







Co-sponsored by









The Geological and Mining Survey of Argentina (SEGEMAR) and the Geological Association of Argentina (AGA) warmly invite you to the

15th Quadrennial Symposium of the International Association on the Genesis of Ore Deposits (IAGOD)

Ore Deposits: providing resources for present & future generations

SECOND CIRCULAR

Convention Center of Salta Salta, Argentina 28-31 August 2018

www.15iagods.org



TABLE OF CONTENTS

Letter of Invitation from the President of the 15 th IAGOD Symposium	5
Committees	6
Important Dates	8
Overall structure of the 15 th IAGOD Symposium	8
Registration	9
Instructions for authors	10
Plenary lectures, Thematic and Special Sessions	13
Pre-Symposium Short Courses	16
Pre- and Post-Symposium Field Trips	17
Sponsorship	19
Accessibility and Transport	20
Venue and Accommodation	22
Tourism Interests	27





LETTER OF INVITATION FROM THE PRESIDENT of the 15th IAGOD Symposium

The Geological and Mining Survey of Argentina (SEGEMAR) and the Geological Association of Argentina (AGA) are proud to organize the forthcoming 15th Quadrennial Symposium of the International Association on the Genesis of Ore Deposits (IAGOD), to be hosted in the city of Salta, Argentina, 28th to 31st August 2018 and give full support for its achievement.

The focal theme for this Symposium is: **«Ore Deposits: providing resources for present and future generations»**.

It is worthy to highlight that this is the first time for Argentina to host such an important meeting. South America, particularly the Andean region that includes some of the richest metallogenic provinces in the world, such as the richest Cu-Mo province, one of the most extensive and rich Sn and Ag belts, one of the richest Sb belts, the most important concentrations of Li in salars, and one of the richest borates provinces. Also it hosts some of the largest individual ore deposits such as Cerro Rico de Potosí, Llallagua, Chuquicamata and El Teniente mines. South America offers excellent geology hosting world class mineral deposits covering the past 2 billion years of Earth's metallogenic history, encompassing almost every conceivable metallogenic process.

Thus the region offers something that will tempt every economic geologist and metallogenist. The diversity of the geology, mineral resources, and local population invite the world to investigate and discuss our science and enjoy Argentina's renowned hospitality. The chance for Argentina to host this important meeting is a unique opportunity to help create an extraordinary environment for the presentation and exchange of knowledge and research results on the genesis of mineral deposits.

It will also give an invaluable occasion for local scientists to expand upon their training in various aspects related to metallogeny and research tools. The Argentine bid commits to enhance the participation in the IAGOD Symposium of young geoscientists, students, and delegates from less advantaged countries from around the globe. The commitments from the Geological Survey of Argentina and the Geological Association of Argentina, the support from the Ibero-American Geological and Mining Survey Association, as well as from the private natural resources sector, guarantee a successful 15th Quadrennial IAGOD Symposium.

There are five post-symposium field trips planned. Trips are organized in order to visit world class deposits of metals (Ag, Sn, Cu) and nonmetals (B, Li), as well as having the opportunity to discover the cultural aspects of the region and their inhabitants, involving mines from Argentina, Bolivia, and Chile.

There will be a variety of day tours available during the conference within Salta city and nearby areas.

The venue for the event is the Salta Convention Center, a world-class facility which has a record of numerous large national and international meetings.

It is our pleasure to warmly invite you to Salta. We look forward to meeting you at the 15th Quadrennial Symposium of the International Association on the Genesis of Ore Deposits.

Eduardo Zappettini The President of IAGOD



COMMITTEES

HONORARY COMMITTEE

Daniel Meilán

Secretary of Mining, Ministry of Energy and Mining, Republic of Argentina

Julio Ríos Gómez

President of the Geological and Mining Survey of Argentina (SEGEMAR)

Mario Pereira

National Director of the Geology and Mining National Survey, Chile (SERNAGEOMIN)

Daniel Ricardo Blasco

Secretary of Mining, Provincia of Salta, Argentina

Ricardo Salas

Former Secretary of Mining, Salta, Argentina

Miguel Soler

Secretary of Mining, Jujuy Province, Argentina

Ricardo Alonso

University of Salta, Argentina

ORGANIZING COMMITTEE

President

Eduardo O. Zappettini

Institute of Geology and Mineral Resources, SEGEMAR; Commission for the Geological Map of the World (CGMW); President of IAGOD

Members

Martin Gozalvez

Institute of Geology and Mineral Resources, SEGEMAR

Graciela Marin

Institute of Geology and Mineral Resources, SEGEMAR; Geological Association of Argentina

Eduardo Marquina

Institute of Geology and Mineral Resources, SEGEMAR

Susana Segal

Former Institute of Geology and Mineral Resources, SEGEMAR

Carlos Herrmann

Institute of Geology and Mineral Resources, SEGEMAR

Nora Rubinstein

National and Technical Research Research Council-Argentina (CONICET), IGeBA Department, University of Buenos Aires

Diego Guido

National Scientific and Technical Research Council-Argentina (CONICET), University of La Plata, Eploration Vicepresident (AUSTRAL GOLD)

Pablo Caffe

National and Technical Research Research Council-Argentina (CONICET)

José Marcelo Arnosio

University of Salta

Waldo Vivallo Sandoval

Geology and Mining National Survey, Chile (SERNAGEOMIN)

Raúl Lira

National Scientific and Technical Research Council-Argentina (CONICET), University of Córdoba Coordinator of the 15th IAGOD Symposium Scientific Committee



IAGOD COUNCIL 2016-2020

President: Eduardo Zappettini - Argentina - eduardo.zappettini@segemar.gov.ar

Secretary General: David Lentz - Canada - dlentz@unb.ca

Chief Treasurer: Reimar Seltmann - UK - R.Seltmann@nhm.ac.uk

Publication Manager: Franco Pirajno - Australia - franco.pirajno@uwa.edu.au

Promotion Manager: *Xiang Junfeng* – China - xjf2929@163.com Webmaster: *Evgeniy Naumov* – Russia - naumovevg@gmail.com

Executive Manager: Alla Dolgopolova – UK - A.Dolgopolova@nhm.ac.uk

Councillors

Past President: Mao Jingwen – China - jingwenmao@263.net

First Vice President: Nora Rubinstein – Argentina - nora@gl.fcen.uba.ar

Second VP: Sergei Cherkasov - Russia - s.cherkasov@sgm.ru

1st VP at Large: Alexandra Gomez Escobar - Colombia - alexagomeze@gmail.com

2nd VP at Large: Alexey Aleshin - Russia - aleshin@igem.ru

Past Secretary General: Sun Xiaoming - China - eessxm@zsu.edu.cn

Regional Councillors

Africa: Paul Nex - South Africa - Paul.Nex@wits.ac.za

Asia: Batkhishig Bayaraa – Mongolia - bkhishig@must.edu.mn Australasia: Nigel Cook – Australia - nigel.cook@adelaide.edu.au

Europe: *David Holwell* – UK - dah29@leicester.ac.uk North America: *Ed Ripley* – USA - ripley@indiana.edu

South America: Diego Guido - Argentina - diegoguido@yahoo.com

China: Xie Guiqing — China - guiqingxie@sohu.com India: Dipak Pal — India - dipak.pal@gmail.com

Iran: Seyed Mehran Heidari — Iran - sm.heidari@gmail.com SE Asia: Khin Zaw — Australia - Khin.Zaw@utas.edu.au

Ex officio Members

Account holder: Andreas Nägele – Germany - iagod@schweizerbart.de

President, SGA: Jorge Relvas - Portugal - president@e-sga.org

Executive Secretary, SGA: Jan Pasava - Czech Republic - jan.pasava@geology.cz

15th IAGOD SYMPOSIUM ORGANIZERS

Geological and Mining Survey of Argentina (SEGEMAR)

Geological Association of Argentina (AGA)

Contact information

secretariat@15iagods.org





IMPORTANT DATES

Abstracts

20th January, 2018 Opening of Online Abstract Submission15th May, 2018 Deadline for Abstracts Submission

15th July, 2018 Notification of Acceptance of reviewed Abstracts
31st July, 2018 Registration Payment Deadline for submitted Abstracts

Registration

20th January, 2018 Opening of Registration and Online Payment

15th February, 2018 Opening of Payment by bank transfer

15th February, 2018 Opening of Registration and Online Payment for Short Courses

31st March, 2018 Early Bird Registration Deadline

1st August, 2018 Online Registration and Online Payment Deadline

OVERALL STRUCTURE OF THE 15TH IAGOD SYMPOSIUM

August 23th - August 27th 2018

Pre-Symposium field trip

August 26th - August 27th

Short Courses

August 28th

Welcome Party

An opening reception will be held on the first evening of the Symposium and is planned for approximately 750 people. The reception includes a bar and hot and cold hors d'oeuvres and local music and entertainment. This will be located off site and showcases a special place with historical significance.

