Donald Gautier

Title: Research Geologist

Primary Affiliations: DonGautier LLC

University of Adelaide School of Petroleum U.S. Geological Survey (Scientist Emeritus)

Address: 3954 Nelson Court, Palo Alto, California 94306

Office Phone: +1 650 857 0622 Mobile Phone: +1 650 862 6149

Email: gautier.donald@gmail.com

Education

Ph.D. Geology University of Colorado B.A. Geology University of Colorado

Professional Experience

2014 to present DonGautier L.L.C. Consulting geologist

University of Adelaide School of Petroleum Adjunct Professor

U.S. Geological Survey Scientist Emeritus

2007 to 2014 U.S. Geological Survey Project Chief, World Petroleum Project

2000 to 2009

U.S. Geological Survey

Research geologist and Task Leader

Circum-Arctic Resource Appraisal North Sea Reserve Growth Analysis San Joaquin Basin Assessment

1996 to 2000 U.S. Geological Survey Chief Scientist, Western Earth Surface Processes Team

1991 to 1996 U.S. Geological Survey Project Chief, National Assessment of U.S. Oil and Gas Resources

1987 to 1991 U.S. Geological Survey Chief, Branch of Petroleum Geology

1977 to 1987 U.S. Geological Survey Research Geologist, Branch of Oil and Gas Resources

1976 to 1977 Mobil Oil Exploration Company Geologist

Honors and Awards

2013	United States Department of Interior (DOI) Distinguished Service Award
2009	United States DOI Group Award for the Circum-Arctic Resource Appraisal
1994	Best Paper in the Mountain Geologist (with T.S.J. Ahlbrandt and T.A. Bader)
1994	U.S. DOI Meritorious Service Award
1980	Best SEPM presentation, AAPG/SEPM National Convention, Denver
1980	Paper selected as best of AAPG for SEG

Current Professional Affiliations

American Association for the Advancement of Science American Association of Petroleum Geologists California Council on Science and Technology European Association of Geoscientists and Engineers Geological Society of London Los Angeles Basin Geological Society Peninsula Geological Society

Y 1: 1Y . 11 CI 0000 (T 1) ... 11 11 ...

Invited Lectureships Since 2003 (Earlier activity available on request)

2015

Society of Petroleum Engineers – Los Angeles Basin Section Long Beach Petroleum Club, January 2015 Petroleum Resources of California – With and Without Hydraulic Fracturing 2014

Norwegian Petroleum Directorate Stavanger, November 2014 Lectures in Aggregation Methodology

Unconventional Resources Technology Conference Denver, Colorado, August 2014 Resource Potential of the Alum Shale in Denmark

California Council on Science and Technology
Lawrence Berkeley National Laboratory, Several dates in 2014
Lectures on Petroleum Resources of Los Angeles (May), San Joaquin (July), and
Sacramento Basins (June) and on resources of the California Federal Offshore OCS
(August)

Petroleum Business Institute Lectures in Petroleum Geology Moscow Russia, April 2014 and July 2014

California Council on Science and Technology Oil and Gas Resources Workshop Sacramento, January 2014

Potential for Future Petroleum Development in California

2013

Keynote Speaker Geological Survey of Denmark and Greenland Shale Oil Symposium Copenhagen, December 2013 Resource Potential of Lower Palaeozoic Shales in Denmark

Invited Speaker
USC Los Angeles Basin Oil Fields Workshop
Los Angeles, November 2013
Discovery History and Remaining Potential of the L.A. Basin Oil Fields

Keynote Speaker U.S. Energy Information Administration Energy Conference Washington D.C., June 2013 Methods of Assessment of Unconventional Oil and Gas Resources

Keynote Speaker (Presented remotely from Palo Alto) Stanford Energy Modeling Forum Washington D.C., May 2013 Assessment of Unconventional Gas Resources

Keynote Speaker (Presented remotely from Palo Alto) Petroleum Business Institute Moscow, March 2013 Growth of Reserves in Existing Fields

Invited Speaker Plains Exploration and Production Company Houston, January 2013 California's Oil Resource Potential

Invited Lecturer Rice University Houston, January 2013 Aspects of Oil Resource Depletion

2012

Keynote Speaker California Oil Event Long Beach, December 2012 California's Oil Resource Potential

Invited Speaker and Panelist National Intelligence Council Conference on Frontier Oil Arlington, September 2012 Oil in the Arctic: Opportunities and Constraints

Keynote Speaker Faroe Petroleum Corporate Investors Conclave Oslo, August 2012 Arctic Exploration: Challenges and Opportunities

U.S. Geological Survey Public Lecturer Menlo Park, July 2012 Introduction to Unconventional Oil and Gas Resources

Invited Address Northern California Geological Society Orinda, June 2012 Volumes, Uncertainty and Costs of Undiscovered Arctic Petroleum

Keynote Speaker
U.S. Coast Guard Leadership for the Arctic Conference
New London, April 2012
Petroleum in the Arctic: Challenges and Opportunities

Keynote Speaker Deloitte Energy Conference, Washington D.C., March 2012

Circum-Arctic Resource Appraisal

Invited Speaker Geological Society of Australia Canberra, March 2012 Estimating Undiscovered Oil and Gas in the Highest Northern Latitudes

Keynote Speaker Peters and Company Investors Conference Lake Louise, January 2012 Arctic Exploration: Challenges and Opportunities

2011

Co-convener, Session Chair and Speaker AAPG Polar Petroleum Potential Conference Halifax, September 2011 Results of the Circum-Arctic Resource Appraisal

Invited Speaker Geological Society of London Petroleum Group 30th Birthday Conference Bath, September 2011 *Arctic Petroleum Potential*

Keynote Speaker Faroe Petroleum Arctic Exploration Event Danish Embassy, London, September 2011 Arctic Exploration: Challenges and Opportunities

Luncheon Speaker Technology and Society Committee Mountain View, September 2011 Introduction to Unconventional Oil and Gas Resources

Keynote Speaker International Oil Spill Conference Portland, May 2011 Circum-Arctic Resource Appraisal

Invited Lecturer
TGS/NOPEC Investors Luncheon
Houston, April 2011
Circum-Arctic Resource Appraisal: Estimating Undiscovered Oil and Gas in the Highest
Northern Latitudes

Invited Lecturer Chevron Corporate Planning Group San Ramon, March 2011 World Petroleum Assessment

2010

Invited Lecturer

Geological Survey of Denmark and Greenland

Copenhagen, December 2010

Circum-Arctic Resource Appraisal: Undiscovered Oil and Gas in the Northern Latitudes

Keynote Speaker Shale Gas World Warsaw, December 2010 Strategy for Assessment of Global Gas Shales

Keynote Speaker

Toward a Sustainable 21st Century – 7th Conference University of California Irvine, November 2010 Preserving the Environment of the Arctic Region

Kenneth Stewart Cronin Lecturer Oklahoma City Geological Society Oklahoma City, November 2010

Circum-Arctic Resource Appraisal: Estimating Undiscovered Oil and Gas in the Highest Northern Latitudes

Keynote Speaker Shale Gas Summit Shanghai, October 2010 Strategy for Assessment of Global Gas Shales

Invited Speaker AAPG Gas Technology Workshop Istanbul, May 2010 Strategy for Assessment of Global Gas Shales

Keynote Speaker DGMK Deutsche Wissenschaftliche Gesellschaft für Erdöl, Erdgas und Kohle e.V. Annual Meeting Celle, April 2010 Strategy for Assessment of Global Gas Shales

Keynote Speaker French Institute for International Relations Brussels, June 2010 Shale Gas Resources in North America and Europe 2009

Keynote Speaker Foundation Financial Officers Group San Francisco, October 2009 Energy Resources and the Future of Petroleum

Keynote Speaker Chinese International Energy Forum Beijing, October 2009 Quantities and Costs of Future Petroleum

Invited Speaker

University of California Davis Institute of Transportation Studies Davis, October 2009

Petroleum in the Arctic: Geology, Climate, and National Interests

Invited Lecturer

Chevron Corporate Planning Group

San Ramon, October 2009

Circum-Arctic Resource Appraisal: Estimating Undiscovered Oil and Gas in the Highest Northern Latitudes

Invited Speaker

Tokyo University FRCER-JOGMEC International Seminar Tokyo, September 2009 Circum-Arctic Resource Appraisal

Keynote Speaker CAPG/CSEG/CWLS Convention Plenary Session Calgary, June 2009 Quantities and Costs of Future Petroleum

Invited Lecturer
International Energy Agency Annual Conference
Florence, June 2009
Quantities and Costs of Future Petroleum

Keynote Speaker (Presented remotely from Palo Alto) Norwegian Research Council/U.S. DOE Arctic Technology Workshop Stavanger, January 2009 Circum-Arctic Resource Appraisal

2008

Panelist and Lecturer Universitě Total: Peak Oil? Un Futur, des Energies Paris, December 2008

Global Perspective on World Petroleum Resources

Invited Address

Geological Survey of Denmark and Greenland

Copenhagen, December 2008

Circum-Arctic Resource Appraisal: Undiscovered Oil and Gas in the Northern Latitudes

