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SPE 111953 Harmonizing Efforts to Evaluate Contractor HSE Performance: The API PIDX Revision of RP 76 .......................................................................................................................... 1961
J. Schey, T. Knade, F. Simon, E. Ring, T. Elsen, D. Campbell, M. Carter, M. Bell, R. Light

SPE 111955 Risk Assessment for Livestock in the Oriente Region of Ecuador ....................... 1964
M. Pattanayek, S.J. McMillen

Tony Zamora, Raoul Martin

SPE 111957 Minimizing Environmental Impacts in the Arctic: 30 Years of Oil Development on the North Slope of Alaska .................................................................................................................. 1987
Janet D. Platt

SPE 111959 A New Monitoring Tool for Assessing Environmental Impact of Offshore Drilling Activities: Benthic Foraminifera ........................................................................ 1992
G. Duchemin, M. Mojthahid, E. Bicchi, M. Gaultier, F.J. Jorissen, Ile d’Yeu; J. Durrieu, F. Galgani, L. Cazes, R. Camps

SPE 111960 Sustainable Water Management in the Oil and Gas Industry: Use of the WBCSD Global Water Tool to Map Risks ......................................................................................... 2004
J.J. Dell, S. Meakin, J. Cramwinckel

SPE 111961 Human Factors in Drill and Well Operations—The Drillers’ Work Situation ................................................................................................................................. 2018
Hilde Heber, Siri Wiig, Arne M. Enoksen

SPE 111963 The TOTAL Group and the Local Economic Development of the Lacq Basin ................................................................................................................................. 2027
Claude Arquizan, Jean-Claude Charbonnel, Renaud Noël

SPE 111964 Energy Efficiency Assessments—Just a Paper Exercise? .................................. 2034
K.A. Speirs

SPE 111965 A Successful Stakeholder Partnership—The Dolphin Energy Experience Coral Reef Habitats of the Arabian Gulf ........................................................................ 2039
Marwan Y. Alkendi, Marcus Chandler

SPE 111967 Europ Assistance’s New Approach of Clinic and Patient Management Tools: An Integrated Solution ........................................................................................................ 2048
P.A. Belliard

SPE 111968 Sustaining Community Education on Road Safety ........................................ 2053
Syed Mahmood Ali Kazmi, Saifdar Hussain Nensey

SPE 111972 Pilot Project on Rehabilitation and Protection of Tugai Forests ...................... 2058
Faig Askerov

SPE 111973 Emerging Issues in Produced Water Management: TOTAL E&P NORGE’s Approach ....................................................................................................................... 2061
Pierre Goud, Stig Helland, Alexandre Goldszal, Ulf E. Moltu, Laurence Pinturier
SPE 111975 Sustainable CSR Activities in Uganda ................................................................. 2073
  G. Brunton, M. Early

SPE 111977 Meeting Expectations: A New Model for a Just and Fair Culture ................. 2079
  Patrick Hudson, Margot Vuijk, Robin Bryden, Dominika Biela, Charles Cowley

SPE 111978 Carriage of Drilling Fluids and Brines—Implications for the Offshore Industry ................................................................. 2091
  Kirsty Walker, David MacRae, Paul Ronald

SPE 111980 Sustaining an Excellent Workforce ................................................................. 2102
  Euan J. Thompson

SPE 111981 Environmental Projects for New Projects: Systematic Processes and Performance Requirements Driving Better Environmental Outcomes ................................................. 2113
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SPE 111982 Measuring Return on Environment ................................................................... 2120
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SPE 111983 Regulatory Compliance Challenges in Countries With Emerging Economies and Developing Legislative Systems ................................................................. 2131
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SPE 111984 HSE Holistic Approach to Azeri Chirag Gunashli PW Disposal in Azerbaijan ........................................................................................................... 2136
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SPE 111987 Using Saturation Campaigns to Effectively Communicate With Employees ........................................................................................................... 2146
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SPE 111988 Screening for Human Factors in Process Safety and Technical Integrity ........................................................................................................... 2151
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SPE 111998 IMO-IPIECA’s Global Initiative Managing and Implementing a Regional Oil Spill Preparedness and Response Programme for Central & West Africa (GI WACAF) ........................................................................................................... 2157
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