The Role of the USGS in Discovering the 3rd Largest Oil Field in the World
Or...The KGB is good for you if you need good body guards:
Field Expeditions Along the Great Silk Road of Kazakhstan and Kyrgyzstan During and After Communism

Abstract
Conducting field expeditions along the Great Silk Road of Kazakhstan and Kyrgyzstan, where the fierce red-headed Mongol conqueror Ghengis Khan (1162-1227) once roamed, is a geologically and culturally unique experience. But for decades this region – and virtually all of the rest of the immense territory of the former Soviet Union – was closed to geologists from outside the Soviet bloc. The current USGS-Kazakhstan-Kyrgyzstan-Oil Industry project is a consortium comprised of major U.S. and European oil companies (Eni/Agip, BG, BP, ExxonMobil, Inpex, Phillips, Royal Dutch Shell, Statoil, and TotalFinaElf) and several former Soviet Union research institutes in Russia, Kazakhstan and Kyrgyzstan. This project has focused on developing predictive exploration and reservoir models based on mountain-climbing studies in the Tian Shan Mountains of Kazakhstan.

February Dinner Meeting
Date: February 21, 2002
Time: 6:00 pm Social Hour
7:00 pm Dinner
8:00 pm Presentation
Location: Biltmore Hotel & Suites
2151 Laurelwood Road
Santa Clara, CA
(408) 988-8411
Speaker: Dr. Harry Cook
U.S. Geological Survey
Cost: $25 with choice of
Chicken Asiago or Soft Polenta with Grilled Vegetables
Reservations: Shirley Radding
(408) 246-2564
(408) 296-8625 FAX

Reservations should be made by February 18th; stating your name, company affiliation, number of people in the party and the meal preference. Or, register using our web site: www.scvacs.org

Chair’s Message
Hello, my name is Jonathan Touster. I am a Lecturer in the Chemistry Department at Stanford University and the new Chair of the Santa Clara Valley Section. This year, as usual, the executive committee has been hard at work planning a variety of events and activities. The dinner meetings this year cut across many disciplines. This month, Dr. James D. Morrison, our Mosher Award winner, will speak on asymmetric organic reactions. February brings Dr. Harry Cook of the U.S. Geological Survey. Dr. Cook will address some of his adventures as a geologist in Russia and central Asia.

continued on next page
In March, Dr. David Rakestraw from Eksigent Technologies, formerly of Sandia National Laboratories, will give an overview of microchip sensor technology. The student affiliates of Santa Clara University will host our April meeting. They'll have talks on undergraduate research and student affiliate activities. Our very own wine connoisseur, Floyd Hobbs, is working on a wine tasting event for May and as usual our Awards Picnic will happen in June.

Again, we encourage your attendance at the dinner meetings. The lively conversations will insure a good time, and you may make a contact or two to boot. However, if you can't make the dinner, you are still more than welcome to attend the talk for free. As always, our events are open to friends, family, guests, and interested members of the general public.

For the most current information about what's happening in the local section, check out our recently renovated web page: www.scvacs.org. Ean Warren did a fabulous job making it easier to navigate, and, as always, Karl Marhenke keeps its content up-to-date with our latest activities and announcements. We are lucky to have a great Web Committee.

Elsewhere in this issue you will find the newly drafted mission statement of the Strategic Planning Committee. It will help guide our new committee while it considers new directions for us to explore as a section.

The latest count, announced at our December executive committee meeting, is that we have 3641 section members. The last few digits of this number fluctuate throughout the year as members move in and out of the section. So, among our longtime members, we always have new faces. Regardless of how long you have been a member of the section, I urge you to participate in our programs and to give us input on what you would like from the section. I can be reached at (650) 723-4340. I wish you all a happy New Year, and look forward to meeting you at our events.