Invited Speaker

Maersk Olie og Gas, Copenhagen

December 2008

Circum-Arctic Resource Appraisal: Methods and Results

Invited Participant

Ernst Strüngmann Forum on Measuring Sustainability

Frankfurt Institute for Advanced Studies

Frankfurt, November 2008

Invited Speaker

Center for Strategic and International Studies

Washington D.C., November 2008

Circum-Arctic Resource Appraisal: Oil and Gas Potential of the High Latitudes

Invited Address

Norwegian Ministry of Petroleum and Energy

Oslo, August 2008

Circum-Arctic Resource Appraisal: Oil and Gas Potential of the High Latitudes

Session Chair (with Kai Sørensen of GEUS),

International Geological Congress

Oslo, August 2008

Petroleum Geoscience of the North American and Greenland Basins

Session Chair (with Paul Nadeau of Statoil)

International Geological Congress

Oslo, August 2008

Geological Basis for Estimating the World's Petroleum Resources

Keynote Speaker

Center for Strategic and International Studies, Washington D.C., August 2008 *USGS Circum-Arctic Resource Appraisal*

Keynote Speaker

19th World Petroleum Congress

Madrid, June 2008

Assessment of Global Oil and Gas Resources

Panelist
19th World Petroleum Congress
Madrid, June 2008
Chasing the 3rd Trillion - Panel Discussion Chaired by Khaled Buraik, Saudi Aramco

Convener and Speaker USGS World Energy Consortium Denver, April Circum-Arctic Resource Appraisal

Invited Speaker Peninsula Geological Society Stanford University, March 2008 Circum-Arctic Resource Appraisal

2007

Convener and Speaker USGS World Energy Consortium Denver, March 2007 Circum-Arctic Resource Appraisal

Keynote Speaker Asia Pacific Energy Research Center Annual Conference Tokyo, March 2007 Oil Resources; Estimates and Uncertainties

Keynote Speaker EAGE 69th Conference and Exhibition Executive Session London, June 2007 *Arctic Oil and Gas Resources in a Global Context*

2006

Keynote speaker AAPG Hedberg Research Conference Colorado Springs, November 2006

Assessment of Undiscovered Petroleum Resources in Frontier Provinces

Keynote Speaker

SPE/EAGE Executive Session: Hydrocarbon Energy Resources with Renewables for Sustainable Development EAGE Conference and Exhibition Vienna, June 2006

Oil Resources: Estimates and Uncertainties

2005

Keynote Speaker

Institut français du pétrole/Arabic OPEC Conference Paris, March 2005 Future Reserve Additions and the Significance of Peak Oil and Gas Production

Co-convener and Keynote Speaker AAPG Hedberg Research Conference Vail, April 2005 Understanding, Exploring and Developing Tight Gas Sands

2004

Organizer, Convener, Chair, Speaker Arctic Workshop and Field Trip Ilulissat, August 2004 Methodology for Assessment of the Circum-Arctic

Convener, Chair, and Speaker Norwegian Geological Society International Conference on Arctic geology Tromsø, May 2004. Arctic Oil and Gas Assessment Methodology Technical Session

Keynote Speaker Energy Modeling Forum Stanford, January 2004 UGSS Assessments of World Gas Resources; Input for a World Gas Trade Model

Courses and Workshops Taught

2014

Petroleum Geology

University of Southern California Viterbi School of Engineering Summer Quarter Course

2013

California's Remaining Petroleum Potential

California Division of Oil, Gas, and Geothermal Resources, Cypress, August The Nature Conservancy, Los Angeles, August

2012

Geology and Assessment of Unconventional Reservoirs

U.K. DECC and British Geological Survey, Edinburgh, October Geological Survey of Denmark and Greenland, Copenhagen, October Nordea, Copenhagen, October U.K. DECC and British Geological Survey, web-based seminar, August EuroGeoSurveys Baltic Basin Working Group, Vilnius, August U.S. Embassy, Kyiy, July U.S. Energy Information Administration, Washington D.C., March Australia Bureau of Resources and Energy Economics, Canberra, March CSIRO, Sydney, March CSIRO, Perth, March Geoscience Australia, Canberra, March TNO, Utrecht, January U.S. Embassy, Riga, January

USGS World Assessments: Methodology and Results Workshop
EnBW AG, Frankfurt, July
Bundesanstalt für Geowissenschaften und Rohstoffe, August

2011

Geology and Assessment of Unconventional Reservoirs Industrija nafte, Zagreb, October 2011 U.S. Embassy, Lvov, October 2011 ExxonMobil Corporation, Houston, June

2010

Geology and Assessment of Unconventional Reservoirs
Geological Survey of Denmark and Greenland, Copenhagen, December
French Institute of Petroleum, Paris, December
Geoforschungszentrum, Potsdam, December
Magyar Olaj, Budapest, May
Hungarian Geological Society, Szeged, May
U.S. Embassy, Warsaw, May
Bundesanstalt für Geowissenschaften und Rohstoffe, Hannover, April

2009

Circum-Arctic Resource Appraisal Methodology and Results
Massachusetts Institute of Technology Energy Initiative, July

2008

Circum-Arctic Resource Appraisal
U.S. DOC International Trade Administration, webinar May

2007

ExxonMobil/USGS Play Assessment Methodology Workshop_(with Ken Hood of XOM) U.S. Geological Survey, Denver, Colorado

2003

Resource assessment methodology (with C.J. Schenk, and R.C. Charpentier) Geological Survey of Denmark and Greenland, Copenhagen, December

2003

Appraisal of the San Joaquin Basin (with several USGS scientists)

San Joaquin Geological Society, Bakersfield, March

2003

Integration of Resource Geology and Microeconomics (with Dale Nesbitt) U.S. Geological Survey, Denver

2001

World Petroleum Assessment 2000: Methodology and Results Norwegian Petroleum Directorate, Stavanger

1996

USGS Assessments of Oil and Gas Resources
American Association of Petroleum Geologists, San Diego

1996

Methodological Alternatives for Assessment of the World U.S. Geological Survey World Assessment Team, Denver

1993

Resource Assessment Methodology Workshop (with several USGS scientists)
U.S. Geological Survey, Vail

1989

Resource Assessment Methodology (with R.F. Mast)
University of Bergen, Institute of Petroleum Geology, Bergen

1989

Burial Diagenesis

Mineralogical Association of Canada Short Course, Montreal

1985-1986

Relationship of Organic Matter and Mineral Diagenesis (with Y. K. Kharaka and R.C. Surdam)

SEPM Short Course No. 17, various venues in the U.S. and Canada

1988-1989

Petroleum geology

University of Bergen, Institute of Petroleum Geology, Bergen University of Oslo, Department of Geology, Oslo

1983-1984

Patterns of Sedimentation, Diagenesis and Hydrocarbon Accumulation in Cretaceous Rocks of the Rocky Mountains (with D.D. Rice)

SEPM Short Course No. 11, various venues in the U.S. and Canada

Low-Temperature Aqueous Geochemistry
University of Colorado, Department of Geology, Denver

Articles and Research Papers (Published abstracts are available on request) 2015

Gautier, D.L., and Dobson, P.F., 2015, Prospective Applications of Advanced Well Stimulation Technologies in California *in* JC.S. Long, L.C. Feinstein, Jens Birkolser, Preston Jordan, James Houseworth, P.F. Dobson, Matthew Heberger, and D.L. Gautier, 2015, Well Stimulation Technologies an their past Present, and Potential Future Use in California, in An Independent Scientific Assessment of Well Stimulation in California: v. 1, Chapter 4, p. 145-252.

Gautier, D.L. and Tennyson, M.E., in preparation, Forgone oil: remaining recoverable petroleum in oil fields of the Los Angeles basin: American Association of Petroleum Geologists Bulletin: XXXX

2014

Gautier, D.L., Schovsbo, N.H., and A.T. Nielsen, 2014, Resource Potential of the Alum Shale in Denmark: Unconventional Resources Technology Conference paper 1931754, 8 pp.

Schuenemeyer, J.H., and Gautier, D.L., 2014, Probabilistic Resource Costs of Continuous Oil Resources in the Bakken and Three Forks Formations, North Dakota and Montana: Unconventional Resources Technology Conference paper 1929983, 7 pp.

2013

Gautier, D.L., Charpentier, R.R., Gaswirth, S.B., Klett, T.R., Pitman, J.K., Schenk, C.J., Tennyson, M.E., and Whidden, K.J., in press, Undiscovered gas resources in the Alum Shale, Baltic Basin Province, Denmark, 2013: U.S. Geological Survey Fact Sheet 2013-3103, 4 p.

Gaswirth, S.B., Marra, K.R., Cook, T.A, Charpentier, R.R., Gautier, D.L., Higley, D.K., Klett, T.R., Lewan, M.D., Lillis, P.G., Schenk, C.J., Tennyson, M.E., and Whidden, K.J., 2013, Assessment of undiscovered oil resources in the Bakken and Three Forks Formations, Williston Basin Province, Montana, North Dakota, and South Dakota, 2013: U.S. Geological Survey Fact Sheet 2013–3013, 4 p., http://pubs.usgs.gov/fs/2013/3013/.

2012

Gautier, D.L., 2012, Potential for development of unconventional oil and gas resources in Latvia: U.S. Geological Survey Administrative Report 10 February 2012, 3 p.

