. 1995 National Oil and Gas Assessment Province Boundaries, <http://geo-nsdi.er.usgs.gov/metadata/digital-data/30/boundary.html> (accessed 19 October 2007).

## Wiki

An Essay Evolves. 2007. Freud and Science (8 March 2007 revision), <http://evolvingessay.pbwiki.com/Freud+and+Science> (accessed 20 May 2007).

Wikipedia. 2010. Semipermeable membrane (4 October 2010 revision), [http://en.wikipedia.org/w/index.php?title=Semipermeable\\_membrane&oldid=388646914](http://en.wikipedia.org/w/index.php?title=Semipermeable_membrane&oldid=388646914) (accessed 20 December 2010).



## Section D-6: Inline Citations

- Cite references in the text or in figure or table captions by placing the author’s last name and the year of publication in parentheses. If the author’s name is used in the text, include only the year of the reference in parentheses.

**Examples:** The generally accepted method (Smith 1990) offers several advantages.

Smith (1990) provides a detailed explanation of this method.

Fig. 2.7—Stresses acting on the borehole wall (after Aadnoy 1996).

- If the text cites more than one reference from the same author in the same year, add “a,” “b,” etc. to distinguish between the references. Separate references included in the same set of parentheses with semicolons.

**Examples:** Smith et al. (2004a, 2004b) showed that...

The method is analyzed in several studies (Smith 1990; Jones and Smith 1992; Smith et al. 2004).

This practice is common across the industry (Smith 1992, 1994b; Jones 1996).

- If the referenced source is of considerable length and more than one part of it is referenced in the current paper, the in-text citation may include original figure or page numbers for clarification.

**Examples:** Yousef (1956, Fig. 4) first described this effect several decades ago.

A different section of the same earlier work was dedicated to this phenomenon (Smith et al. 1997, p. 234–236).

- When citing standards in text, do not spell out the abbreviations [i.e., American Petroleum Institute (API) Recommended Practice (RP) 7G]. The abbreviated term is the actual name of the standard and should not be deconstructed.

**Correct:** *API SPEC 2F* (1981) defines this process.

The operating limits (*API RP 7G* 1989) are defined as...

**Incorrect:** *API Specification 2F* (1981) defines this process.

The operating limits (*API* 1989) are defined as...