Jonathan Touster

Kazakhstan, Kyrgyzstan and Uzbekistan. Our predictive models were used in the recent 2000 discovery of the Kashagan Oil Field, the supergiant 50 billion-barrel oil field in the North Caspian Basin of Kazakhstan. Kashagan is the 3rd largest oil field ever discovered in the world out of about 75,000 oil fields. Kashagan’s 50 billion barrels of oil represents about 60% of all the remaining oil in the US. Building on this success, Harry Cook and his colleagues from research institutes in Russia and Kyrgyzstan, as well as the US and European oil industry are developing a new 4-year project. This new multimillion dollar Cooperative Research and Development Agreement (CRADA) will undertake new field research expeditions in the high Tian Shan Mountains of Kyrgyzstan.

Because Islamic terrorists and kidnappers frequent this Central Asia region, where opium poppies and marijuana are grown, former KGB personnel, weapons, emergency evacuation procedures, and medical doctors are part of the field expeditions.

Biography:

Dr. Cook received his BA degree in Geology from the University of California at Santa Barbara and his Ph.D. degree in Geology from the University of California at Berkeley. From 1965 through 1970, he was a Research Geologist with Marathon Oil Company’s Denver Research Center in Littleton, Colorado. Here he conducted petroleum exploration research in the United States, Canada, Mexico, and numerous countries in Western Europe. In 1970, he left industrial research and became a Professor of Geology at the University of California at Riverside and the Institute of Geophysics and Planetary Physics. During the Arab oil embargo in 1975, he joined the U.S. Geological Survey in Menlo Park as part of the U.S. Geological Survey’s World Energy Resources Program.

Since 1985, six years before the breakup of the former Soviet Union, Dr. Cook has been conducting bi-annual field expeditions in the mountains of Siberia, Kazakhstan, Kyrgyzstan, and Russia. In 1994, he developed a multimillion-dollar international collaborative project with eight U.S. and European oil companies and several Russian and Kazakhstan research institutes. This research focused on conducting field studies in the Tian Shan Mountains of Kazakhstan where ancient 350 million old carbonate reefs are beautifully exposed. The petroleum exploration models developed during this project have assisted in the recent discovery of the new supergiant Kashagan oil field in the Caspian Basin of western Kazakhstan. Kashagan oil field contains up to 50 billion barrels of oil, making it the 3rd largest oil field ever discovered in the world.

Dr. Cook recently developed a new 4-year project with the U.S. and European oil industry and Russian and Kyrgyzstan research institutes. This new project will focus on ancient carbonate reefs in the Tian Shan Mountains of Kyrgyzstan and Uzbekistan near Afghanistan, and China, in an effort to better understand the potential distribution of oil and gas resources of Central Asia.
A new, liquid fenced-in enclosure, in alcohol answer to a problem, had remarkably high tendency to erupt into violent action.

Doesn’t make much sense, does it? It’s how a lay person understands a chemist’s statement, “a new, liquid compound in alcohol solution had remarkably high volatility”. Our lay friend’s understanding is impaired because several of the simple terms used by chemists, every day in the lab or seminar room, are well-known to our fellow citizens with entirely different meanings.

In colloquial English, a compound is usually understood to be either a large fenced or walled-in area or a goo of practical utility, like a pipe joint compound. A solution is the answer to a problem, and volatility represents tendency to erupt into violent action. These words are so well known that folks don’t bother to look them up. They just conclude that chemists are strange people.

Prominent other common chemical terms with double meaning are ‘base’, ‘mole’, ‘aromatic’, ‘organic’ and ‘determine’. The confusion we engender when we try to explain things in simple terms blocks understanding, and contributes to chemo-phobia.

We need to revise some of our familiar terminology, using the new terms regularly, to improve public understanding of what chemists say. We English-speaking chemists should agree that better terms are needed, and cooperate in a project to define better ones.

Dr. Joseph F. Bunnett
bunnett@chemistry.ucsc.edu

Strategic Planning Committee Update

The Executive Committee of the local section has created a new committee: Strategic Planning. This committee will develop the long-range plan for the local section.