The ticket for the Opening Reception is included in the Registration price.

August 28 - August 31

Symposium Scientific Programme

Special Sessions

Keynote presentations

Poster sessions

Registration fees cover coffee-breaks and lunch

August 31

Farewell Assembly

A farewell dinner will be held on the last evening of the conference, after the conclusion of the General Assembly.

September 1st onward

Field trips

The field trips will typically be of 3 - 5 days duration. Costs will include land transport from and to Salta, meals and accommodation.





REGISTRATION

(payment portal opens 20th January, 2018)

	Early Bird U\$S (before May 15th)	Regular Payment U\$S
IAGOD Member	450	500
Non member	550	600
Student*	225	250

^{*}A valid student card will be required to pick up accreditation at the registration desk

To pay as IAGOD Member you have to pay Membership fees before registering to the Symposium. Discounted registration for IAGOD Members: To be eligible for the discount pay a 3-year term (total €30) that must include 2018.

For joining IAGOD download Membership Application Form http://iagod.org/node/16 and send completed to: IAGOD chief treasurer Prof Reimar Seltmann r.seltmann@nhm.ac.uk and copy to account holder Dr Andreas Naegele mail@schweizerbart.de

For membership payment please use the web shop at: http://www.schweizerbart.de/iagod/membership-payment.

For registering as IAGOD Member you can download the *Membership application* (at the Downloads section) and pay IAGOD membership fees before registering to the Symposium (see instructions at www.iagod.org).

For registering to the Symposium you are asked to complete the *Registration form* (at the Downloads section) and send it back to the following email address: registration@15iagods.org. For Registration create an account. Use the same account for Registration & Payment, as well as for Abstract submission.

From January 20th, 2018 the online Registration Payment option can be accessed through the IAGOD Symposium web page (<u>www.15iagods.org</u>)

The ticket for the Opening Reception is included in the Registration price. Registration fees cover coffee-breaks and lunch each day.

Please note:

- The early bird registration will be closed on 30th May 2018.
- Online registration closes: 1st August 2018.
- Payment by bank transfer will be available from February 15th until 1st August 2018.
 After 1st August payments will only be on site.
 Details for bank transfer will be provided at the IAGOD Symposium web page (www.15iagods.org).
- There will be no refund after 31 July 2018 if registered participants cancel by personal reasons.





INSTRUCTIONS FOR AUTHORS

Abstracts

There will be a printed symposium programme but only electronic abstract volume.

Information on publication of full papers in Special Issues of IAGOD affiliated journals (Ore Geology Review, Global Tectonics and Metallogeny) and potentially a proceedings volume (IAGOD Quadrennial Symposia, Schweizerbart) will be provided on the Symposium website www.15iagods.org and within the Final Programme.

All abstracts must be submitted in English.

They must include sufficient information for reviewers to judge the nature and significance of the topic, the adequacy of the investigative strategy, the nature of the results, and the conclusions. The abstract should summarize the substantive results of the work and not merely list topics to be discussed.

An abstract is an outline/brief summary of your paper and your whole project. It should have an intro, body and conclusion. It is a well-developed paragraph, should be exact in wording, and must be understandable to a wide audience. Abstracts highlight major points of your research and explain why your work is important; what your purpose was, how you went about your project, what you learned, and what you concluded.

If your title includes scientific notation, Greek letters, bold, italics, or other special characters/symbols, do make sure they appear correctly.

Abstracts can be accepted either as poster or oral communication. The Abstract Scientific Committee will select submitted abstracts and determine whether they are accepted for oral or poster presentation. Oral presentations are not guaranteed. If your abstract is accepted as a poster, you will be requested to be available for discussion during the corresponding poster viewing session.

For abstracts submissions please go to the Abstract submission Platform at the IAGOD Symposium web page (www.15iagods.org).

At least one presenter for each accepted abstract must register for the Symposium and **pay the registration fee by 15**th **July 2018**. Abstracts without presenter paid registration by this date will be removed from the Symposium programme and electronic abstracts volume.

Poster Presentations

General information

All posters must be written in English.

The exhibition of posters of each exhibitor will take place in the halls of the Convention Center.

Posters will be exhibited during one day during the Congress and will be grouped by sessions and by topics. Presenters are expected to be present at the daily poster sessions and requested to attend their posters the day their session is scheduled in the Final Program.

It is important to consult the final program beforehand to know the location of the poster in the panels. Volunteers will offer assistance.

Photographing posters or oral sessions will be prohibited except by authorized agents of the Symposium or by the first author of the presentation.

No chairs and tables will be provided at the exhibition site. If any special items are needed, the staff should be required to assist during the sessions.

Poster dimensions

54 inches high and 36 inches wide

We recommend that you use 72-point bold font for title and a 60-point font for authors and affiliations. The title should be the same as the work of the conference. The texts and illustrations must have enough size to read from a distance of 2 meters.

Oral Presentations



General information

Computers, audio-video equipment and technical assistance will be provided to monitor and test the presentation of each participant.

Format of the oral presentations

Presentations will only be allowed to display in Microsoft PowerPoint (.ppt and .pptx). There will be no projectors or slide carusel. Presenters have the responsibility to ensure the exposure is compatible with Windows and Microsoft office. Letter Arial, Times New Roman, Etc. Common format such as AVI, MPG

The presentations must be in English. There will be no simultaneous translation into Spanish.

Regular Oral presentations will be 20 minutes long, including a couple minutes for questions. It is essential that speakers strictly follow the Final Program and respect the stipulated time.

30 minutes before the session the presenter must go to the corresponding room to receive instructions for use of equipment and control that everything is in order.

Speakers have to bring the presentation in # USB stick #. Speakers will not be allowed to use their own laptop.

Presentations will be deleted from computers after the end of each session.

Abstract Preparation Guidelines

All abstracts must be submitted in English.

Author Name(s): The presenting author of an accepted abstract must attend, register and pay for the Symposium.

An author may present **no more than two** abstracts. More than two submissions can be accepted from an autor if one of his/her co-authors present additional abstracts. If an abstract is accepted, the presenter must be one of the co-authors listed.

If an author's name appears on more than one abstract, it must be identical on each submission. Do not list authors by initials only.

Provide email and affiliation only for the first autor.

Abstract category

Please choose from the abstract categories available (T: Topics and S: Special Sessions): See Plenary talks and Thematic Sessions below.

Data

Abstracts that appear to be replicate versions of a single study will be rejected. Abstracts containing identical or nearly identical data submitted from the same institution and/or individuals will be rejected.

Format

Abstracts of original science – content should be structured into the following four (4) sections: Background, Methods, Results and Conclusions.

Content

Abstracts are limited to 1200 words (or 2 pages A4). This includes the text in type Arial 11 point, plus any graphic/table.

Images/Graphics/Tables – Their use is encouraged if they are relevant to the research submitted. Only one of the following is allowed per abstract:

• Images/Graphics: Images should be pasted under «attachment» in the template in JPG/BMP format, maximum size 9cm x 17cm, and resolution up to 300dpi. Please note that these may be resized to fit in the final printed material. Their inclusion counts as 350 words for the total count of the abstract



• Tables: Tables have to be added as a table and not as an image in the template. The characters used in the table count toward the total words count of the abstract (max 1200)

Clarity of expression will be considered in the review process. The overall quality of language used should assure comprehension by the reader.

Do not include:

References, abbreviations, footnotes, key words, credits, or grant support in your submission.

Proofread abstracts carefully to avoid errors. IAGOD will never edit the scientific content of a submission, after approval by the Scientific Committee. If accepted, the abstract will be published in electronic versions as submitted.

Presentation

All abstracts presented at the Scientific Sessions must conform to the eligibility criteria listed above. All presentations and question-and-answer periods will be in English. If presenters need assistance in understanding or responding to questions in English, they are encouraged to have a member of their research group assist them.

Any additional or revised guidelines for abstract presentation will be provided to presenting authors of accepted abstracts in their notification email.

