Who We Are

SEG is dedicated to advancing the science of applied geophysics and fostering common scientific interests of geophysicists.
What was SEG’s brand?
identity crisis
What is SEG’s BRAND today?
LOGO – clean, modern & polished
*Graphic emphasizes the worldwide reach of SEG*

TAGLINE - explains what we do as an organization
*(Not just who we are)*
Our Priorities

➢ Serve a global membership

➢ Advance applied geophysics

➢ Inspire the geoscientists of tomorrow

➢ Engage in sustainable business
Global Membership

SEG’s Membership spans the world:

- 27,000 members
- 128 countries
- 52 sections/associated societies
- 360 student chapters
Membership by Region

Count By Country

Connecting the World of Applied Geophysics
Distinguished Instructor Short Courses (DISC)

Since its inception in 1988, DISC has been attended by 30,000 people around the world.

**2016 DISC**

3C Seismic and VSP by James Gaiser

Jim has completed 14 stops in 8 countries including Austria, Australia, Argentina, China, Malaysia, Japan, Saudi Arabia and the USA (Houston, Midland, Stanford, Dallas)

Attendance in all these locations has been over 400.

**2017 DISC**

Electromagnetics for geophysical problems: Fundamentals and Applications by Doug Oldenburg

**2018 DISC**

Integrated Interpretation by Kurt Marfurt
HL/DL Global Lecturer Series

- **Distinguished Lecturers**
  - 2 speakers each year
  - 61 presentations (2016)
  - 22 universities
  - 15 countries
  - 3,287 attendees

- **Honorary Lecturers**
  - 6 regions each year
  - 35 countries
  - 117 presentations (2016)
  - 93 universities
  - 5,827 attendees

2016:
- Joe Dellinger
- Steven Constable

2016:
- Michael Kemper
- Pedro Alvarez
- Said Mahrooqi
- Scott Mitchell
- How-Wei Chen
- Jie Zhang
Company researches how microwaves can replace fracking
Microwaves may allow drillers to capture previously unextractable oil reserves with a method that may be safer and more efficient than fracking, according to Colorado-based company Qmast. The method eliminates the need for water and instead uses a beam focused on the shale formation until the formation releases its oil.  
Ozy (10/4)

Gravitational, magnetic geophysical methods offer advantages in oil exploration
Gravitational and magnetic geophysical measurements are critical to oil exploration, according to Henry Lyatsky of Lyatsky Geoscience Research & Consulting. The surveys are relatively low-cost but are often overlooked because the methods aren't widely taught in college programs. Lyatsky writes. 
E&P magazine online (10/3)
Seismic Soundoff

- Launched 4 August
- Women in Geophysics: 439 unique listens* (4 August)
- Exploring Interpretation – May 2016 with Kurt Marfurt: 272 unique listens (11 August)
- James Gaiser, 2016 DISC lecturer: 314 unique listens (18 August)
- SEG Advanced Modeling (SEAM): 166 unique listens (25 August)
- Dallas 2016 SEG Annual Meeting Preview: 171 unique listens (28 September)

Upcoming podcasts (at least one per month)
- Previewing Vernik’s *Seismic Petrophysics in Quantitative Interpretation* (13 October release date)
- Lev Vernicks: Mentoring and the Scholarships Committee
- Kurt Marfurt: condensed August 2016 *Interpretation*
- John Bradford: Presidential Address
- Dual careers in geophysics
- Why I love geophysics

*Numbers as of 6 October 2016. Current analytics package does not include download stats. Any downloads from iTunes, StitcherRadio, TuneIn, etc., are not included in these totals.
Our Priorities

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- **Advance applied geophysics**
- Inspire the geoscientists of tomorrow
- Engage in sustainable business
SEG International Exposition and Annual Meeting
The world’s premier gathering of geoscientists

- 5,791 attendees
- 251 exhibitors
- 720 oral presentations
- 197 posters
- 186 E-posters
2017 Collaborative Events

- NAPE Summit, 15-17 February — Houston, Texas
- SEAPEX Exploration Conference, 26-28 April — Singapore
- OTC Houston, 1-4 May — Houston, Texas
- URTeC, 24-26 July — Austin, Texas
- NAPE Summer, 16-17 August — Houston, Texas
- AAPG/SEG ICE London, 15-18 October — London, UK
- OTC Brazil, 24-26 October — Rio de Janeiro, Brazil
- NAPE Rockies, October — Denver, Colorado
- OTC Arctic Technology Conference, 31 Oct-3 Nov — Calgary, Canada
SEG Publications

- Cutting-edge technical content
- Editorial excellence

- The Leading Edge
- Geophysics
- Interpretation
- Reference books
- SEG eBooks
The Leading Edge