Gautier, D.L., Pitman, J.K., Charpentier, R.R., Cook, T., Klett, T.R., and Schenk, C.J., 2012, Potential for technically recoverable unconventional gas and oil resources in the Polish-Ukrainian Foredeep, Poland, 2012: U.S. Geological Survey Fact Sheet 2012–3102, 2 p. Available online http://pubs.usgs.gov/fs/2012/3102/.

Gautier, D.L., Tennyson, M.E., Cook, T.A., Charpentier, R.R., and Klett, T.R., 2012, Remaining Recoverable Petroleum in Giant Oil Fields of the Los Angeles Basin, Southern California: U.S. Geological Survey Fact Sheet 2012-3120, 2 p.

Klett, T.R., Cook, T. A. Cook, Charpentier, R.R., Tennyson, M.E., Attanasi, E.D., Freeman, P.A., Ryder, R.T., Gautier, D.L., Verma, M.K., Le, P.A. and Schenk, C.J., 2012, Assessment of potential additions to conventional oil and gas resources of the world (Outside the United States) from reserve growth, 2012, U.S. Geological Survey Fact Sheet 2012-3052, 2 p.

Schenk, C.J. (task leader), Brownfield, M.E., Charpentier, R.R., Cook, T.A., Gautier, D. L., Higley, D.K., Kirschbaum, M.A., Klett, T.R., Pitman, J.K., Pollastro, R.M., Tennyson, M.E., Wandrey, C.J., and Whidden, K.J., 2012, An estimate of undiscovered conventional oil and gas resources of the world, 2012: U.S. Geological Survey Fact Sheet 2012–3042, 6 p.

2011

Gautier, D.L., 2011, U.S. Geological Survey Circum-Arctic Resource Appraisal: *in* Arctic Technology Conference Proceedings Volume, Offshore Technology Conference Proceedings, 5 p.

Gautier, D.L., Bird, K.J., Charpentier, R.R., Grantz, Arthur, Houseknecht, D.W., Klett, T.R., Moore, T.E., Pitman, J.K., Schenk, C.J., Schuenemeyer, J.H., Sørensen, Kai, Tennyson, M.E., Valin, Z.C., and Wandrey, C.J., 2011, Oil and gas resource potential north of the Arctic Circle, *in* Spencer, A.M., Embry, A.F., Gautier, D.L., Stoupakova, A.V., and Sørensen, K., eds., Arctic Petroleum Geology, Geological Society of London Memoir 35, p. 151-161.

Gautier, D.L., Stemmerik, Lars, Christiansen, F.G., Sørensen, Kai, Bidstrup, Torben, Bojesen-Koefoed, J.A., Bird, K.J., Charpentier, R.R., Houseknecht, D.W., Klett, T.R., Schenk, C.J., and Tennyson, M.E., 2011, Assessment of NE Greenland: prototype for development of Circum-Arctic Resource Appraisal methodology, *in* Spencer, A.M., Embry, A.F., Gautier, D.L., Stoupakova, A.V., and Sørensen, K., eds., Arctic Petroleum Geology, Geological Society of London Memoir 35, p. 663-672.

Charpentier, R.R., and Gautier, D.L., 2011, U.S. Geological Survey Circum-Arctic Resource Appraisal (CARA): Introduction and summary of organization and methods, *in* Spencer, A.M., Embry, A.F., Gautier, D.L., Stoupakova, A.V., and Sørensen, K., eds., Arctic Petroleum Geology, Geological Society of London Memoir 35, p. 145-150.

Sørensen, Kai, Gautier, D.L., Pitman, J.K., Jackson, H.R., and Dahl-Jensen, Trine, 2011, Geology and petroleum potential of the Lincoln Sea basin, offshore North Greenland, *in* Spencer, A.M., Embry, A.F., Gautier, D.L., Stoupakova, A.V., and Sørensen, K., eds., Arctic Petroleum Geology, Geological Society of London Memoir 35, p. 673-684.

Spencer, A.M., Embry, A.F., Gautier, D.L., Stoupakova, A.V., and Sørensen, Kai, 2011, An overview of the petroleum geology of the Arctic, *in* Spencer, A.M., Embry, A.F., Gautier, D.L., Stoupakova, A.V., and Sørensen, K., eds., Arctic Petroleum Geology, Geological Society of London Memoir 35, p. 1-15.

White, L.P., Verma, Mahendra, and Gautier, D.L., 2011, Resource appraisal technology for undiscovered Arctic petroleum: *in* Arctic Technology Conference Proceedings Volume, OTC 22067, 7 p.

2010

Gautier, D.L. and Klett, T.R., 2010, U.S. Geological Survey Oil and Gas Resource Assessment of the Russian Arctic: Report of DOE Award Number DE-A126-05NT15538, 26 p.

Gautier, D.L., McCabe, P.J., Ogden, Joan, and Demayo, T.N., 2010, Resources, Reserves, and Consumption of Energy, *in* Thomas E. Graedel and Ester van der Voet, eds., Linkages of sustainability, Frankfurt Institute for Advanced Studies Ernst Strüngmann Forum on Measuring Sustainability: Cambridge, Massachusetts Institute of Technology Press, p. 323-340.

Löschel, Andreas, Johnston, John, Delucchi, M.A., Demayo, T.N., Gautier, D.L., Greene, D.L., Johnson, John, Ogden, Joan. Rayner, Steve and Worrell, Ernst, 2010, Stocks, Flows, and Prospects of Energy, *in* Thomas E. Graedel and Ester van der Voet, eds., Linkages of Sustainability, Frankfurt Institute for Advanced Studies Ernst Strüngmann Forum on Measuring Sustainability: Cambridge, Massachusetts Institute of Technology Press, p. 389–420.

Schuenemeyer, J.H., and Gautier, D.L., 2010, Aggregation Methodology for the Circum-Arctic Resource Appraisal: Mathematical Geoscience, v. 42, p. 583-594.

2009

Gautier, D.L., Bird, K.J., Charpentier, R.R., Grantz, Arthur, Houseknecht, D.W., Klett, T.R., Moore, T.E., Pitman, J.K., Schenk, C.J., Schuenemeyer, J.H., Sørensen, Kai, Tennyson, M.E., Valin, Z.C., and Wandrey, C.J., 2009, Assessment of Undiscovered Oil and Gas in the Arctic: Science, v. 324 (May 2009), p. 1175 – 1179.

Gautier, D.L., Bird, K.J., Charpentier, R.R., Grantz, Arthur, Houseknecht, D.W., Klett, T.R., Moore, T.E., Pitman, J.K., Schenk, C.J., Schuenemeyer, J.H., Sørensen, Kai, Tennyson, M.E., Valin, Z.C., and Wandrey, C.J., 2009, First ever release of USGS offshore Arctic resource assessment: Offshore v. 69, no. 8, 8 p.

Masset, Jean-Marie, avec les contributions de Pierre-Rene Bauquis, Donald L. Gautier et Alain Perrodon, 2009, Petrole, Gaz: Pic ou Plateau?: Revue de l'Energie, n° 591, septembre-octobre 2009, p. 318-325.

United States Geological Survey, 2009, Circum-Arctic Resource Appraisal (North of the Arctic Circle) GIS Shape Files of Assessment Units: Available Online http://energy.usgs.gov/arctic/.

2008

Gautier, D.L., and Hosford Scheirer, Alegra, 2008a, Miocene total petroleum system—Southeast stable shelf assessment unit of the San Joaquin Basin Province, *in* Hosford Scheirer, Alegra, ed., Petroleum systems and geologic assessment of oil and gas in the San Joaquin Basin Province, California, U.S. Geological Survey Professional Paper 1713, chapter 13, p. 1-19: Available online http://pubs.usgs.gov/pp/pp1713/.

Gautier, D.L., and Hosford Scheirer, Alegra, 2008b, Miocene total petroleum system—Lower Bakersfield Arch assessment unit of the San Joaquin Basin Province, *in* Hosford Scheirer, Alegra, ed., Petroleum systems and geologic assessment of oil and gas in the San Joaquin Basin Province, California, U.S. Geological Survey Professional Paper 1713, chapter 14, p. 1-19: Available online http://pubs.usgs.gov/pp/pp1713/.

Gautier, D.L., and Hosford Scheirer, Alegra, 2008c, Eocene composite petroleum system—North and east of Eocene west side fold belt assessment unit of the San Joaquin Basin Province, *in* Hosford Scheirer, Alegra, ed., Petroleum systems and geologic assessment of oil and gas in the San Joaquin Basin Province, California, U.S. Geological Survey Professional Paper 1713, chapter 19, p. 1-19: Available online http://pubs.usgs.gov/pp/pp1713/.

Circum-Arctic Resource Appraisal Assessment Team, 2008, Circum-Arctic Resource Appraisal: Estimates of undiscovered oil and gas north of the Arctic Circle: U.S. Geological Survey Fact Sheet FS-2008-3049: Available online http://energy.usgs.gov/arctic/.

Peters, K.E., Magoon, L.B., Lampe, C., Hosford Scheirer, Alegra, Lillis, P.G., and Gautier, D.L., 2008, A four-dimensional petroleum systems model for the San Joaquin Basin Province, California, *in* Hosford Scheirer, Alegra, ed., Petroleum systems and geologic assessment of oil and gas in the San Joaquin Basin, California, U.S. Geological Survey Professional Paper 1713, chapter 12, p. 1-35: Available online http://pubs.usgs.gov/pp/pp1713/.

