

1st Conference on Geophysics for Geothermal-Energy Utilization and Renewable-Energy Storage 2019

Held at Near Surface Geoscience Conference and
Exhibition 2019

The Hague, Netherlands
8 – 12 September 2019

ISBN: 978-1-7138-1189-3

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2019) by the European Association of Geoscientists & Engineers (EAGE)
All rights reserved.

Printed with permission by Curran Associates, Inc. (2020)

For permission requests, please contact by the European Association of Geoscientists & Engineers (EAGE)
at the address below.

European Association of Geoscientists & Engineers (EAGE)
PO Box 59
3990 DB Houten
The Netherlands

Phone: +31 88 995 5055
Fax: +31 30 634 3524

eage@eage.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

COMBINATION OF ELECTRICAL RESISTIVITY TOMOGRAPHY AND SEISMIC REFRACTION METHODS TO CHARACTERIZE SANDSTONE DEPOSITS <i>J. Tristany, M. Himi, R. Lovera, A. Urruela, R. Garcia, A. Sendrós, L. Rivero, A. Casas</i>	1
PERSISTENT PERMIAN REMAGNETIZATION IN THE PALEOZOIC FORMATIONS OF THE ILLIZI BASIN (ALGERIA) - MAGNETIC AND GRAVIMETRIC CONSTRAINTS <i>A. Lamali, L. Hamai, N. Merabet, A. Yelle-Chaouche, A. Abtout, B. Henry, S. Maouche, M. Amenna, M. Hamoudi</i>	6
GEOPHYSICAL SIGNATURES ON MESOPROTEROZOIC CHIMAKURTI ANORTHOSITE-GABBRO (CAG) COMPLEX, EASTERN GHAT BELT, INDIA - UNDERSTANDING THE MAGMATIC PROCESSES <i>S. Krishnamacharyulu, K. Vijaya Kumar</i>	11
A REVIEW OF THE GEODYNAMIC EVOLUTION OF THE ONSHORE-OFFSHORE CENTRAL ALGERIAN MARGIN CONSTRAINED BY GRAVITY DATA <i>L. Hamai, A. Lamali, A. Abtout, A. Yesses-Chaouche, A. Boudelaa, J. Deverchere, S. S. Bougchiche, W. Bacha, L. Djadia</i>	16
MODELING THERMAL ENERGY STORAGE IN ROCKS <i>A. Santos, F. Almeida</i>	21
LABORATORY SIP RESPONSES FOR ARTIFICIAL SULFIDE MINERALS <i>S. Park, S. W. Shin, M. K. Park</i>	26
COMBINED SEISMIC AND GPR SURVEYS SUPPORTING DYNAMIC MODELLING OF RIVER EVOLUTION <i>T. Toth, M. Kóbor, Z. Kádi, Z. Hamori, S. Baranya, G. Török</i>	31
ESTIMATION OF THE POTENTIAL OF CO ₂ STORAGE IN THE TAMPICO MISANTLA OIL PROVINCE, MEXICO <i>M. Cerca, E. Medina-Romero, C. Cortéz-Prado, G. Levresse, D. Carreón-Freyre</i>	36
VARIATIONS OF THE GEOMAGNETIC FIELD BEFORE THE 6.2-MAGNITUDE EARTHQUAKE OF CENTRAL ITALY IN 2016 <i>S. Nourbakhsh, A. Hojat, M. Montahaei</i>	41
GRAVITY MAP COMPILATION AND 2D GRAVITY MODEL IN THE AVINYÓ AREA (CATALONIA-SPAIN) <i>E. Álvarez, M. Himi, R. Garcia, A. Urruela, R. Lovera, A. Sendrós, A. Casas, L. Rivero</i>	46
DETERMINATION OF THE RADIATION PATTERN OF A PIEZOELETTRIC SOURCE USING NUMERICAL METHODS <i>D. Pageot, D. Leparoux, Y. Capdeville</i>	51
FD MODELLING OF DEEPLY-BURIED PALEO-DOLINES UNDERNEATH THE CITY OF MUNICH <i>A. Sell, H. Buness, J. Ziesch, D. Tanner, A. Weller</i>	56
STOCHASTIC INVERSE MODELING OF MAGNETOTELLURIC DATA FROM THE LARDERELLO-TRAVALÉ GEOTHERMAL AREA (ITALY) <i>F. Pace, A. Santilano, A. Godio, A. Manzella</i>	61