**TLE app**
- Last four months: >1,700 sessions

**TLE Digital Edition**
- Last four months: >14,000 page views

**Upcoming TLE sections**
- Near-surface modeling and imaging
- Full-waveform inversion
- Remote sensing
- Velocity-model uncertainty
- Highest impact factor in journal’s history: 2.017!
- Record year for accepted papers: 413 — 87 more than previous high
- New category for 2017: Magnetic resonance sounding
Interpretation

- Co-published with AAPG since 2013 launch
- Received first impact factor in June: 0.510
- Close to 5,000 SEG members subscribe
SEG has partnered with IHRDC to develop the SEG Competency Management System (CMS)

- FREE benefit for SEG members
- Ten SEG Competency Models
- Helps members identify areas for improvement and take action
- Learning plan points to SEG, IHRDC, and some third-party resources to help members fill their learning gaps
SEG on Demand

New SEG on Demand platform
   - Easier to access courses for users and potential companies

Bundle SEG on Demand Packages for NOCs, Companies, and Institutions

Marketing Plan
New Life of Field:

SEAM's upcoming project examines the full Life of Field workflows and data flows, including simulations of reservoir and fluid dynamics.

The project commenced in December 2015 with a pilot that is launching a full project startup in December 2016 with early deliverables beginning after a two year period.
Industry Research Consortia

SEAM:
SEG Advanced Modeling Corporation, an industry partnership designed to advance geophysical science and technology through the construction of earth subsurface models and generation of synthetic data sets.
Our Priorities

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Number of Student Chapters Worldwide

360 student chapters in 67 countries
EPIC
Emerging Professionals International Committee

Keeping SEG vital for geoscientists transitioning from academia to industry

The Emerging Professionals International Committee activities:

- Volunteer driven
- Global group with district representation
- Strengthening bonds through social interaction, community involvement and technological exchange
- Foster engagement and promote member recruitment
- Promote the development of great leaders
SEG thanks the following companies for their support of Student and Early Career Programs:

- Shell
- Chevron
- ExxonMobil
- Human Energy
- Landmark
- Halliburton
- TGS
- CGG
- Anadarko
- Petroleum Corporation
- Apache
- Total
- Geokinetics
- Geophysical Pursuit, Inc.
Women’s Network Committee (WNC)
For women in geosciences and related careers

- Nancy House and Anna Shaughnessy are WNC members
- Estella Atekwana wins Outstanding Educator Award
- Full Spectrum column in TLE
- Special Sessions on Women’s Issues
  - ICEG Al Ain, Abu Dhabi
  - ICE Barcelona
  - ICE Cancun
- Evening Networking Event, 6th Annual WNC Breakfast, and Post Conference Workshop

The changing gender mix of SEG.

Eve Sprunt (SEG 2nd VP), TLE President’s Page (Oct. 2015)
Near Surface Technical Section

- Membership
- Publications
- Collaborations
- Events & Joint Technical Sessions
- Annual Meeting

Photographic source Remke van Dam
Near Surface Technical Section Membership

* 8 September 2016 data

- Active
- Associate
- Student
- Emeritus
- Expired SEG

* 2011: 203
* 2012: 165
* 2013: 122
* 2014: 145
* 2015: 205
* 2016: 224

- 2011: 61
- 2012: 48
- 2013: 20
- 2014: 25
- 2015: 7
- 2016: 3
Geoscientists Without Borders®
29 Projects in 23 Countries since 2008

- Archaeology
  - Northern Thailand
  - Greece

- Earthquake Preparedness
  - Kingston Harbor, Jamaica
  - Leogane, Haiti
  - Port-au-Prince, Haiti
  - Timor Leste

- Landslide Preparedness
  - Sweden
  - Brazil
  - Bosnia & Herzegovina & Serbia
  - Peru

- Tsunami Preparedness
  - West Sumatra, Indonesia
  - Java, Indonesia

- Volcano Preparedness
  - Nicaragua
  - Guatemala

- Water Management
  - Honduras
  - India
  - South Central Australia
  - South Africa
  - Benin, West Africa
  - South Australia
  - Millingimbi, Australia
  - Cameroon
  - Argentina
  - Kenya
  - Bolivia
  - Malawi

- Pollution Mitigation
  - Central Romania

Connecting the World of Applied Geophysics
SEG thanks the following companies for their support of Geoscientists Without Borders®

Schlumberger

PGS  CGG  KiwiEnergy

Santos  Global Geophysical Services
SEG Foundation

The SEG Foundation advances geophysics today and inspires geoscientists for tomorrow through funding innovative activities and grant programs that benefit geophysicists, their professional community, the Society of Exploration Geophysicists, and the general public.
Connecting the World of Applied Geophysics