Verma, M.K., White, L.P., and Gautier, D.L., 2008, Engineering and economics of the USGS Circum-Arctic Oil and Gas Resource Appraisal (CARA) Project: U.S. Geological Survey Open-File Report 2008-1193, 17 p. Available Online http://energy.usgs.gov/arctic/.

Schenk, C.J., Bird, K.J., Brown, P.J., Charpentier, R.R., Gautier, D.L., Houseknecht, D.W., Klett, T.R., Pawlewicz, M.J., Shah, A., and Tennyson, M.E., 2008, Assessment of undiscovered oil and gas resources of the West Greenland-East Canada Province: U.S. Geological Survey Fact Sheet 2008-3014, 2 p. Available Online http://energy.usgs.gov/arctic/.

Schenk, C.J., Bird, K.J., Charpentier, R.R., Gautier, D.L., Houseknecht, D.W., Klett, T.R., Moore, T.E., Pawlewicz, M.J., Pitman, J.K., and Tennyson, M.E., 2008, Assessment of undiscovered oil and gas resources of the Timan-Pechora Basin Province, Russia: U.S. Geological Survey Fact Sheet 2008-3051, 2 p. Available Online http://energy.usgs.gov/arctic/.

Schenk, C.J., Bird, K.J., Charpentier, R.R., Gautier, D.L., Houseknecht, D.W., Klett, T.R., Moore, T.E., Pawlewicz, M.J., Pitman, J.K., and Tennyson, M.E., 2008, Assessment of Undiscovered oil and gas resources of the West Siberian Basin Province, Russia: U.S. Geological Survey Fact Sheet 2008-3064, 2 p. Available Online http://energy.usgs.gov/arctic/.

2007

Gautier, D.L., 2007, Oil and Gas Resources of Northeast Greenland: GEO ExPro v. 4, no. 5, p. 56-60.

Gautier, D.L., 2007, Assessment of undiscovered oil and gas resources of the East Greenland Rift Basins Province: U.S. Geological Survey Fact Sheet 2007-3077, 4 p. Available online http://energy.usgs.gov/arctic/.

Klett, T.R., Bird, K.J., Brown P.J. II, Charpentier, R.R., Gautier, D.L., Houseknecht, D.W., Moore, T.E., Pitman, J.K., Saltus, R.W., Schenk, C.J., and Tennyson, M.E., 2007, Assessment of Undiscovered Petroleum Resources of the Laptev Sea Shelf Province, Russian Federation: U.S. Geological Survey Fact sheet FS07-3096, 2 p. Available online http://energy.usgs.gov/arctic/.

Peters, K.E., Ramos, L.S., Zumberge, J.E., Scotese, C.R., and Gautier, D.L., 2007, Circum-Arctic Petroleum Systems Identified Using Decision-Tree Chemometrics: American Association of Petroleum Geologists Bulletin v. 91, p. 877-913.

San Joaquin Basin Province Assessment Team, 2007, Executive summary— Assessment of undiscovered oil and gas resources of the San Joaquin Province of California, 2003, *in* Hosford Scheirer, Alegra, ed., Petroleum systems and geologic assessment of oil and gas in the San Joaquin Basin, Province, California, U.S.

Geological Survey Professional Paper 1713, chapter 1, p. 1-2: Available online http://pubs.usgs.gov/pp/pp1713/.

Takahashi, K.I., and Gautier, D.L., 2007, A brief history of oil and gas exploration in the southern San Joaquin Valley of California, *in* Hosford Scheirer, Alegra, ed., Petroleum systems and geologic assessment of oil and gas in the San Joaquin Basin Province, California, U.S. Geological Survey Professional Paper 1713, chapter 3, p. 1-24: Available online http://pubs.usgs.gov/pp/pp1713/.

2005

Gautier, D.L., 2005, Kimmeridgian Shales Total Petroleum System of the North Sea Graben Province: U.S. Geological Survey Bulletin 2204-C, 29 p. Available online http://pubs.usgs.gov/bul/2204/c/.

Gautier, D.L., and Klett, T.R., 2005, Future Reserve Additions and the Significance of Peak Oil and Gas Production: Oil and Arab Cooperation v. 31, Issue 115, p. 9-21 (translated from English to Arabic by Mukhtar Lababidi).

Gautier, D.L., Klett, T.R., and Pierce, B.S., 2005, Global significance of reserve growth: U.S. Geological Survey Open-File Report 2004-1274, 25 p. Available online http://pubs.usgs.gov/of/2005/1355/.

Gautier, D.L., and Klett, T.R., 2005, Reserve growth in chalk fields of the North Sea, *in* Doré, A.G., and Vining, B.A., eds., Petroleum geology: North-west Europe and global perspectives - Proceedings of the 6th Petroleum Geology Conference: London, Geological Society, p.169-175.

Henry, M.E., Ahlbrandt, T.S., Charpentier, R.R., Gautier, D.L., Klett, T.R., Pollastro, R.M., Schenk, C.J., and Ulmishek, G.F., 2005, Assessment of Undiscovered Oil and Gas Resources of the Mackenzie Delta Province, North America, 2004: U.S. Geological Survey Oil and Gas Fact Sheet 2005-1, 7 p. Available online http://pubs.usgs.gov/fs/2006/3002/.

Klett, T.R., and Gautier, D.L., 2005, Reserve growth in oil fields of the North Sea: Petroleum Geoscience, v. 11, no. 2, p. 179-190.

Klett, T.R., Gautier, D.L., and Ahlbrandt, T.S., 2005, Evaluation of the U.S. Geological Survey World Petroleum Assessment 2000: American Association of Petroleum Geologists Bulletin v. 89, no. 8, p. 1033-1042.

2004

Gautier, D.L., 2004, Oil and Natural Gas Resource Assessment: Geological Methods, *in* Encyclopedia of Energy, Cutler J. Cleveland, editor: Elsevier, p. 607-615.

Gautier, D.L., contributing author, 2004, Oil-based technology and economy: prospects for the future: a short introduction to basic issues and a review of oil depletion projections derived from different theories and methods: Teknologi-Rådet, The Danish Board of Technology, Copenhagen, the Society of Danish Engineers, 103 p.

Gautier, D.L., Hosford Scheirer, Allegra, Tennyson, M.E., Peters, K.E., Magoon, L.B., Lillis, P.G., Charpentier, R.R., Cook, T.A., French, C.D., Klett, T.R., Pollastro, R.M., and Schenk, C.J., 2004, Assessment of Undiscovered Oil and Gas Resources of the San Joaquin Basin Province of California, 2003: U.S. Geological Survey Fact Sheet 2004-3043, 2 p. Available online: http://pubs.usgs.gov/fs/2004/3043/.

Klett, T.R., and Gautier, D.L., 2004, Reserve Growth in Natural Gas Fields of the Southern North Sea Gas Basin, *in* EAGE Annual Meeting, short papers and extended abstracts, Paris, France, June 7-10, 2004, 7 p.

Schenk, C.J., Ahlbrandt, T.S., Charpentier, R.R., Gautier, D.L., Henry, M.E., Klett, T.R., Pollastro, R.M., and Ulmishek, G.F., 2004, Assessment of undiscovered oil and gas resources of the Burgos Basin Province, northeastern Mexico, 2003: U.S. Geological Survey Fact Sheet 2004-3007, 2 p. Available online (http://pubs.usgs.gov/fs/fs2004-3007/).

2003

Gautier, D.L., 2003, Carboniferous-Rotliegend Total Petroleum System Description and Assessment Results Summary: U.S. Geological Survey Bulletin 2211, 24 p. http://pubs.usgs.gov/bul/b2211/.

Pawlewicz, M.J., Steinshouer, D.W., and Gautier, D.L., 2003, Map Showing Geology, Oil and Gas Fields, and Geologic Provinces of Europe including Turkey: U.S. Geological Survey Open-File Report 97-470I, Version 1.0. [CD-ROM] and available online: http://pubs.usgs.gov/of/1997/ofr-97-470/OF97-470I/.

2002

Gautier, Donald L., 2002, Book Review, *Hubbert's Peak: the Impending Oil Shortage* by Kenneth S. Deffeyes: Journal of the History of Geology, 2 p.

Howell, D.G., Gautier, D.L., and Ahlbrandt, T.S., 2002, The impending world oil shortage? Geotimes, v. 47, no. 5, p. 4.

2001

Gautier, D. L. and Nesbitt, D.M., 2001, Joint Technology System of Resource Analysis and Economic Modeling: Application to a European Gas Model: U.S. Geological Survey CRADA; administrative report, 8 p.

Jachens, R.C., Wentworth, C.M., Gautier, D.L., and Pack, S., 2001, 3-dimensional geologic maps and visualization; a new approach to the geology of the Santa Clara ("Silicon") Valley, California, *in* Soller, D. R., ed., Digital mapping techniques '01; workshop proceedings, Tuscaloosa, Alabama, May 20-23, 2001: U.S. Geological Survey Open-File Report 01-0223, p. 13-23. Available online http://pubs.usgs.gov/of/2001/of01-223/jachens.html.