Copyright

The submitter acts on behalf of all co-authors and in submitting an abstract, transfers to IAGOD the copyright and all other rights in the material comprising the abstract if the abstract is accepted.

IAGOD, as holder of the copyright of the accepted abstract, reserves all rights of reproduction, distribution, performance, display, and the right to create derivative works in both print and digital formats.

Disclosure

All abstracts submitted are disclosed to members of the peer-review selection committee, as well as to IAGOD staff as necessary in connection with the Scientific Sessions. Those abstracts that are accepted for presentation are made available to the public in advance of the Scientific Sessions. Abstracts not accepted for presentation are not published, and are ordinarily not disclosed outside of IAGOD and persons associated with the selection process (i.e., the peer-review committee). Notwithstanding these policies and procedures, IAGOD is not subject to any confidentiality requirements with respect to submitted abstracts. In addition, compliance with any disclosure or nondisclosure requirements that apply to researchers or research sponsors (whether under federal securities laws, contract agreement, or otherwise) is the sole responsibility of the researcher and/or sponsor, and not IAGOD.

Abstract Withdrawal

If you decide to withdraw your abstract prior to the submission and editing deadline, you should send an email to the following email address: abstracts@15iagods.org

Include your abstract control number, title and the presenting author's name in your email.

NOTE: Before sending an Abstract, You have to Sign In at the web page of the IAGOD Symposium (www.15iagods.org). If you do not have an account sign up. Use the same account for Registration & Payment.





PLENARY LECTURES, THEMATIC AND SPECIAL SESSIONS

PLENARY LECTURES - KEYNOTE SPEAKERS

Eduardo Zappettini (President of IAGOD) Metallogenic Potential of Argentina

Reimar Seltmann (IAGOD Distinguished Lecturer)

Mineral exploration models from simple fiction to complex reality

Richard Sillitoe

Volcano-tectonic controls on Andean porphyry deposits

Lena Monteiro (SEG Regional VP Lecturer)

Copper deposits in Brazil: geological setting, process and evolution of mineral systems

Fernando Tornos (SGA Keynote speaker)

Microbiology and the formation of ore deposits

Olga Plotinskaya

Paleozoic porphyry Cu (Mo, Au) systems from the Urals

Franco Pirajno

Rare Earth mineral systems associated with alkaline intrussions and carbonatites

Jeffrey Hedenquist

Near-surface features of the epithermal environment: Formation, characteristics and contrasting implications for exploration

THEMATIC SESSIONS

- T1: Epithermal gold deposits
- T2: Ore deposits in rift environments
- T3: Ore deposits related to granites: from ore forming processes to metallogeny
- T4: Metallogeny of the Andes
- T5: Metallogeny of cratonic areas
- T6: Global tectonics and Metallogeny: large to giant ore deposit settings
- T7: Non conventional ore sources: Exploration and extraction
- T8: Geochemistry of ore forming fluids
- T9: Precision Geochronology and isotope geology of ore-forming processes: its importance in exploration and metallogenic modelling
- T10: Predictive modelling applied to mineral resources
- T11: Ore mineralogy





SPECIAL SESSIONS

S1: New discoveries and new research on skarn deposits

Conveners: Zhaoshan CHANG (James Cook University, Townsville), Larry Meinert (Energy & Mineral Resources USGS), Taofa Zhou (Hefei University of Technology, Hefei)

Sponsored by: IAGOD WG on Skarn Deposits

Outline: South America has some of the largest skarn deposits in the world, including Antamina and Las Bambas. This session will focus on recent advances in understanding the geology, geochemistry, and mineralogy of skarn deposits across the globe.

S2: New developments in magmatic sulfide and oxide deposits in South America and worldwide

Conveners: Maria Emilia Schutesky Della Giustina (Universidade de Brasília, Brasil), David Holwell (University of Leicester, UK)

Sponsored by: IAGOD CODMUR

Outline: Magmatic ore deposits are the single most important source of Ni, PGE, Cr, Ti and V on the planet. Their formation results from processes that involve major fluxes of metals from the mantle to the crust, through magmatism, and the diversity of the deposits is determined by a range of crustal processes, including chemical fractionation and contamination and increasingly recognised physical processes such as sulfide injection, slumping, brecciation and entrainment in magmas on a range of scales. This session will cover new developments in geological, analytical and exploration models for magmatic Ni-Cu-PGE sulfides and magmatic Cr-Fe-Ti-V deposits. We welcome contributions that cover a broad range of approaches from the field, mineralogical and geochemical studies, through to large scale mineral systems approaches. Within this session, there will be a focus on recent developments in South America, alongside presentations covering deposits worldwide.

S3: Magmatic-hydrothermal systems and the formation of porphyry type and IOCG deposits

Conveners: Fernando Tornos (Spanish National Research Council – CSIC) and David Lentz (University of New Brunswick, Economic Geology Chair)

Sponsored by: SGA & IAGOD WG on IOCG-IOA systems

Outline: Magmatic-hydrothermal systems form a wide variety of ore deposits related to the evolution of fluids exsolved from igneous rocks. Cooling, reaction with host rocks, boiling and mixing with other fluids can form large deposits of base, precious and critical metals that are included in the porphyry, epithermal, IOCG, skarn and several other styles of mineralization. The session is focussed to the description, evolution, chronology and geochemistry of the porphry type and IOCG systems with especial emphasis in the evolution of the mineral systems and the mechanism that trigger ore formation.

S4: High-tech critical metals: Evaluation and deposit models. Meeting the resource demands of the low carbon society

Conveners: Kenzo Sanematsu (Geological Survey of Japan, AIST), Yasushi Watanabe (Faculty of International Resource Sciences, Akita University, Japan), Jens C. Andersen (Camborne School of Mines, University of Exeter) and Reimar Seltmann (Natural History Museum, London)

Sponsored by: IAGOD WGCM

Outline: Critical metals have the higher supply risk and economic importance than the other metals although this classification changes with time. The supply risk is related to heterogenous distribution or difficulty in economical processing or extraction of the metals (e.g., rare earths, niobium, indium, cobalt, silicon). Some of these critical metals recently attract the attention due to a rapid increase of the price or demand for high technology. Additionally, climate change has led to strong societal demands for the phasing out of fossil fuel in favour of carbon neutral energy resources. If this is to



have significant global impact, this is likely to generate an unprecedented demand for metals that are critical to energy production (Dy, Ga, In, Nd, Se), storage (Li, Co), conversion (Pt, Pd) and efficiency (In, Ga). This session invites contributions to the geology, new deposit models, exploration, evaluation and extraction of these high-tech critical metals as well as how their increased extraction may affect the current mining industry and global economy.

S5: Technical developments and geological applications in remote sensing: from satellites to unmanned aerial vehicles (UAV)

Conveners: Valery Bondur (Presidium RAS, 14 Lewinsky Prospect, Moscow), Sergey Cherkasov (Vernadsky State Geological Museum of Russian Academy of Sciences (SGM RAS) and Marina Diaz-Michelena (National Institute of Aeronautics – INTA)

Sponsored by: IAGOD CTOD WG Remote Sensing Methods for Tectonics & Ore Prospecting Outline: The session is dedicated to the intensively developing technologies of multispectral and hyper-spectral surveys, aerial magnetometry, and other geophysical methods with UAVs as carriers for the corresponding equipment as well as to the satellite data being used for geological purposes. Presentations on unmanned aircraft systems (UAS) for these data acquisition, methods and software for data processing, as well as results of the surveys are welcome.

S6: Uranium deposits and resources

Conveners: Luis López (Comisión Nacional de Energía Atómica, Argentina), Michel Cuney (French National Centre for Scientific Research) and Mostafa Fajek (University of Manitoba)

Sponsored by: IAGOD IUG (International Uranium Group)

Outline: With increased need for uninterrupted, long-term and sustainable supply of uranium, it has become important to look into augmenting the resource base, and making the mining and extraction more efficient and environmentally friendly. This requires a deeper understanding of the genesis of uranium deposits under various geological environments with complex mineralization processes through analysis of the geochemical and mineralogical characteristics of each deposit. Such information will be helpful in guiding further exploration and optimization of extraction and production, and in effective environmental management.

The proposed session will look into complete metallogenic characterization of uranium and associated critical material deposits where uranium could be recover as main, co- and by-product. The outputs are also expected to enrich the IAEA database on uranium - World Distribution of Uranium Deposits (UDEPO) - and help understand the global distribution of uranium in a consistent manner and thus provide valuable inputs available resources and their sustainable development.