GEOPHYSICAL EXPLORATION OF THE KIEJO-MBAKA GEOTHERMAL FIELD (TANZANIA).....	66
<i>D. Rizzello, E. Armadillo, C. Pasqua, T. Mnjokawa, J. Mwano, D. Makoye, L. Tumbu</i>	
MAGNETIC, GRAVIMETRIC, TDEM AND MAGNETOTELLURIC JOINT INTERPRETATIONS AT THE LUHOI GEOTHERMAL FIELD, TANZANIA.....	71
<i>E. Armadillo, D. Rizzello, C. Pasqua, P. Pisani, A. Ghirotto, K. Kabaka, T. Mnjokava, J. Mwano, M. Didas, L. Tumbu</i>	
10 YEARS OF TEMPERATURE MONITORING EXPERIMENTS USING ELECTRICAL RESISTIVITY TOMOGRAPHY - WHAT HAVE WE LEARNED?	76
<i>T. Hermans, F. Nguyen, G. De Schepper, N. Lesparre, T. Robert</i>	
SUPPRESSING GROUND ROLL, P-S CONVERSIONS AND OUT-OF-PLANE SCATTERING IN NEAR SURFACE SEISMIC DATA USING 3C POLARIZATION	81
<i>S. Carpentier, P. Lamberts, S. Meekes</i>	
MULTI-PARAMETER TOMOGRAPHIC INVERSION FOR IMAGING 2D ELECTRICAL RESISTIVITY ANISOTROPY.....	86
<i>B. Zhou, W. Moosoo</i>	
POTENTIAL OF AMBIENT SEISMIC NOISE METHODS IN A GEOTHERMAL CONTEXT	91
<i>P. Sanchez, A. Obermann</i>	
NEAR-SURFACE GEOPHYSICAL INVESTIGATION FOR CHARACTERIZATION OF A VOLCANIC GEOTHERMAL RESERVOIR BY ACTIVE-SEISMIC-DATA TOMOGRAPHY AND ATTENUATION	93
<i>G. Bohm, F. Poletto, E. Barison</i>	
OFFSET-GAP COMPENSATION BY SEISMIC INTERFEROMETRY FOR SHALLOW SIGNALS OF ACTIVE-SEISMIC LINES ACQUIRED IN A SUPERHOT-GEOTHERMAL FIELD.....	98
<i>E. Barison, F. Poletto, B. Farina</i>	
MULTICOMPONENT SEISMIC RECORDING FOR THE EXPLORATION OF A DEEP CARBONATE GEOTHERMAL RESERVOIR IN SOUTHERN GERMANY	103
<i>B. Wawerzinek, H. Buness, H. Von Hartmann</i>	
USE OF GLOBAL-LOCAL FWI OF SEISMIC LAND DATA ACQUIRED IN A GEOTHERMAL EXPLORATION AREA.....	108
<i>A. Tognarelli, E. Stucchi, A. Mazzotti</i>	
ACCELERATING GEOTHERMAL ENERGY PROJECTS IN THE NETHERLANDS THROUGH ACQUISITION OF HIGH QUALITY LONG-OFFSET 2D SEISMIC	113
<i>J. Rehling, E. Siemerink, M. Ter Borgh, G. Zaalberg-Metselaar</i>	
DE-RISKING GEOTHERMAL PLAYS BY SEISMIC RESERVOIR CHARACTERISATION.....	118
<i>E. Dalgaard, K. Bredesen, A. Mathiesen, N. Balling</i>	
SEISMIC REFLECTION IMAGING OF FRACTURES USING LEAST-SQUARES MIGRATION AND LINEAR-SLIP THEORY - LABORATORY AND NUMERICAL TESTS	123
<i>S. Minato, R. Ghose, K. Wapenaar</i>	
RECONSTRUCTION OF PRESSURE AND SHEAR WAVE VELOCITY PROFILES FROM AMBIENT NOISE TOMOGRAPHY	128
<i>A. Konkov, S. Manakov</i>	

Author Index