2000

Gautier, D. L., 2000, Southern Permian Basin-Europe Offshore Assessment Unit 40360103-Geologic Summary and Input Data, in U.S. Geological Survey World Petroleum Assessment 2000: Digital Data Series 60, 9 p.

Gautier, D. L., 2000, Southern Permian Basin-Europe Onshore Assessment Unit 40360102-Geologic Summary and Input Data, in U.S. Geological Survey World Petroleum Assessment 2000: Digital Data Series 60, 9 p.

Gautier, D. L., 2000, Southern Permian Basin-U.K. Onshore Assessment Unit 40360101-Geologic Summary and Input Data, in U.S. Geological Survey World Petroleum Assessment 2000: Digital Data Series 60, 9 p.

Gautier, D. L., 2000, Central Graben Assessment unit 40250103-Geologic Summary and Input Data, in U.S. Geological Survey World Petroleum Assessment 2000, Digital Data Series 60, 10 p.

Gautier, D. L., 2000, Moray Firth Assessment Unit 40250102-Geologic Summary and Input Data, in U.S. Geological Survey World Petroleum Assessment 2000: Digital Data Series 60, 9 p.

Gautier, D. L., 2000, Viking Graben Assessment Unit 40250101-Geologic Summary and Input Data, in U.S. Geological Survey World Petroleum Assessment 2000: Digital Data Series 60, 9 p.

Gautier, D. L., 2000, Mid-Norway Continental Margin Assessment Unit 40170102 Geologic Summary and Input Data, in U.S. Geological Survey World Petroleum Assessment 2000: Digital Data Series 60, 9 p.

Gautier, D. L., 2000, Halten Terrace-Trondelag Platform Assessment Unit 40170101: Geologic Summary and Input Data, *in* U.S. Geological Survey World Petroleum Assessment 2000: Digital Data Series 60, 8 p.

Gautier, D.L., 2000, Region 4: Europe--Assessment Summary, Chapter R4, *in* U.S. Geological Survey World Energy Petroleum Assessment 2000--Description and Results by U.S. Geological Survey World Energy Assessment Team: U.S. Geological Survey Digital Data Series DDS-60, Version 1.1, 14 p. [4 CD-ROMs]. Available online http://energy.cr.usgs.gov/WEcont/regions/reg4/R4chap.pdf.

Gautier, D.L., 2000, Oil and gas resource appraisal: Diminishing reserves, increasing supplies, *in* Sarewitz, Daniel, Pielke, R.A., Jr., and Byerly, Radford, Jr., eds., Prediction, science, decision making, and the future of nature: Island Press, Washington, D.C., p. 231-249.

Merewether, E.A., and Gautier, D.L., 2000, Composition and depositional environment of concretionary strata of Early Cenomanian (early Late Cretaceous) age, Johnson County, Wyoming, Chapter U, *in* Kropschot, S., ed., Evolution of sedimentary basins; Powder River Basin: U.S. Geological Survey Bulletin 1917-U, p. U1-U33. Available online http://pubs.usgs.gov/bul/b1917-u/.

1999

Gautier, D.L., 1999, Data model for single geologic maps: an application of the National Geologic Map Data Model, *in* Soller, D. R., ed., Digital mapping techniques '99; workshop proceedings: U.S. Geological Survey Open-File Report 99-0386, p. 77-81.

Gautier, D.L., Houseknecht, D.W., 1999, Play Analysis: The Cornerstone of the National Oil and Gas Assessment: U.S. Geological Survey Fact Sheet. Available online http://energy.usgs.gov/factsheets/NOAGA/oilgas.html.

1998

Gautier, D.L., Dolton, G.L., and Attanasi, E.D., compilers, 1998, 1995 National Oil and Gas Assessment and Onshore Federal Lands: U.S. Geological Survey Open-File Report 95-75-N; 64 p. Available online http://pubs.usgs.gov/of/1995/of95-075n/.

1997

Gautier, D.L., 1997, Impact of oil and gas activity on land-use management decisions: U.S. Geological Survey Fact Sheet FS-016-97, 2 p. Available online http://energy.usgs.gov/factsheets/GIS/gis.html.

Gautier, D.L., and Houseknecht, D.W., 1997, Uncertainty of Estimating Growth of Hydrocarbon Reserves: U.S. Geological Survey Fact Sheet. Available online http://energy.usgs.gov/factsheets/HydroGrowth/estimating.html.

Root, D.H., Attanasi, E.D., Mast, R.F., and Gautier, D.L., 1997, Estimates of inferred reserves for the 1995 USGS National Oil and Gas Resource Assessment: U.S. Geological Survey Open-File Report 95-75-L, 29 p. Available online http://greenwood.cr.usgs.gov/energy/95-75-l.pdf.

San Francisco Bay Landslide Mapping Team, 1997, San Francisco Bay Region, California, Landslide Folio: U.S. Geological Survey Open File Report 97-745, 6 chapters.

1996

Gautier, D.L., 1996, Introduction, purpose, and scope, *in* Gautier, D. L., Dolton, G.L., Takahashi, K. I., and Varnes, K.L., eds., National assessment of United States oil and gas resources; results, methodology, and supporting data: U.S. Geological Survey Digital Data Series DDS-30, Release 2, one CD-ROM. Available online http://pubs.usgs.gov/dds/dds-030/DDS-30.html.

Irvine, W.M., Bockelee, M.D., Lis-Dariusz, C., Matthews, H.E., and Gautier, D.L., 1996, Spectroscopic evidence for interstellar ices in Comet Hyakutake: Nature, London, England, v. 383, p. 418-420.

USGS, 1996, U.S. Geological Survey National Oil and Gas Resource Assessment Team, Executive summary of results, *in* Gautier, D. L., Dolton, G.L., Takahashi, K.I. and Varnes, K.L., eds., 1995 National Assessment of United States oil and gas resources; results, methodology, and supporting data: U.S. Geological Survey Digital Data Series DDS-30, Release 2, one CD-ROM. Available online http://pubs.usgs.gov/dds/dds-030/DDS-30.html.

Varnes, K.L., and Gautier, D.L., 1996, Introduction to play narratives, *in* Gautier, D. L., Dolton, G.L., Takahashi, K.I., and Varnes, K.L., eds., 1995 National Assessment of United States Oil and Gas resources--Results, methodology, and supporting data: U.S. Geological Survey Digital Data Series DDS-30, Release 2, one CD-ROM. Available online http://pubs.usgs.gov/dds/dds-030/DDS-30.html.

1995

Gautier, D.L., 1995, The potential for oil and gas production in the United States: Geopolitics of Energy, May 1995 issue, 10 p.

Gautier, D.L., 1995, Recommendations for further research, *in* Gautier, D. L., Dolton, G.L., Takahashi, K. I., and Varnes, K.L., eds., National assessment of United States oil and gas resources; results, methodology, and supporting data: U.S. Geological Survey Digital Data Series DDS-30, Release 2, one CD-ROM. Available online http://pubs.usgs.gov/dds/dds-030/DDS-30.html.

Gautier, D.L., 1995, Oil and Natural Gas Resources of the United States: The 1995 National Assessment: U.S. Geological Survey Fact Sheet 018-97. Available online http://energy.usgs.gov/factsheets/95assessment/95assessment.html.

Gautier, D.L., 1995, A Summary of the U.S. Geological Survey 1995 National Assessment of Oil and Gas Resources: U.S. Geological Survey Fact Sheet. Available online http://energy.usgs.gov/factsheets/NAresults/nat.assess.number.html.

Gautier, D.L., and Dolton, G.L., 1995, Oil and gas resources of the United States; how much is left and where is it?, *in* Carter, L. M. H., ed., Energy and the environment; application of geosciences to decision-making; Program and short papers; Tenth V.E.

McKelvey Forum on Mineral and Energy Resources, Washington, DC, Feb. 13-17, 1995: U.S. Geological Survey Circular 1108, p. 8-9.

Gautier, D.L., and Dolton, G.L., 1995, Methodology for assessment of undiscovered conventional accumulations, *in* Gautier, D. L., Dolton, G.L., Takahashi, K.T., and Varnes, K.L., eds., 1995 National assessment of United States oil and gas resources-results, methodology, and supporting data: U.S. Geological Survey Digital Data Series DDS-30, Release 2, one CD-ROM. Available online http://pubs.usgs.gov/dds/dds-030/DDS-30.html.

Gautier, D.L., Dolton, G.L., Takahashi, K. I., and Varnes, K.L., eds., 1995b, 1995 National assessment of United States oil and gas resources: Overview of the 1995 National Assessment of Potential Additions to Technically Recoverable Resources of Oil and Gas-Onshore and State Waters of the United States: U.S. Geological Survey Circular 1118, 20 p. Available online http://pubs.usgs.gov/circ/1995/circ1118/circ1118.html.

Attanasi, E.D., Gautier, D.L., and Root, D.H., 1995, Economics and undiscovered conventional oil and gas accumulations in the 1995 National Assessment of U.S. Oil and Gas Resources: Conterminous United States: U.S. Geological Survey Open-File Report 95-75-H, 50 p.