S7. Base Metals in sedimentary sequences

Conveners: Thierry Bineli-Betsi - Botswana International University of Science and Technology, Josefina Pons IIPG-Universidad Nacional del Río Negro-Universidad Nacional del Comahue - CONICET and Joseph Zulu Josrum Enterprises (Pvt) Ltd

Outline: Sedimentary hosted deposits are the most importance source of lead and zinc and totalize the twenty-three percent of the world's copper production. This session covers the broad range of deposits hosted in sedimentary basins, including Sedimentary Exhalative, Mississippi Valley Type, Vein-type and Sedimentary Hosted Copper Deposits.

This session will explore the numerous aspects related to the critical factors involved in the genesis of these sedimentary hosted base metal deposits: 1) large-scale geodynamic setting of mineralization; 2) lithological and structural controls on deposits with special emphasis on the tectono-thermal evolution of the basin; 3) the origin of the metals and sulphur; 4) geochronology 5) the source and geochemistry of the mineralizing fluids; 6) fluid drive mechanisms; 7) the metals transport and precipitation mechanisms and 10) the main factors that help to preserved them.



PRE-SYMPOSIUM SHORT COURSES

Epithermal deposits (1 day)

Diego Guido (sponsored by SEG)

Prices:

Regular attendee: U\$S 200 SEG or IAGOD member: U\$S 150 Student with University ID: U\$S 100

Fluid inclusions (1 day)

Daniel Moncada (sponsored by SGA)

Prices:

Regular attendee: U\$S 200 SGA or IAGOD member: U\$S 150 Student with University ID: U\$S 100

Faults, Veins, Breccias, and related Alteration (1 day)

Anna Fonseca - SRK Consulting (Canada)

Prices:

Regular attendee: U\$S 200 IAGOD member: U\$S 150 Student with University ID: U\$S 100

Non-magmatic mineral systems (2 days)

Franco Pirajno

Prices:

Regular attendee: U\$S 300 IAGOD member: U\$S 200 Student with University ID: U\$S 150

Ore mineralogy of micron- to nanoscale to atomic scale observations (1 day)

Nigel Cook and Cristiana Ciobanu

Prices:

Regular attendee: U\$S 200 IAGOD member: U\$S 150 Student with University ID: U\$S 100

Metallogeny of uranium (2 days)

Michel Cuney

Prices:

Regular attendee: U\$S 300 IAGOD member: U\$S 200 Student with University ID: U\$S 150

Opening of Short Courses Registration payment:

15th February 2018

Cancelation policy: Short Courses will be cancelled and fees refunded if there are less than 10 attendees.

Cancelation deadline: 31st June 2018



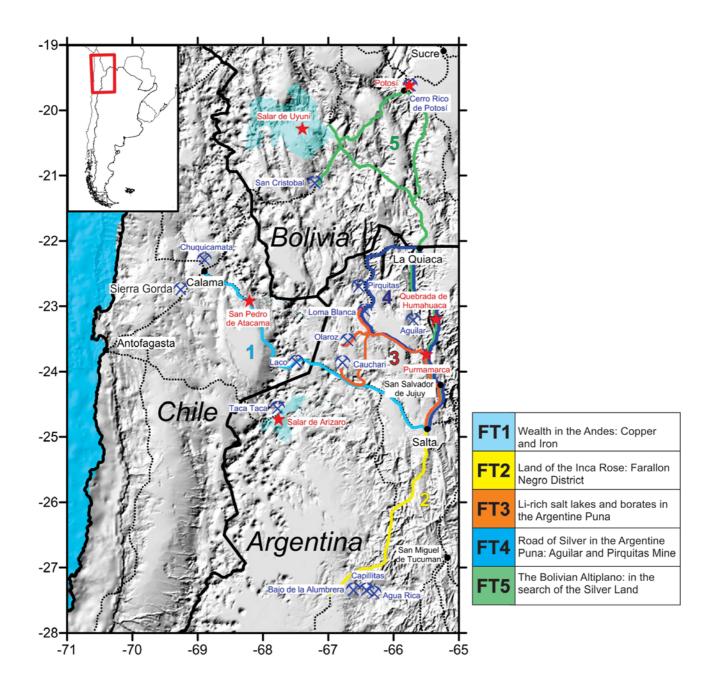


PRE- AND POST-SYMPOSIUM FIELD TRIPS

The rich mining history of this part of America that began with the exploitation of Ag in the Cerro Rico de Potosí (Bolivia) continues today with the exploitation of Cu and Au porphyries in the Andean region of Chile and Argentina, as well as Li from the salt lakes in the Puna - Altiplano triangle that comprises Argentina Bolivia and Chile.

Trips will be organized in these three countries in order to visit world class deposits of metals (Ag, Sn, Cu) and nonmetals (B, Li) having the opportunity to discover the cultural aspects of this region and their inhabitants.

Registration and payment of field trips start January 20th, 2018. If any trip is cancelled because of force majeur or not reaching the minimum number of participants, payments will be refunded.





Pre-symposium field trip

FT1. WEALTH IN THE ANDES: COPPER AND IRON

Sponsored by: SGA

Synthesis: Starting in Calama, Chile the visit includes the world largest porphyy Cu Chuquicamata mine (86 Mt Cu) as well as the Sierra Gorda porphyry Cu-Mo and the volcanogenic El Laco Fe deposit (430 Mt Fe) in Chile. In Argentina drill cores from the Taca Taca porphyry (Cu-Au-Mo) (13 Mt Cu - 180 t Au) will be examined.

Cultural aspects: visits toursitic destinations such as San Pedro de Atacama (Chile), San Antonio of the los Cobres and Santa Rosa de Tastil (Argentina), Atacama salt lake (Chile) and salt lake (Argentina).

Duration: 5 days PRICE: U\$S 1400





Post-symposium field trips

FT2. LAND OF THE INCA ROSE: FARALLÓN NEGRO DISTRICT

Summary: Visit the world-class mineral deposit Bajo de la Alumbrera (porphyry Cu-Au; 3.9 Mt Cu, 490 t Au), Agua Rica (porphyry Cu-Au-Mo; 4.9 Mt Cu, 193 t Au), the Capillitas polymetallic vein deposit, known for its rhodochrosite production and the epithermal Au-Ag-Mn Farallón Negro Mine. Mineralizations are hosted in a back-arc Miocene volcanic complex and comprise more than 12 Mt Cu and 750 t Au.

Cultural aspects: Capillitas mine is a unique deposit of rhodochrosite for its original and uncommon stalactite-like formations. This beautiful mineral is considered the «national stone» of Argentina. While visiting the region you will enjoy old towns like Cafayate, Santa María and Andalgalá.

Duration: 4 days PRICE: U\$S 1000







FT3. LI-RICH SALT LAKES AND BORATES IN THE ARGENTINE PUNA

Summary: Visit the Tertiary fourth largest borate deposit in the world: Loma Blanca (12.7 Mt borates) and an active boratiferous geyser, as well as lithium brine deposits in the salt flats of Olaroz (1.5 Mt Li carbonate), Cauchari (4.9 Mt Li carbonate) and Rincón (7.4 Mt Li carbonate). This region of the Argentine Puna is one of the main global reserves of Li and B.

Cultural aspects: visit the typical Puna towns Purmamarca, San Antonio de los Cobres and Susques.

Duration: 3 days PRICE: U\$S 750





FT4. ROAD OF SILVER IN THE ARGENTINE PUNA: AGUILAR AND PIRQUITAS MINES

Summary: Visit the Ordovician SEDEX type world class Ag-Zn-Pb Aguilar deposit (2.75 Mt Pb, 4.35 Mt Zn, 6,000 t Ag) and discuss its genesis. See the newly open Pirquitas Sn-Ag-Zn open pit (3,250 t Ag, 0.4 Mt Zn), the southern end of the Bolivian Tin belt.

Cultural aspects: visit the Quebrada de Humahuaca (Cultural and Natural Heritage, UNESCO).

Duration: 4 days PRICE: U\$S 1000





FT5. BOLIVIAN ALTIPLANO: IN THE SEARCH OF THE SILVER LAND

Summary: Visit the world-class Ag-Sn Cerro Rico deposit (0.1 Mt Ag, 2.4 Mt Sn) and the Ag-Zn-Pb San Cristobal epithermal mine (4 Mt Zn, 1,4 Mt Pb, 20,000 t Ag), Bolivia.

