CESCO CENTRO DE ESTUDIOS DEL COBRE Y LA MINERÍA – CENTER FOR COPPER AND MINING STUDIES

Australian Society of Exploration Geophysicists

Environmental and Engineering Geophysical Society

Chile Explore Group

LATIN GEOPHYSICS EXPLORE 2021

27th to 29th July

PROGRAM

INTERACTIVE DIGITAL PLATFORM

27TH JULY

AIRBORNE

10:00	**Tim Leonard**, *Consulting and Services Geophysicist*, Intrepid Geophysics. **"Updated AEM Inversion Technology."** (Co-authors: James Macnae, Rod Paterson, Desmond FitzGerald)
10:25	**Greg Hodges**, *Senior Geophysicist*, Sanders Geophysics. **"Types of AEM systems, Features, Factors, and Applications."**
10:50	**William E. S. (Ted) Urquhart PhD**., *President,* New-Sense Geophysics Limited. **"Improving Safety for Airborne Geophysical Surveys in Mountainous Terrains."**
11:15	**Alan Morgan,** *Chief Geophysicist,* Bell Geospace**. "TBC."**

MT

11:40	**Wolfgang Soyer,** *Manager Interpretation, Multi-Physics Imaging,* CGG. **"MT for mineral exploration – 3D inversion modeling workflows."**
12:05	**Rob Gordon**, *Manager of Marketing and Sales,* Quantec Geoscience. **"Emerging technology and processes utilising deep magnetotelluric resistivity imaging for regional and local exploration, brownfields and mine planning."**
12:30	**Anton Vetrov**, *Senior Geophysicist,* Phoenix Geophysics Ltd. **"AMT and MT signal characteristics -from concurrent recordings."** (Co-author: Erhan Erdogan)
12:55	**Break**

GRAVITY

13:15	**Sebastián Aguilef,** *Regional Geologist,* SERNAGEOMIN**. "Relationship between gravity anomalies and epithermal metallic deposits in the Cordillera de la Costa, VII Region, Chile." (Co-author: Daniel Morales V.)**
13:40	**Nicky Young,** *Project Manager*, Abitibi**. "Applications of Downhole Borehole Gravity in Mineral Exploraiton."**

SEISMIC

14:05	**Carlos Toledo,** *Technical Manager*, Terra Pacific Solutions SpA. **"HVSR and SPAC passive seismic for sedimentary coverage exploration in mining prospects, experience in Chile."**

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INNOVATION

10:00	**Christine Devine,** *Principal Geoscientist* - Fugro. **"Estimating a Mineral Resource 4,500 m Below the Sea - Integration of High-Resolution Geophysical Data and Seabed Sampling for a Polymetallic Nodule Resource in the NORI Area D, Clarion Clipperton Zone."**
10:25	**Dave Pratt**, *Manager Research & Development,* Tensor Research. **"AI constrained magnetic formation mapping beneath cover."**
10:50	**Julian Cote,** *Head of technical services,* Comprobe. **"Elemental Analysis by Pulsed Fast Pulsed Thermal Neutron Activation (Pftna)."**(Co-authors: Philippe Jeanneau - Sodern, Ian Raleigh - Comprobe)
11:15	**Edward Cifuentes**, *Senior Geophysicist*, Magxplore Spa.. **"Current use and applications of geophysical methods in RPAS applied to mining exploration in Chile. Use, limits of existing methods and prospects for future applications."**
11:40	**Break**

IP

12:00	**Jeremy Barrett,** *General Manager*, Southernrock Geophysics S.A.. **"Time and Frequency-Domain Induced Polarization – a pragmatic evaluation of pros and cons." (Co-author: Jim Scarbrough)**
12:25	**Silvia Lombardo,** *Business Manager - Senior Geophysicist*, Wellfield Services Ltda.. **"Comparisons between Deep IP & AMT 2D and 3D inversions - Juruena Gold Deposit."**

CASE STUDIES

12:50	**Sarah Devriese,** *Project Geophysicist*, Condor North Consulting ULC. **"Inversion of 3D DCIP data at Filo del Sol, Chile/Argentina: a case study for delineation of a high-sulphidation epithermal copper-gold-silver deposit."**
13:15	**Alexander Prikhodko,** *Chief Geophysicist*, Expert Geophysics Limited. **"Santiago project– historical exploration and renaissance."**
13:40	**Adriano Lopes Valente,** *Exploration Geophysicist*, OZMinerals. **"Application of DHTEM in Carajás (BR) mineral exploration: Pantera deposit study case."(Co-authors: Owen Hatton, Mike Sousa)**
14:05	**Michael Webb,** *Manager- geophysicist,* BHP. **"Geophysics for basement Depth Interpretation." (Co-authors: Todd Grant – Consultor, Raimundo Passi - Geodatos)**

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29TH JULY – VIRTUAL WORKSHOP

09:00 to 13:00 - "MT/EM/CSEM FOR MINERAL EXPLORATION."

Introduction to the workshop and presentation of the speaker
A quick introduction into EM methods in frequency domain: active and passive sources and various configurations for electric and/or magnetic components
Practical remarks on data acquisition: survey design and points which need to be considered while collecting the data.
A quick and brief introduction into 3d inversion of EM data: some mathematical formulations.
Practical remarks on 3d inversion of EM data: inversion setting and the parameters which have significant influence on inverse model.
Break
The importance various EM data in passive source (MT), i.e., Full Impudence (Z) and Phase Tensor (PT) vs. Tipper (Tz) with some examples
Inversion of AFMAG (e.g., ZTEM) and its joint inversion with ground mt data.
Case studies: from Continental scale to project scale.
Questions

Dr. Naser Meqbel

Dr. Naser Meqbel received his master degree in geophysics from Cologne University (Germany) and obtained the Doctoral title from Freie University of Berlin in collaboration with the Research Centre for Geoscience-Potsdam, Germany (GFZ). His main research topics include 2D and 3D modelling of electrical and electromagnetic data. Together with Prof. Egbert from Orgon State University, OR, US, he is also a developer of ModEM code. In addition to his scientific contributions, he has worked as a consultant for 3D EM methods for geothermal and mineral exploration firms worldwide. Since 2018, Dr. Meqbel formed a GmbH (LLC) in Germany for Consulting in EM. Main service include, but not limited to 3D inversion of EM data.

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