Dolton, G.L., Varnes, K.L., Gautier, D.L., and Barnet, D.L., 1995, Oil and gas resource assessment areas 1995; lower 48 states: U.S. Geological Survey Open-File Report 95-75-I, 27 p.

Isaacs, C.M., Bird, K.J., Medrano, M., Keller, M.A., Piper, D.Z., and Gautier, D.L., 1995, Preliminary report on major and minor elements in cores from the Triassic Shublik Formation, Jurassic and Cretaceous Kingak Shale, and Cretaceous Pebble shale unit, Hue Shale, and Torok Formation, North Slope, Alaska: U.S. Geological Survey Open-File Report 95-236, 30 p.

Lewan, M.D., Comer, J. B., Hamilton-Smith, T., Hausenmuller, N. R., Guthrie, J. M., Hatch, J. R., Gautier, D. L., and Frankie, W. T., 1995, Feasibility study of material-balance assessment of petroleum from the New Albany Shale in the Illinois Basin: U.S. Geological Survey Bulletin 2137, 31 p.

Takahashi, K.I., and Gautier, D.L., 1995, CD-ROM publication of the 1995 National assessment of oil and gas resources of the United States, *in* Carter, L. M. H., ed., Energy and the environment--Application of geosciences to decision-making; Program and short papers; Tenth V.E. McKelvey Forum on Mineral and Energy Resources, 1995, Washington, DC, Feb. 13-17, 1995: U.S. Geological Survey Circular 1108, p. 41-42.

Ahlbrandt, T.S., Gautier, D.L., and Bader, T.A., 1994, Low-angle eolian deposits in coastal settings; significant Rocky Mountain exploration targets: The Mountain Geologist, Denver, CO, v. 31, no. 4, p. 95-114.

1993

Gautier, D.L., 1993, Oil and Gas Resources of the United States: The 1995 National Assessment: Public Issues in Energy and Marine Geology, fact sheet, March 1993.

Gautier, D.L., 1993, National Oil and Gas Assessment: U.S. Geological Survey Yearbook, Reston, VA, p. 61-62.

Gautier, D.L., 1993, Denver Basin province (104), *in* Powers, R. B., ed., Petroleum exploration plays and resource estimates, 1989, onshore United States; Region 4, Rocky Mountains and Northern Great Plains: U.S. Geological Survey Open-File Report 93-0337, p. 162-176.

Gautier, D.L., and Brown, R.L., 1993, National Petroleum Council source and supply study--The potential for natural gas in the United States, *in* Howell, D. G., ed., The future of energy gases: U.S. Geological Survey Professional Paper 1570, p. 507-526.

Gautier, D.L., and Varnes, K.L., compilers, 1993, Plays for assessment in Region VIII, Eastern, as of October 4, 1993; 1995 National Assessment of Oil and Gas: U.S. Geological Survey Open-File Report 93-596-H, 23 p.

Gautier, D.L., and Varnes, K.L., compilers, 1993, Plays for assessment in Region VII, Mid-Continent, as of October 4, 1993; 1995 National Assessment of Oil and Gas: U.S. Geological Survey Open-File Report 93-596-G, 17 p.

Gautier, D.L., and Varnes, K.L., compilers, 1993, Plays for assessment in Region VI, Gulf Coast; as of October 4, 1993; 1995 National Assessment of Oil and Gas: U.S. Geological Survey Open-File Report 93-596-F, 60 p.

Gautier, D.L., and Varnes, K.L., compilers, 1993, Plays for assessment in Region V, West Texas and Eastern New Mexico, as of October 4, 1993; 1995 National Assessment of Oil and Gas: U.S. Geological Survey Open-File Report 93-596-E, 9 p.

Gautier, D.L., and Varnes, K.L., compilers, 1993, Plays for assessment in Region IV, Rocky Mountains and Northern Great Plains as of October 4, 1993; 1995 National Assessment of Oil and Gas: U.S. Geological Survey Open-File Report 93-596-D, 34 p.

Gautier, D.L., and Varnes, K.L., compilers, 1993, Plays for assessment in Region III, Colorado Plateau and Basin and Range, as of October 4, 1993; 1995 National Assessment of Oil and Gas: U.S. Geological Survey Open-File Report 93-596-C, 18 p.

- Gautier, D.L., and Varnes, K.L., compilers, 1993, Plays for assessment in Region II, Pacific Coast as of October 4, 1993; 1995 National Assessment of Oil and Gas: U.S. Geological Survey Open-File Report 93-596-B, 11 p.
- Gautier, D.L., and Varnes, K.L., compilers, 1993, Plays for assessment in Region I, Alaska, as of October 4, 1993; 1995 National Assessment of Oil and Gas: U.S. Geological Survey Open-File Report 93-596-A, 7 p.
- Dolton, G.L., Bird, K.J., Varnes, K.L., and Gautier, D.L., 1993, Onshore oil and gas resource assessment areas; Alaska 1993: U.S. Geological Survey Open-File Report 93-331.
- Dolton, G.L., Gautier, D.L., Mast, R.F., and Root, D.H., 1993, U.S. Geological Survey estimates of natural-gas energy resources, *in* Howell, D. G., Wiese, K., Fanelli, M., Zink, L.L., and Cole, F., eds., The future of energy gases: U.S. Geological Survey Professional Paper 1570, p. 495-506.
- Howell, D.G., Bird, K.J., and Gautier, D.L., 1993, Oil--When will we run out?: Earth, Kalmbach Publications, Waukesha, Wisconsin, v. 2, no. 2, p. 26-33.
- Klett, T.R., and Gautier, D.L., 1993, Methodology for estimating volumes of flared and vented natural gas, *in* Howell, D. G., Wiese, K., Fanelli, M., Zink, L.L., and Cole, F., eds., The future of energy gases: U.S. Geological Survey Professional Paper 1570, p. 651-660.
- Parrish, J.T., and Gautier, D.L., 1993, Sharon Springs Member of Pierre Shale; upwelling in the Western Interior Seaway?, *in* Caldwell, W. G. E., and Kauffman, E.G., eds., Evolution of the Western Interior Basin: Geological Association of Canada Special Paper 39, p. 319-332.
- Schenk, C.J., Gautier, D.L., Olhoeft, G.R., and Lucius, J.E., 1993, Internal structure of an eolian dune using ground-penetrating radar, *in* Pye, K., and Lancaster, N., eds., Aeolian Sediments--Ancient and Modern, Nottingham, United Kingdom, Aug., 1990: International Association of Sedimentologists Special Publication, v. 16, p. 61-69.

1992

- Gautier, D.L., 1992, Oil and gas resources of the United States--The 1995 assessment: U.S. Geological Survey, Public Issues in Energy and Marine Geology, 2 p.
- Dolton, G.L., Varnes, K.L., Gautier, D.L., and Baird, J.K., compilers, 1992, Oil and gas resource assessment areas, 1992; lower 48 states: U.S. Geological Survey Open-File Report 92-696.
- Higley, D.K., Gautier, D.L., and Pawlewicz, M.J., 1992, Influence of regional heat flow variation on thermal maturity of the Lower Cretaceous Muddy ("J") Sandstone, Denver

Basin, Colorado, *in* Magoon, L. B., ed., The Petroleum System--Status of Research and Methods, 1992: U.S. Geological Survey Bulletin 2007, p. 66-69.

1991

Gautier, D.L., and Masters, C.D., 1991, World energy resources assessment: U.S. Geological Survey Yearbook Fiscal Year 1990, p. 44-45.

Elliott, W.C., Aronson, J.L., Matisoff, Gerald, and Gautier, D.L., 1991, Kinetics of the smectite-to-illite transformation in the Denver basin; clay mineral, K-Ar data, and mathematical modeling results: American Association of Petroleum Geologists Bulletin v. 75, no. 3, p. 436-462.

1990

Olhoeft, G.R., Lucius, J.E., Gautier, D.L., and Schenk, C.J., 1990, Sedimentology of eolian sand dunes by multifrequency ground penetrating radar, *in* Lucius, J. E., Olhoeft, G.R., and Duke, S.K., eds., Third international conference on ground penetrating radar, Lakewood, CO, May 14-18, 1990: U.S. Geological Survey Open-File Report 90-414, p. 51.

Schmoker, J.W., and Gautier, D.L., 1990, Reply (to Deming) on "Compaction of basin sediments: Modeling based on time-temperature history": Journal of Geophysical Research, v. 95, p. 5155-5157.

1989

Schmoker, J.W. and Gautier, D.L., 1989, Compaction of basin sediments - modeling based on time-temperature history: Journal of Geophysical Research, v. 94, no. 6, p. 7379-7386.

Schmoker, J.W., and Gautier, D.L., 1989, Sandstone porosity as a function of thermal maturity; reply: Geology, Boulder, Colorado, v. 17, no. 9, p. 867-868.

Schmoker, J.W., Gautier, D.L., 1989, Reply (to S.N. Ehrenberg) concerning "Sandstone porosity as a function of thermal maturity": Geology, v. 17, p. 867-868.

Schenk, C.J., and Gautier, D.L., 1989, Sedimentology and heterogeneity of the Main B Sandstone (Stevens) Reservoir, Elk Hills field, southern San Joaquin basin, California: U.S. Geological Survey Administrative Report prepared for Department of Energy, 2 p.