Cultural aspects: Travel through the Quebrada de Humahuaca (Cultural and Natural Heritage, UNESCO) and visit Potosi, with the world known Royal Mint and the Uyuni world largest salt lake.

Duration: 5 days PRICE: U\$S 1600







SPONSORSHIP AND EXHIBITION

The IAGOD was established in September 1963 with the objective of promoting international cooperation in the study of the genesis of ore deposits and furthering the growth of knowledge in this field. IAGOD is a member of IUGS. These tasks are achieved in several ways. This quadrennial international symposium is the most important one. The 15th IAGOD Symposium, with the theme « *Ore Deposits: providing resources for present and future generations*», covers all aspects of currently hot topics in economic geology that will lead to an enhanced understanding of the genesis of mineral deposits and important practical issues of improved exploration concepts and discoveries in economic geology.

It is worth highlighting that this is the first time for Argentina to host such important meeting.

We expect a mix of industry, government, and academia, with a strong student component, attending the Quadrennial Symposium. This four days symposium will be supplemented by field trips, workshops, and short courses. The symposium will provide a great opportunity to promote mining companies through sponsorship and participation as exhibitors.

Join us, to reach for the peak of the understanding of ore deposits and the concepts of exploration, having a chance to reach a broad international audience through this Symposium.

Sponsors have the opportunity to have their sponsorship promoted in various ways:

	Platinum	Gold	Silver	Bronze
	U\$S 10,000	U\$S 6,000	U\$S 3,000	U\$S 2,000
Acknowledgement with logo on conference web site	•	•	•	•
Acknowledgement with logo on abstract book	•	•	•	
Exhibition space (in order of sponsorship level)	•	•	•	•
Company banner/logo displayed in venue (level dependent)	•	•	•	•
Acknowledgement at opening/closing conference	•	•		
Promotional material included in registration package	•	•	•	
Complementary registration for up to 3 delegates	•			
Complementary registration for up to 2 delegates		•		
Complementary registration for up to 1 delegate			•	•
Acknowledgement at opening/closing one session (of choice)			•	•



ACCESSIBILITY AND TRANSPORT



INTERNATIONAL AIRPORT M. MIGUEL DE GÜEMES.

76 weekly flights from Salta to Buenos Aires, Córdoba, Mendoza, and Iguazú; connecting to international destinations in America and Europe.

SALTA/BUENOS AIRES FLIGHTS

ANDES - 3 flights a week
AEROLINEAS ARGENTINAS - 23 flights a week
LAN - 21 flights a week

DIRECT FLIGHTS TO SALTA

Buenos Aires, Córdoba, Mendoza, Iguazú.

INTERNATIONAL FLIGHTS

From Santa Cruz, Bolivia > Salta
From Rio de Janeiro > Iguazú > Salta
From Santiago de Chile > Mendoza > Salta
From Lima / Montevideo / Panamá / Santiago
de Chile / Porto Alegre / Rio de Janeiro >
Córdoba > Salta11

EZEIZA INTERNATIONAL AIRPORT (BUENOS AIRES)

It has around 30 air carriers with many direct flights from New York, Miami, Dallas, Atlanta, Toronto, Auckland, Sydney, Houston, Rome, Madrid, Paris, Amsterdam, Frankfurt, London, Barcelona, Dubai, Doha and all South American main cities.

Operating air carriers: Aerolíneas Argentinas, Aeromexico, Air Canada, Air Europa, Air France, Alitalia, American Airlines, Austral, Avianca, Boliviana de Aviación, BQB Líneas Aéreas, British Airways, Conviasa, Copa Airlines, Delta Airlines, Emirates, Gol, Iberia, KLM, LAN, Qatar Lufthansa, Airlines, Airlines, TAM, TAME, Turkish Airlines, United Airlines.





AEROLINEAS ARGENTINAS

The main airline in Argentina offer the followings discounts:

10% live for attendees, 15% direct to speakers; 25% direct commission of the

NATIONAL DISTANCES

ROUTES

16

9/38

9/5

9/52

68/40

9/52

51/40

9/38

68

68

9/38/40

1.605

1.464

903

245

410

772

1.506

1.609

473

157

241

222

265

555

311 420

124

92

460

310

17

12

4

10

16

17

6 1/2

4 1/4

1 1/2

2

6

5

4

PROVINCE

(Misiones) Córdoba

La Rioja

Mendoza

Buenos Aires

Cataratas del Iguazú

Humahuaca (Jujuy)

La Quiaca (Jujuy)

Mendoza (via Córdoba)

Paso de Jama (Jujuy)

Purmamarca (Jujuy)

Ruinas de Quilmes

Salinas Grandes

Salinas Grandes

(via Quebrada del Toro) San Fernando del

San Miguel de Tucumán

San Miguel de Tucumán

San Salvador de Jujuy

San Salvador de Jujuy

(through cliffside road)

Santiago del Estero

Valle de Catamarca

(via Cafayate)

association

INTERNATIONAL LAND CONNECTIONS

ACCESS BY LAND

Nationals

- From Buenos Aires: NR 34 / NR 9

- From Iguazú: NR 16 - From Córdoba: NR 9

- From Tucumán: NR 9 / NR 40

- From Jujuy: NR9 / NR 34

Internationals

From Bolivia through the border crossing points:

- Yacuiba (Salvador Mazza)
- Bermejo (Aguas Blancas)

From Chile through the border crossing points:

- Sico: (San Pedro de Atacama San Antonio de los Cobres - Salta)
- Jama: (San Pedro de Atacama Jujuy Salta)

From Paraguay through border crossing points:

- National Route NR 81

PUBLIC TRANSPORTATION SYSTEM

Bus - Taxi - Car service - Car rental









VENUE AND ACCOMMODATION

SALTA HOST CITY

NIGHTS ON BALCARCE STREET

Folklore peñas (pubs), regional food restaurants, bars, arranged along the traditional Balcarce Street: night in "La Balcarce" is characterized by good folk music, the sound of the guitars, drums, the zambas and chacareras (both traditional dances), friends gather to enjoy asado (roasted meet) and empanadas (pasty), topped with the flavors of the exquisite wines from Salta.

Peñas are a must for tourists who want to have fun and dance, enjoy music and traditional food. There are also bars where live bands from different genres play, restaurants that serve regional and international food.





ARTISANS FAIR

On Sundays from 10:00 to 09:00 more than 200 artisans gather, on both sides of Balcarce Street which dresses in colors, shapes, sounds and smells that convey images from afar as much as vivid present images. The number of visitors grows every Sunday as not only people visiting from around the world assist but salteños that have prolonged the magic of gathering with friends at night to the point of becoming a family ride, they enjoy the afternoons, our traditions and fun with music and shows for both grownups and children. There are many different crafts; the ones made in alpaca are typical, fabrics, embroidery, ceramics, sweets, etc.





CONVENTION CENTER

Salta does not only mean culture, tradition, beauty and landscape diversity; it is also the ideal framework for Business Tourism. That is why the Convention Center of Salta is waiting for you to offer you the best place for your event.

Convention Center of Salta was opened on August 11, 2007; its main objective is to satisfy the growing demand of the business tourism segment that includes the organization of conferences, trade fairs, exhibitions, sporting events, corporate and incentive trips.

This majestic work is considered as one of the most significant of the interior of the country, not only because of its infrastructure, but also for its capacity and leading technology.

The Convention Center Salta S.E. was established in May, 2012, to positions Salta province within Argentina and Mercosur, as a destination for Meetings, Conventions and Events, offering the highest quality at the forefront of modernity requirements, offering visitors and clients the best result.