Sustaining Donors

$2,000,000 AND UP

Chevron  Shell  Schlumberger  ExxonMobil  Anadarko Petroleum Corporation

$1,000,000 TO $1,999,999

Statoil  CGG  CNPC  BGP  Halliburton  TGS  PGS

$500,000 TO $999,999

Apache  ion  KiwiEnergy  Total

$250,000 TO $499,999

Paradigm  IHS Markit  Marathon Oil Corporation  Santos  Geophysical  Pursuit, Inc.  Global Geophysical Services  Geokinetics
Our Priorities

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2016-2017 SEG Board of Directors

- Bill Abriel
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- John Bradford
  Past President

- Jie Zhang
  2nd Vice President

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- Rocky Detomo
  Director at Large

- Vladimir Grechka
  Director at Large

- Xianhuai Zhu
  Director at Large

- Maurice Nessim
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2016-2017 SEG Board of Directors – Elect

Nancy House
President-Elect

Madeline Lee
2nd Vice President

Lee Bell
Treasurer

Ruben Martinez
Director at Large

Paul Cunningham
Director at Large
The Changing World and the Need for a New SEG Strategy
Current Business Environment
Recognize and react to motivating forces (trends)
Recognize, strengthen and focus on core capabilities
Expand horizons and influence
What do Geophysicists Value?
(SEG Survey 2015)
Growth Areas of Applied Geophysics (SEG survey 2015)

Fastest Growing Opportunities

- Petroleum Reservoir Management
- Unconventional Energy
- Water Management
- Environmental
- CO2 Management

Energy

Water

Environment/Climate
Grand Challenges for Society

Population growth over time, showing trends in Less developed countries and More developed countries.

http://www.prb.org/Publications/LessonPlans/HumanPopulation/PopulationGrowth.asp
Energy

World Oil Production and Population 1900-2005

http://www.paulchefurka.ca/Population.html
“We’re going to run out of water much much earlier than we’ll run out of oil,” Peter Brabeck-Letmathe, chairman of Nestlé, at the OECD Forum in May 2012.
“The risk of climate change is clear and the risk warrants action. Increasing carbon emissions in the atmosphere are having a warming effect.”

“We know enough based on the research and science that the risk is real and appropriate steps should be taken to address that risk.”

*ExxonMobil*
Global Energy Trends

Fossil fuels will remain dominant energy source for decades to come. Combination of economics and social/political forcing is driving major shifts in the global energy economy.

- Shift in demand from coal to natural gas
- Significant growth of unconventionals
- Regulatory requirements for cleaner oil and gas production
- Increased subsidies for renewables
- Encouragement of CO2 capture and sequestration
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Demographic Shifts

Age of SEG Members

Number of Members

- Student
- Associate
- Active

Connect with the World of Applied Geophysics
Professional members declining from end (FY12) to end (FY15)

Membership Changes FY12-FY15

- Student
- Emeritus
- Core
- Total

Since 2012

- Core down
- Emeritus Up
- Student
Tomorrow’s geophysicist likely to be different than today’s

Motivated by a sense of social contribution

Depend on electronic communication

Demand easy digital access to information

1Based on a comparison of students and professionals for FY15
Strategy: Leverage Successes to Build for the Future

**Current Challenges**
- SEG sustainability
- Association model not attracting EP
- Great crew change

**Trends**
- Communications Technology
- Globalization
- Geophysicist’s jobs are changing

**Opportunities**
- Members value science
- Social contribution of applied geophysics
- Shifting areas of practice
SEG Strategy
Advance Applied Geophysics

This strategy gives members what they value most — *a focus on technical excellence*

- Expand on our trusted legacy of *sustaining and advancing the science of applied geophysics* in resource extraction and management
- Unlock the *social contribution* of geophysics applied to energy, water, and environment
- Strengthen the *marketplace* for exchange of technical knowledge and products
- Become the trusted *“go-to” source* for information about applied geophysics
  - Connect the world of applied geophysics
  - Connect geology and engineering to geophysics
  - Show the world the power of applied geophysics
Required shifts for successful, sustainable future

**SEG Today**
- Technical Excellence
- Recognized for Societal Impact
- Member Driven
- Sustainability Issues
- Aging Membership
- Slow to react

**Required Shifts**
- Execute Cohesive Strategy
- Exercise Program Discipline
- Improve Communications
- Build a Strong Media Presence
- Develop Nimble Processes

**Advance Applied Geophysics**
- Go-to Source for “World of Applied Geophysics”
- Global
- Connected and integrated
- Agile
- Sustainable

**Rebuild SEG**
Thank You