1988

Gautier, D.L., 1988, McKelvey Forum on Energy Resources: Geotimes v. 33, no. 7, p. 13-14.

Gautier, D.L., Dyman, T.S., and Takahashi, K.I., 1988, Oil and gas investigations and computer applications, Branch of Petroleum Geology, U.S. Geological Survey, *in* The first conference on oil and gas information and data-base management, Norman, OK, Oct. 20-21, 1987, coordinated by M.J. Summers: Oklahoma Geological Survey Special Publication 88-3, p. 33-42.

Gautier, D.L., Mast, R.F., and Dolton, G.L., 1989, Update on estimates of undiscovered oil and gas resources in the United States: U.S. Geological Survey Yearbook Fiscal Year 1988, p. 54-56.

Gautier, D.L., Revesz, Istvan, and Schmoker, J.W., 1988, Petrology and porosity distribution in selected Bekes Basin reservoirs: Administrative Report to OKGT (The Hungarian Oil and Gas Trust) and the World Bank, 21 p.

Gautier, D.L., and Schmoker, J.W., 1989, Evaluation of sandstone porosity from thermal maturity information, *in* Hutcheon, I. E., ed., Short course in burial diagenesis, Montreal, Canada, May 1989: Mineralogical Association of Canada Short Course Handbook, p. 135-160.

Higley, D.K., and Gautier, D.L., 1988, Burial history reconstruction of the Lower Cretaceous J. Sandstone in the Wattenberg field, Colorado "hotspot", *in* Carter, L. M. H., ed., Fourth annual V. E. McKelvey forum on Mineral and energy resources, Denver, CO, Feb. 29-Mar. 2, 1988: U.S. Geological Survey Circular 1025, p. 20-21.

Schmoker, J.W., and Gautier, D.L., 1988a, Sandstone porosity as a function of thermal maturity: Geology v. 16, no. 11, p. 1007-1010.

Schmoker, J.W., and Gautier, D.L., 1988b, Dependence of sandstone porosity upon thermal maturity: An approach to prediction and interbasinal comparison of porosity: The Outcrop v. 37, no. 9, p. 4.

Schmoker, J.W., and Gautier, D.L., 1988c, Dependence of sandstone porosity upon thermal maturity: an approach to prediction and interbasinal comparison of porosity, *in* Carter, L. M. H., ed., Fourth annual V. E. McKelvey forum on Mineral and energy resources, Denver, CO, Feb. 29-Mar. 2, 1988: U.S. Geological Survey Circular 1025, p. 56-57.

1987

Gautier, D.L., 1987, Isotopic composition of pyrite--Relationship to organic matter type and iron availability in some North American Cretaceous shales, *in* Clauer, N., and Chaudhuri, S., eds., Les isotopes dans le cycle sédimentaire, Obernai, France, July 1-5, 1985: Amsterdam, Elsevier Science Publishers, B.V., Chemical Geology, Isotope Geoscience Section v. 65, nos. 3-4.

- Gautier, D.L., 1987, Petrology of Cretaceous and Tertiary reservoir sandstones in the Point Thomson area, Chapter 9, *in* Bird, K. J., and Magoon, L.B., eds., Petroleum Geology of the Northern Part of the Arctic National Wildlife Refuge, Northeastern Alaska: U.S. Geological Survey Bulletin 1778, p. 117-122.
- Gautier, D.L., 1987, Isotopic composition of pyrite--Relationship to organic matter type and iron availability in some North American Cretaceous shales: Amsterdam, Elsevier Science Publishers B.V., Chemical Geology, Isotope Geoscience Section v. 65, p. 293-303.
- Gautier, D.L., Bird, K.J., and Colten-Bradley, V.A., 1987, Relationship of clay mineralogy, thermal maturity, and geopressure in wells of the Point Thomson area, Chapter 13, *in* Bird, K. J., and Magoon, L.B., eds., Petroleum Geology of the Northern Part of the Arctic National Wildlife Refuge, Northeastern Alaska: U.S. Geological Survey Bulletin 1778, p. 199-207.
- Gautier, D.L., contributing author, 1987, Assessment of oil and gas potential and petroleum geology of the 1002 area, chapter III, *in* Clough, N. K., Patton, P.C., and Christiansen, A.C., eds., Arctic National Wildlife Refuge, Alaska, coastal plain resource assessment--Report and recommendation to the Congress of the United States and final legislative environmental impact statement: Washington, D.C., U.S. Fish and Wildlife Service in cooperation with the U.S. Geological Survey and the Bureau of Land Management v. 1, p. 55-81.
- Higley, D.K., and Gautier, D.L., 1987, Median porosity contour map of the J Sandstone, Dakota Group in the Denver Basin, Colorado, Nebraska, and Wyoming: U.S. Geological Survey Miscellaneous Field Studies MF-87-1982.
- Higley, D.K., Gautier, D.L., and Mast, R.F., 1987, Exploration intensity map of the Upper Cretaceous J sandstone, Denver Basin, Colorado, Nebraska, and Wyoming: U.S. Geological Survey Open-File Report 87-2, 1 p.
- Higley, D.K., Gautier, D.L., and Mast, R.F., 1987, Exploration intensity map of the Upper Cretaceous D sandstone, Denver basin, Colorado, Nebraska, and Wyoming: U.S. Geological Survey Open-File Report 87-351-A.
- Higley, D.K., Gautier, D.L., and Mast, R.F., 1987, Exploration intensity map of the Upper Cretaceous Niobrara Formation, Denver basin, Colorado, Nebraska, and Wyoming: U.S. Geological Survey Open-File Report 87-351-B.
- Higley, D.K., Gautier, D.L., and Mast, R.F., 1987, Exploration intensity map of the Upper Cretaceous Pierre Formation, Denver basin, Colorado, Nebraska, and Wyoming: U.S. Geological Survey Open-File Report 87-351-C.

Higley, D.K., Gautier, D.L., and Mast, R.F., 1987, Exploration intensity map of the Paleozoic section, Denver basin, Colorado, Nebraska, and Wyoming: U.S. Geological Survey Open-File Report 87-351-D.

Higley, D.K., Gautier, D.L., and Mast, R.F., 1987, Exploration intensity map of the Upper Cretaceous Codell Sandstone, Denver basin, Colorado, Nebraska, and Wyoming: U.S. Geological Survey Open-File Report 87-351-E.

Higley, D.K., Mast, R.F., and Gautier, D.L., 1987, Denver basin exploration intensity map, Colorado, Nebraska, and Wyoming: U.S. Geological Survey Open-File Report 87-25, one sheet.

1986

Gautier, D.L., 1986, Cretaceous shales from the western interior of North America-Sulfur/carbon ratios and sulfur-isotope composition: Geology v. 14, no. 3, p. 225-228.

Gautier, D.L., 1986, Book Review of *The Chemical Evolution of the Atmosphere and Oceans*, by H.D. Holland: Journal of Sedimentary Petrology v. 56, p. 737.

Gautier, D.L., 1986, Earth science research at South Dakota School of Mines and Technology—Status and prospects: Administrative Report prepared for the Department of Geology and Geological Engineering of the South Dakota School of Mines and Technology on behalf of the National Science Foundation, 9 p.

Gautier, D.L., Mast, R.F., and Dolton, G.L., 1986, Geologic rationale for assessment of undiscovered oil and gas in the Denver basin: U.S. Geological Survey Administrative Report Prepared for the resource assessment of the Denver Basin, 50 p.

Higley, D.K., and Gautier, D.L., 1986, Median-permeability contour map of the J Sandstone, Dakota Group, in the Denver Basin, Colorado, Nebraska, and Wyoming: U.S. Geological Survey Miscellaneous Field Studies Map MF-1837.

1985

Gautier, D.L., 1985, Interpretation of early diagenesis in ancient marine sediments, *in* Gautier, D. L., Kharaka, Y.K., and Surdam, R.C., eds., Relationship of organic matter and mineral diagenesis: Society of Economic Paleontologists and Mineralogists Short Course No. 17, p. 6-78.

Gautier, D.L., 1985, Sulfur/carbon ratios and sulfur isotope composition of some Cretaceous shales from the Western Interior of North America: U.S. Geological Survey Open-File Report 85-514, 22 p.

Gautier, D.L., 1985, Book Review of *Atlas of Sedimentary Rocks Under the Microscope,* by A.E. Adams, W.S. Mackenzie and C. Guilford: Journal of Sedimentary Petrology v. 55, p. 295.

Higley, D.K., Pawlewicz, M.J., and Gautier, D.L., 1985, Isoreflectance map of the J Sandstone in the Denver basin of Colorado: U.S. Geological Survey Open-File Report 85-384, 98 p., 1 oversize sheet.

1984

Gautier, D.L., 1984, Relationship of organic matter and mineral diagenesis; report of the 1983 SEPM research conference: Journal of Sedimentary Petrology v. 54, no. 3, p. 1028-1032.

Gautier, D.L., 1984, Book Review of *Sediment Diagenesis*, edited by A. Parker and B. W. Sellwood: Journal of Sedimentary Petrology v. 54, p. 1394-1395.