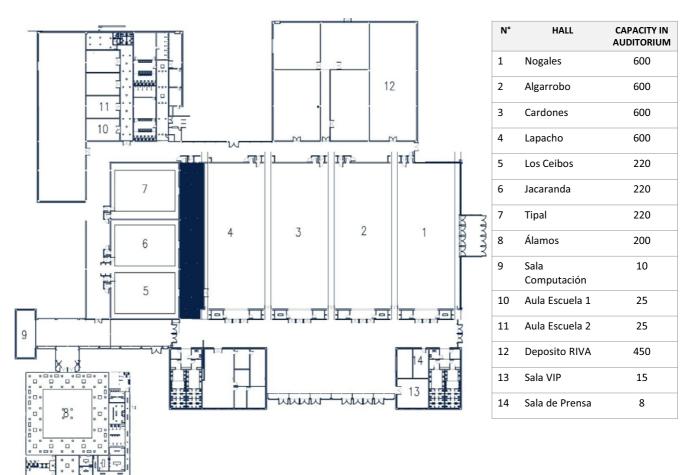








FLOOR PLAN



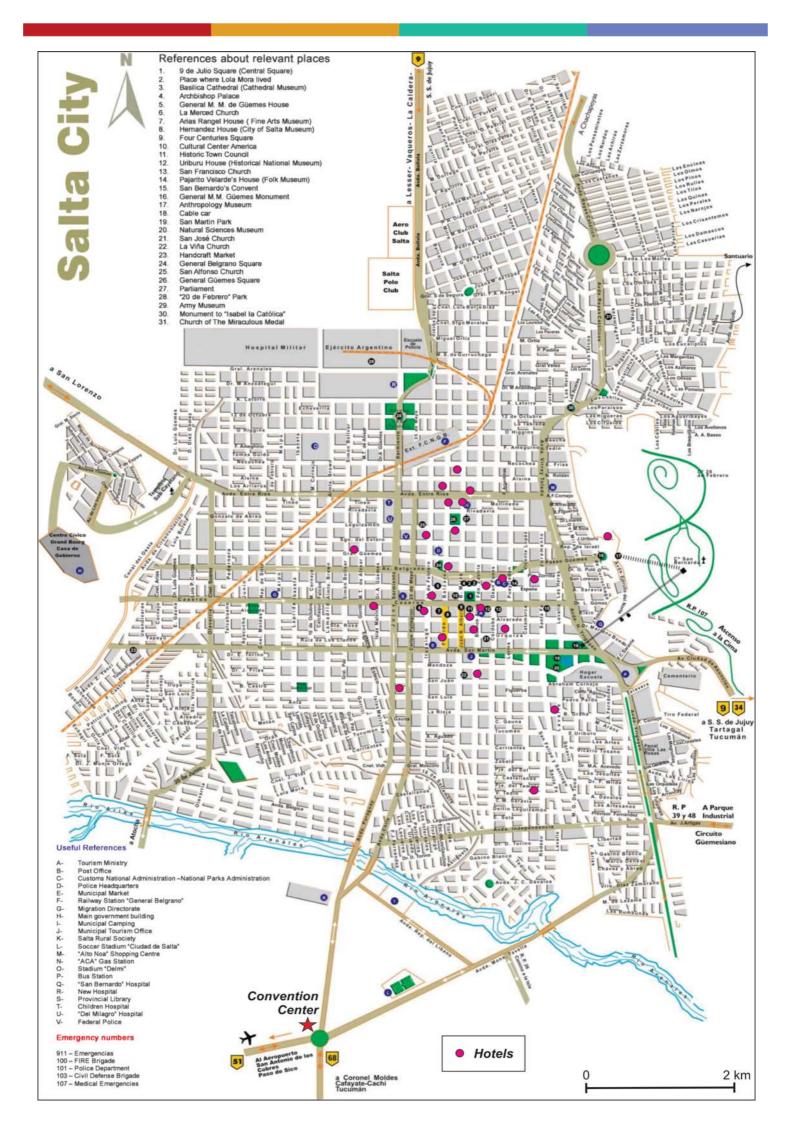
THE CONFERENCE CENTER



LOCATION

The Convention Center of Salta is located at the entrance of the city on the route to the International Airport Martin Miguel de Güemes - Limache roundabout, Kennedy Avenue-5 minutes from the airport and 10 minutes from downtown. Excellent conditions of accessibility and connection.





HOTEL ACCOMMODATION

The province's current hotel capacity is 19.000 beds. This includes 4 and 5 star hotels as well as boutique hotels. Besides, Salta as four venue auditoriums and 110 conference rooms, prepared to accommodate meetings and conventions which call for different magnitude and technology.

HOTELS IN THE CITY

FIVE STARS HOTELS (U\$S 120 - 220)

- Alejandro I
- Sheraton Salta



- Amerian
- Design Suites
- Portezuelo Hotel
- Provincial Plaza



- Posada del Sol
- Shauard
- Wilson
- El Colonial
- Las Moras (Villa San Lorenzo)

BOUTIQUE HOTELS (U\$\$ 100 - 120)

- Aldaba Hotel
- Del Vino Boutique
- Hotel Legado MÃ-tico
- House of Jasmines (La Merced chica)
- Patios de Lerma
- Solar de la Plaza
- Las Chirimoyas

















ONE AND TWO STARS HOTEL FOR STUDENTS (U\$S 25 - 50)



TOURISM INTERESTS



MOVITRACK - SHORT TRIP - 1 DAY SAFARI TO THE CLOUDS

Aboard vehicles specially designed for maximum enjoyment of the landscape and the difficulties of the Puna, wind, sun, cold and heat, are inevitable partners in this adventure. 4x4 Trucks with comfort of a motor home, have onboard bathroom and ceilings that open on certain sections of the circuits, open on certain

sections of the circuits, this feature allows not only have a complete panoramic view, but also a forced oxygenation leaving with no effect altitude sickness. They seat 18 and 20 people and are ideal vehicles to travel in small groups given the distribution of its interior.

CAFAYATE SHORT TRIP - 1 DAY

The road to Cafayate has a particular geography that has been carved by wind and sun. Surprising rock formations seen in gorges and multicoloured mountains surprise the traveller. Some of these formations are the Garganta del Diablo or Devil's Throat, El Anfiteatro or Amphitheatre, El Sapo or Frog, El Fraile or Friar, Los Castillos or Castles, among many.



THE VINE AND WINE MUSEUM - 1 DAY

In the Calchaquí- Valleys, a region noted for its viticulture, valleys, mountains and gorges, one finds The Vine and Wine Museum. It is a live space, full of visual and sound effects that are interactive and entertaining, presenting all visitors with a chance to learn.



CACHI – SHORT TRIP – 2 DAYS

Surrounded by coloured mountains and blessed by the Calchaqui River, Cachi remains a restful town, as well as protecting more than one hundred archaeological sites. Located at 2.280 metres above sea level, this Calchaqui town is recognized by visitors for its particular essence. The Cachi snow capped massif, is one of the treasures that give special characteristics to this town of six thousand inhabitants.



IRUYA - SHORT TRIP - 2 DAYS

Surrounded by an incredible landscape, Iruya is a magic town, literally hanging in the mountains in the north of the province of Salta. Its steep stone streets seem to be from another time. As if out of a postcard, Iruya invites to rest and meditate.

TOLAR GRANDE – 2 DAYS

The small town of Tolar Grande is set in the high altitude Puna desert from where the volcanoes found in the province can be visited (Llullaillaco, Socompa, Arizaro, Aracar and Guanaquero), as well as the incredible water holes in the salt flats, and the most unforgettable landscape. The Arita Cone is a perfect cone of a black lava, 147 metres high and one of the outstanding geographical most features in Salta. It is found at the Arizaro Salar, in the high plateau or Puna, 80 kilometres away from Tolar Grande.





Creating Hands Circuit description day by day Circuit description day by day Circuit description at the Airport, Transfer to the Hotel. In the afternoon, Themed City Tour (Museum de Fine Arts, Museum of Contemporary Arts, House of Culture, Historical Centre). Day 2: Leaving for Cafayate. Quebrada de las Conchas. Accommodation and lunch. Pictorial Workshop under the supervision of a professor of visual arts at the town of Cafayate. End of the activity. Visit to a crafts workshop. Night in Cafayate. Day 3: Workshop day and country lunch. Return to Cafayate, Afternoon off. Night in Cafayate. Day 4: Continuing the Workshop day and country

lunch. Return to Cafayate.Afternoon off. Night in Cafayate.

Day 5: Return to Salta, Night in Salta, Reunion dinner

Day 6: Transfer to Salta Airport

Region and main tourist attractions

Salta and its outskirts

Lerma Valley.

Puna: Santa Rosa de Tastil (archeology and crafts), town of San Antonio de los Cobres.

Province of Jujuy:

Salinas Grandes

(salt pools, arts and crafts)

Purmamarca (Cerro de los Siete Colores, arts and crafts).

*Quebrada: gorge; cuesta: winding road.

Duration

Days











THE INCA TRAIL AND SACRED SNOW PEAKS Circuit description day by day R to

Day 1: Salta - San Antonio de los Cobres. Salta, Quebrada del Toro, Puerta de Tastil, San Bernardo de las Zorras, Laguna del Toro, Palomar, Pie del Nevado de Chañi, Andean Spiritual Ceremony. Salinas Grandes, San Antonio de los Cobres. Dinner. Night in San Antonio de los Cobres.

Dia 2: San Antonio de los Cobres - Cachi. La Polvorilla Viaduct, Abra del Acay, Andean Spiritual Ceremony, La Poma, Inca Barns. Payogasta, Cachi. Accommodation in cabins. Dinner.

Day 3: Cachi - Las Pailas - Cachi. Vivencial Workshops - Tinku - sharing perceptions and feelings aroused from Ceremonies. Interpretation of the messages of the Apus with Pusak-Nuna Andean Spiritual Guide. Visit Cachi

and Las Pailas with a local guide. Dinner and accommodation in Cachi.

Day 4: Cachi - Corralito. NR40, Las Pailas. Molinos. Camino de los Artesanos, Seclantás, Angastaco, San Carlos, Animaná, Corralito. Dinner and accommodation in peasantbased tourism Network.

Day 5: Corralito - Cafayate - Salta
Trekking and lunch in the community. Visits
around Cafayate, visit around the town. At
Punilla, NR 68, Ceremony of Gratitude. Visiting the incredible Geological formations in
the Calchaqui Valley and in Quebrada de las
Conchas. Lerma Valley, Arrival to Salta.
Observations: Circuit available throughout

the year.

Region and main tourist attractions

Lerma Valley.

Quebrada del Toro: C-14 Branch, Tren a las Nubes.

Puna: Santa Rosa de tastil (archeology), Nevado de Chañi, Salinas Grandes, San Antonio de los Cobres (La Polvorilla Viaduct).

Calchaqui Valleys: La Poma (Incas' Barns, Devil's Bridge), Payogasta, cachi (church, museum, crafts mar-

ket, archeological ruins), Inca Trail, Molinos (crafts), Seclantás, Angastaco, Quebrada de las Flechas, San Carlos, Animaná, Corralito, Native communities.

Quebrada de las Conchas.

Lerma Valley.

*Quebrada: gorge; cuesta: winding road.



GOLDEN FISH FLY FISHING AND WINE EXPERIENCES				
Duration Days	Circuit description day by day	Region and main tourist attractions		
9	-Fly fishing of gold fish in , wild and clear waters in the middle of the yungas forest. A programme prepared for people with adventurous spirit, and who are fond of fishing. Accommodation in boutique Hotels, 3* 4* 5* (stars) Camping. Meals at camping and winery. Tastings. Full days of fly fishing activities.	Salta City and outs- kirts.		
	 All transfers on double-cabin 4x4 truck or similar with A/C. 03 nights of accommodation in Salta. 	Observations: From March 15th through		

• 04 nights in lodge next to the river.

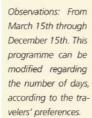
01 night in camping.

• 01 lunch in winery.

• 04 lunches

• 06 dinners.

• 01 tasting.







nes National Park, Alga-

rrobal), Cuesta del Obispo,

Quebrada de Escoipe)







CALCHAQUI ROADS Duration Region and main Circuit description day by day Days tourist attractions Day 1: Salta - Amblayo. Lerma Valley 6 Excursion to Amblayo located between Ler-Calchaqui Valleys: ma Valley and the Calchaqui Valleys. Cuesta Amblayo, Quebrada de las del Obispo. Descent to the town of Amblayo. According to the season, participation in agri-Conchas (geological forcultural activities (milking cows, cheese mamations), Cafayate, (gasking). Night in a family home. tronomy, rural tourism, wi-Day 2: Horseback riding in Amblayo - Mounnery, wines), Quebrada tain refuge. Horse-riding expedition through the Amblayo Valley along an old horse trail. de las Flechas, Angastaco, (Duration: 5 hours). Arrival at the mountain Molinos, Seclantás (Acsibi refuge. Night. caves), Cachi (Los Cardo-

Molinos – Seclantás. In the morning, a walk around the surroundings with the hosts and participation in the preparation of a regional lunch. In the afternoon, visit to a craft winery and a tour to the Quebrada de las Flechas Visit to the town of Molinos. Night in Seclantás in a famiy home.

Day 3: Mountain refuge horseback Riding

- Quebrada de las Conchas - Cafayate (su-

rroundings). Midday horse riding towards

the Quebrada de las Conchas, ascending to a wonderful panoramic view. Cafayate. Meeting with a family from the Rural Tourism Net-

Day 4: Cafayate - Quebrada de las Flechas -

work. Night in a family home.

Day 5: Seclantás – Trek to Acsibi – Cachi.

Reaching closer to the starting point in offroad vehicles. Trekking day towards the caves of Acsibi. At the end of the day, return to Cachi. Night.

Day 6: Cachi - Los Cardones National Park-Salta.

In the morning, walk to the Algarrobal visiting crop areas. In the afternoon, return to Salta through the Los Cardones National Park.

*quebrada: gorge; cuesta: winding road; camino: road.



VALLEYS, SUBTERRANEAN RIVERS, CAVES AND MYSTERIES

Duration Days

Circuit description day by day

Region and main tourist attractions

Salta City and its

outskirts: Historical

city center, churches, museums, San Ber-

nardo Hill, Balcarce

Street, San Lorenzo.

Calchaqui Valleys:

Quebrada de Escoipe,

Cuesta del Obispo,

5

Day 1: Transfer to the hotel. Tour around the city. Dinner with the whole tour group and guide. Accommodation in Salta.

Day 2: Salta - La Poma - Cachi -Seclantás.

Escursion to the Calchaqui Valleys through the Cuesta del Obispo. Los Cardones National Park. National Road N. 40 heading towards the town of La Poma. Circuit around one of the stretches of the Calchaqui river within the caves. A small trek through the Graneros incaicos. Picnic. Return to Cachi taking NR N. 40. Visit to the Archeological Museum. Leaving for Seclantás through "el Camino de los Artesanos". Night in Seclantás.

Day 3: Seclantás - Molinos - Angastaco.

Excursion to the Caves of Acsibi. Trekking. Visit to

Cachi, Los Cardones National Park, Recta

a vicuña farm and a church in the town of Molinos. On the way to Angastaco visit and lunch at El Carmen Farm. Entrance and snacks in Angastaco. Small trek in Los Colorados. Camping in La Quebrada de las Flechas

Day 4: Quebrada de las Flechas - San Carlos - Animaná - Cafayate - Quebrada de Cafayate - Salta.

Excursion to San Carlos through some small villages located by the roadside. Visit to an ancient church. Animaná. Cafayate. Visit to a traditional winery and tasting of wines. Lunch at a high altitude bar. Return to Salta city through the Qubrada de las Conchas. Stops at natural attractions such as Los Castillos, Anfiteatro, the Garganta del Diablo, etc. Night in Salta.

Day 5: Transfer to Salta city airport.

del Tin Tin), Amblayo, Isonza, Payagasta, Seclantás, (Camino de los Artesanos). Molinos (vicuña farm. church), Angastaco, Los Colorados, Que-

brada de las Flechas,

San Carlos (church,

arts and crafts), Ani-

maná, Cafayate (wi-

nery, wines), Que-

las Conchas (geological formations).

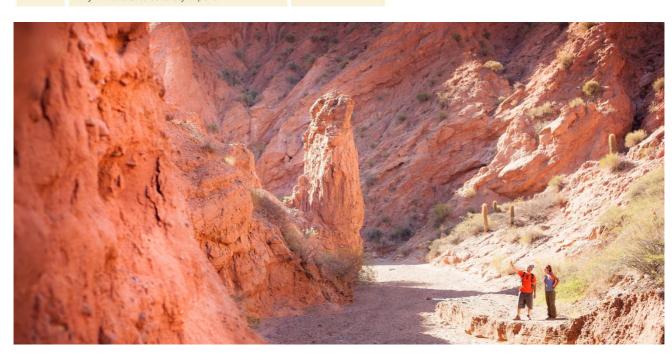
brada de

*quebrada: gorge; cuesta: winding road; recta: stretch; camino: road; vi-cuña: Andean camelidae.