Gautier, D. L., 1984, Book Review of *The Mediterranean was a Desert: A Voyage of the Glomar Challenger*, by Kenneth J. Hsu: Journal of Sedimentary Petrology v. 54, p. 669-670.

Gautier, D.L., and Claypool, G.E., 1984, Interpretation of methanic diagenesis in ancient sediments by analogy with processes in modern diagenetic environments, *in* McDonald, D. A., and Surdam, R.C., eds., Clastic diagenesis: American Association of Petroleum Geologists Memoir 37, p. 111-123.

Gautier, D.L., Clayton, J., Leventhal, J., and Redden, N.J., 1984, Origin and source-rock potential of the Sharon Springs member of the Pierre Shale, Colorado and Kansas, *in* Woodward, J., Meissner, F.F., and Clayton, J.L., eds., Hydrocarbon source rocks of the Rocky Mountain Region: Rocky Mountain Association of Geologists Symposium Guidebook, Denver, CO, p. 369-385.

Halley, R. B. and Gautier, D.L., 1984, Book Review of *Coated Grains*, by J.M. Peryt and *Atlas of Spheroidal Textures and Their Genetic Significance*, by S.S. Augustithis: Journal of Sedimentary Petrology v. 54, p. 671-672.

1983

Gautier, D.L., 1983, Nonmarine rocks, Chapter 5, *in* Rice, D. D., and Gautier, D.L., eds., Patterns of sedimentation, diagenesis, and hydrocarbon accumulation in Cretaceous rocks of the Rocky Mountains: Society of Economic Paleontologists and Mineralogists Short Course No. 11, p. 5-1 to 5-43.

Gautier, D.L., 1983, Marine shales, Chapter 8, *in* Rice, D. D., and Gautier, D.L., eds., Patterns of sedimentation, diagenesis, and hydrocarbon accumulation in Cretaceous rocks

of the Rocky Mountains: Society of Economic Paleontologists and Mineralogists Short Course No. 11, p. 8-1 to 8-41.

Gautier, D.L., 1983, Diagenesis, Chapter 4, *in* Rice, D. D., and Gautier, D.L., eds., Patterns of sedimentation, diagenesis, and hydrocarbon accumulation in Cretaceous rocks of the Rocky Mountains: Society of Economic Paleontologists and Mineralogists Short Course No. 11, p. 4-1 to 4-29.

Gautier, D. L., 1983, Book Review of *Elsevier's Mineral and Rock Table*, compiled by P. Lof: Journal of Sedimentary Petrology v. 53, no. 1, p. 331-332.

Gautier, D.L., Starkey, H.E., and Takahashi, K.I., 1983, Clays, cations, and log response of gas producing and non-producing zones in the Gammon Shale (Cretaceous), southwestern North Dakota: Clays and Clay Minerals v. 31, no. 2, p. 122-128.

Rice, D.D., and Gautier, D.L., 1983, Shelf sandstones, Chapter 7, *in* Rice, D. D., and Gautier, D.L., eds., Patterns of sedimentation, diagenesis and hydrocarbon accumulation in Cretaceous rocks of the Rocky Mountains: Society of Economic Paleontologists and Mineralogists Short Course No. 11, p. 7-1 to 7-41.

Rice, D.D., and Gautier, D.L., 1983, Coastal sandstones, Chapter 6, *in* Rice, D. D., and Gautier, D.L., eds., Patterns of sedimentation, diagenesis and hydrocarbon accumulation in Cretaceous rocks of the Rocky Mountains: Society of Economic Paleontologists and Mineralogists Short Course No. 11, p. 6-1 to 6-41.

1982

Gautier, D.L., 1982, Siderite concretions; indicators of early diagenesis in the Gammon Shale (Cretaceous): Journal of Sedimentary Petrology v. 52, no. 3, p. 859-871.

Gautier, D.L., 1982, Diagenesis and gas generation in Gammon Shale, northern Great Plains, *in* Geological Survey research 1982: U.S. Geological Survey Professional Paper 1375, p. 24-25.

Gautier, D.L., 1982, Book Review of *Depositional Sedimentary Environments, second edition*, by H.E. Reineck and I.B. Singh: Journal of Sedimentary Petrology v. 52, no. 1, p. 338-339.

Gautier, D.L., 1982, Book Review of *The Geological Evolution of the River Nile* by Rushdi Said: Journal of Sedimentary Petrology v. 52, no.2, p. 669-670.

Gautier, D.L., 1982, Book Review of *Crustal and Coastal Evolution of Southern Africa* by A.J. Tankard: Journal of Sedimentary Petrology v. 52, no. 4, p. 1340-1341.

Gautier, D.L., and Pollastro, R.M., 1982, Petrology and mineralogy in relation to reservoir properties in the El Paso Natural Gas Co. No. 1 Wagon Wheel Well, Green River basin, Wyoming: Earth Science Bulletin v. 15, p. 129-131.

Gautier, D.L., and Rice, D.D., 1982, Conventional and low-permeability reservoirs of shallow gas in the northern Great Plains: Journal of Petroleum Technology v. 34, no. 7, p. 1600-1608.

Gautier, D.L., Starkey, H.C., and Takahashi, K.I., 1982, Effect of clay on gas production interpreted using data from Gammon Shale, Williston basin, *in* Geological Survey research 1982: U.S. Geological Survey Professional Paper 1375, p. 25.

Rice, D.D., Shurr, G.W., and Gautier, D.L., 1982, Revision of Upper Cretaceous nomenclature in Montana and South Dakota: U.S. Geological Survey Bulletin 1529-H, p. H99-H104.

1981

Gautier, D.L., 1981, Lithology, reservoir properties, and burial history of a portion of the Gammon Shale (Cretaceous), southwestern North Dakota: American Association of Petroleum Geologists Bulletin v. 65, no. 6, p. 1146-1159.

Gautier, D.L., 1981, Relationship of organic matter and mineral diagenesis - Report of the 1983 Society of Economic Paleontologists and Mineralogists Research Conference: Journal of Sedimentary Petrology v. 54, p. 1028-1032.

Gautier, D.L., 1981, Origin of biogenic gas in Upper Cretaceous Gammon Shale: *in* Geological Survey research 1980: U.S. Geological Survey Professional Paper 1275, p 34.

Gautier, D.L., and Rice, D.D., 1981, Comparison of conventional and low permeability reservoirs of shallow gas in the northern Great Plains, *in* Proceedings of the Society of Petroleum Engineers and Department of Energy Symposium on Low Permeability Gas Reservoirs, Dallas, TX: Society of Petroleum Engineers Paper No. 9846, p. 193-204.

1979

Gautier, D.L., 1979, Preliminary report of authigenic, euhedral tourmaline crystals in a productive gas reservoir of the Tiger Ridge Field, north-central Montana: Journal of Sedimentary Petrology v. 49, p. 911-916.

Gautier, D.L., 1979, A brief look at the clay minerals from the Glenns Ferry Formation, Snake River Plain, Idaho: TEBIWA, Miscellaneous papers of the Idaho State University Museum of Natural History, 4 p.

Spencer, A.M., Embry, A.F., Gautier, D.L., Stoupakova, A.V., and Sørensen, Kai (editors), 2011, Arctic Petroleum Geology: Geological Society of London Memoir No. 35, 818 p.

Gautier, D.L., Dolton, G.L., Takahashi, K. I., and Varnes, K.L., eds., 1995a, 1995 National assessment of United States oil and gas resources - results, methodology, and supporting data: U.S. Geological Survey Digital Data Series DDS-30, release 2, 1 CD-ROM. Available online http://pubs.usgs.gov/dds/dds-030/DDS-30.html

McCabe, P.J., Gautier, D.L., Lewan, M.D., and Turner, C.E., 1993, The future of energy gases: U. S. Geological Survey Circular 1115, 58 p.

Gautier, D.L., Kharaka, Y.K., and Surdam, R.C., eds., 1985, Relationship of organic matter and mineral diagenesis: Society of Economic Paleontologists and Mineralogist Short Course, 17 Lecture Notes, 279 p.

Gautier, D. L., editor, 1984, Society of Economic Paleontologists and Mineralogists symposium volume - Relationship of Organic Matter and Mineral Diagenesis: Society of Economic Paleontologists and Mineralogists Special Publication 38, 203 p.

Rice, D.D., and Gautier, D.L., editors, 1983, Patterns of sedimentation, diagenesis, and hydrocarbon accumulation in Cretaceous rocks of the Rocky Mountains: Society of Economic Paleontologists and Mineralogists Short Course 11 Lecture Notes, 280 p.

Gautier, D.L., 1981, Petrology of the Eagle Sandstone, Bearpaw Mountains area, north-Central Montana: U.S. Geological Survey Bulletin 1521, 54 p.

Gautier, D.L., 1980, Petrology of shallow gas reservoirs in the northern Great Plains-Selected examples from the Eagle Sandstone and equivalent rocks: Ph.D. Dissertation, University of Colorado, Boulder: University Microfilms, 253 p.

Graduate Students Advised

Debra Higley, Colorado School of Mines Ph.D. 1991 Crawford Elliot, Case Western Reserve University Ph.D. 1989 Ernest Jones, Harvard Ph.D. 1986 Frederick B. Zelt, Princeton Ph.D. 1985 Warren Dickinson, University of Colorado Ph.D.1983