	BIRDWATCHING SALTA
Duration Days	Circuit description day by day
8	1. Huaico Reserve, San Lorenzo Birdwatching walk at Huaico Reserve in search of Huaico Tinamou, Cream-backed Woodpecker, Alder Amazon, Red-tailed Comet We then visit San Lorenzo in search of Red-legged Seriema two nights accommodation at Selva Montana Lodge, San Lorenzo. Night outing for Hoy's Screech Owl, Scissor-tailed Nightjar 2. Mountain pass and Yala river, San Lorenzo Full day excursion for Torrent Duck, Rufous-throated Dipper, Red-faced Guan
	Relomitas and J. V. Gonzales Full day exploring transitional doudforest and dry woodland in search of Toco Toucan, Black-legged Seriema Two nights accommodation at hotel in J.V. Gonzales J.V. Gonzales Full day exploring dry chaco
	forest looking for Quebracho Crested-Tinamou, Spot-winged Falconet, Turquoise-fronted Am-
	azon, Brown Cacholote, Scimitar-billed Wood- creeper
	5. El Tunal, Juramento, San Lorenzo Full day trip in search of Rheas, Tinamous, Crowned Eagle, Andean Condor
	Overnight at Selva Montana Lodge 6. Toro Canyon, San Antonio de los Cobres
	Ful day exploring the canyon, cactus fields and la- goons looking for Horned and Giant Coots, An- dean Goose, Giant Hummingbird two nights at Hosteria de las Nubes, S.A.C
	7. Gallo Mount pass, Pocitos saltflat, S.A.C High Andes birding full day in search of Andean and Puna Flamingoes, Rufous-bellied and Gray-breast- ed Seedsnipes, Puna Plover
	Abra Blanca, Salta We drive back to Salta with several birding stops at different altitudes. End



Region and main tourist attractions Lerma valley, San Lo-

Birds of Huaico Re-

Santa Laura mountain

Birds of Yungas forest

Birds of Yungas and Chaco woodland. Dry Chaco brushland. Birds of semidesert chaco habitat Chaco Salteño Birds of chaco habitat Puna, lagoons and

renzo

pass, Yala

Chaco forest

canyons Birding the Puna High Andes, saltflats, rivers and lakes. Birds of the High An-

*Quebrada: gorge; Guai-

youngs: Aymaran for "warm lands"; pava de monte alisero: a bird from the family of Cracids; ho-

teria: guest house.







THE INHOSPITABLE PUNA Duration Circuit description day by day Days Day 1: Salta - Quebrada del Toro - San Antonio de los Cobres - Pocitos -Tolar Grande. Departure from Salta. Circuit through the route of the Train to the Clouds (via the Quebrada del Toro). Arrival in San Antonio de los Cobres. Crossing through Salar de Pocitos and the Desierto del Diablo. Arrival in Tolar

Grande. Night in Tolar Grande Day 2: Tolar Grande - Salar de Arizaro - Tolar Grande. Outing. Circuit through the Salar de Arizaro. Arrival at the rare formation "Cono de Arita" (Arita's Cone). Trek. Return. Visit to the Tunel del Hombre Muerto and Ojo

Day 3: Tolar Grande - San Antonio de los Cobres - Quebrada del Toro - Salta. Return to Salta. Visit to the archeological ruins of Santa Rosa de Tastil. End of excursion.

de Mar. Night in Tolar Grande.

Region and main tourist attractions

Puna: Santa Rosa de Tastil (archeological place), San Antonio de los Cobres (town, arts and crafts), Salar de Pocitos, Desierto del Diablo, Salar de Arizaro, Tolar Grande, Ojos de Mar, Cono de Arita, Tunel del Hombre Muerto.

Quebrada del Toro: Railways of the Tren a las Nubes.

*Quebrada: gorge; salar: salt flat; cono: cone.



Duration Days Circuit description day by day 6 Dia 1: Reception and transfer to the hotel. Night in Salta. Day 2: Visit to the City and surroundings. Night in Salta. Day 3: Full day excursion to Cafayate visiting a winery and the Vine and Wine Museum (tickets included). Accommodation. Day 4: Visit to two wineries. Excursion to Molinos, visiting places where the "Patero" wine is elaborated in a traditional fashion. Night in

Molinos.

Day 5: Excursion to Cachi and Cachi Adentro. Continuation of trip through the Cuesta del Obispo. Arrival in Salta. Night in Salta.

Day 6: Transfer to Salta city airport.

*quebrada: gorge; cuesta: winding road; recta: stretch; camino: road; Patero: a wine made by stepping on grapes.

Region and main tourist attractions

Salta City and its outskirts: Historical Center, churches, museums, San Bernardo Hill, Monuments, Balcarce Street, San Lorenzo.

Calchagui Valleys: Quebrada de Escoipe, Cuesta del Obispo, Payogasta (wines), Cachi (Los Cardones National Park, recta del Tin Tin, church, museum), Cachi Adentro: (wineries, Seclantás (Camino de los Artesanos, "Salta's poncho"), Molinos (winery, "Patero" wine, museum), Angastaco. Ouebrada de las Flechas. San Carlos (church, arts and crafts), Animaná, Cafayate (winery, wines, Vine and Wine Museum, goat cheese factory), Quebrada de las Conchas (geological formations).







HIGH ALTITUDE NORTHERN WINES

Duration Circuit description day by day

Day 1: Salta. Reception and transfer to the hotel. City tour around 9 de julio Square, Basilica Cathedral, Cabildo (Town Council), Convent of San Francisco, San Bernardo Hill Summit, the Monument to General Güemes, the 20 de Febrero Monument, Quebrada de San Lorenzo and Crafts Market. Night in Salta.

Day 2: Salta - Cachi. (Tour around the Valleys).
Circuit: Quebrada de Los Laureles. Quebrada de Escoipe. Cuesta del Obispo. Enchanted Valley. Piedra del Molino (3348 meters above sea level.). Recta del Tin Tin. Los Cardones National Park, Nevado de Cachi. Stops and treks along the circuit to enjoy the beauty of the gorgees. Lunch. Visit to a winery. Night in Cachi.

Day 3: Cachi - Cafayate. (Tour around the Valleys). Leaving for Cafayate taking National Road N. 40

along the Calchaqui River, Historical towns such as Seclantás (Camino de los Artesanos) and Molinos (ancient Spanish Hacienda and National Historical Museum). Quebrada de Las Flechas (a 25-minute light trekking tour) wine-producing area of remarkable towns such as Animaná, San Carlos and Cafayate. Visit to the wineries Nanni (organic wines), El Esteco and Domingo Hermanos.

Day 4: Cafayate - Salta Airport. Leaving for the archeological place of Quilmes (Province of Tucumán). Return to Cafayate. Lunch at Finca "Las Nubes" with tasting of wines of Bodega Mounier. Return to Salta through the Quebrada de Las Conchas (Garganta del Diablo, Anfiteatro and Los Castillos among others). Arrival in Salta. Night in Salta.

*Quebrada: gorge; cuesta: winding road; recta: stretch; nevado: a snowcapped mountain; camino: road.

Region and main tourist attractions

Salta City and its outskirts: Historical Center, churches, museums, San Bernardo Hill, Monuments, Balcarce Street, San Lorenzo.

Calchaqui Valleys: Quebrada de Escoipe, Cuesta del Obispo, Payogasta (wines), Cachi (Los Cardones National Park, recta del Tin Tin, church, museum), Seclantás (Camino de los Ar-

tesanos, Salta's poncho), Molinos (Colomé winery, museum), Angastaco, Quebrada de las Flechas, San Carlos (church, arts and crafts), Animaná, Cafayate (winery, wines, Vine and Wine Museum, goat cheese factory), Quebrada de las Conchas (geological formations).

Province of Tucumán: Ruinas de Quilmes.





CONTACT INFORMATION OF LOCAL TRAVEL AGENCIES

If you are interested in hiring a tour you may contact any of the following Travel Agencies, members of the Salta Convention & Visitors Bureau:

Agencia del Peregrino

info@agenciadelperegrino.com.ar www.agenciadelperegrino.com.ar Phone +54-387-4229440

Tastil Viajes

info@tastil.com.ar http://www.turismotastil.com.ar Phone +54-387-4311223

UMA Travel

promocion@umatravel.tur.ar www.umatravel.tur.ar Phone +54-387-4228317









Servicio Geológico Minero Argentino www.segemar.gov.ar



CONTACT INFORMATION



15th Quadrennial IAGOD Symposium secretariat@15iagods.org www.15iagods.org



International Association on the Genesis of Ore Deposits www.iagod.org