The first order of business was to develop a mission statement. The Committee presented their mission statement, a version modified from the national American Chemical Society’s mission statement, to the Executive Committee and the following was adopted:

To encourage in the broadest and most liberal manner the advancement of the chemical enterprise and its practitioners.

Toward that end, the Santa Clara Valley Section of the American Chemical Society advances scholarly knowledge; provides professional services and support; communicates with varied audiences; and is actively involved in the science, education, and public policy arenas relevant to the Santa Clara Valley local section.

If you are interested to be a deciding factor in the plan, please contact: Ean Warren ewarren@scvacs.org

New Publications at www.chemistry.org/careers

Curious about the non-technical skills that many employers increasingly are asking for in today’s chemical workplace? Need some tips about writing a curriculum vitae?

You can download new publications on each of these subjects as well as gain access to an entire library of career-development publications and other resources at ACS’ Department of Career Services website: www.chemistry.org/careers.

Interested in sizing up an employment situation you may be considering? While at the above website, you may wish to use the Salary Comparator which allows members to evaluate their salaries with other members in their employment situation.

This new tool also allows members to examine any employment situation within the scope of the ACS surveys, including new graduates’ starting salaries. The comparator is available only to ACS members. For further information, email: careers@acs.org or (voice) 1-800-227-5558.
Past Chair’s Message

Welcome to 2002 and goodbye to 2001!

This was an eventful year for me as Chair of the Santa Clara Valley Section of the ACS. The last message from the outgoing chair usually highlights the section’s accomplishments (there were many) and mentions the dinner meetings, but this message is dedicated to the volunteers of the section.

The experience of serving as chair reaffirmed my positive thoughts about human nature – people are innately helpful and like to say ‘yes’! Old friends responded willingly to gentle arm-twisting; senior scientists and public figures responded positively and rearranged their busy calendars to speak at our dinner meetings; and members, new and old, volunteered and helped out wherever they could. In case you do not know it, your executive committee is comprised of a group of dedicated and hardworking chemists. Without them, this volunteer organization would not function as smoothly as it does.

I am especially appreciative of our secretary, Karl Marhenke. He has kept excellent minutes of our somewhat disorganized meetings, as well as, manning the registration desk at dinner, assembling materials for the annual report (he even contacted me from Japan about it), reminding me gently of many missed items, and driving from Santa Cruz at least twice a month for section business. He has been doing all of this for more than 10 years! Ean Warren, the immediate past chair will be a difficult act to follow! Many of the duties he assumed were the result of having seen a need as the chair and then filling it. He proofed the newsletter, chaired the web committee, helped organize the Younger Chemist Committee, and chaired the National Chemistry Week activities. Shirley Radding with her 50+ years of ACS experience was invaluable. She handles the single most important part of the organization – Chmployment, she serves as hospitality chair, greets each of our new members by letter (often as many as 50 a month), serves as our memory and conscience, and hosts most of the monthly business meetings at her house! All of the councilors and committee chairs have specific duties for the section – their faithful work makes the chair’s job much lighter. The newest member of our group is Laura Rasay, the editor of the monthly ‘Silicon Valley Chemist.’ She is a fast learner and has fit into our group seamlessly! Thank you, Laura.

The committee chair of which I am most thankful is the chair of the minority affairs committee, Howard Peters, my husband! Without his support, patience, ideas, and positive outlook I would not have survived! Thank you, Howard!

So, Executive Committee of the Santa Clara Valley section of the ACS, thank you for all of your support and help in 2000 and 2001 and for making this section so successful!

Sally Peters
“Diversity in the 21st Century-Advancing Women in Science” is the theme of the WCC Diamond Jubilee planned for the 2002 ACS national and regional meetings in honor of the committee’s 75th anniversary.

The celebration will be highlighted in a Presidential Plenary event and multiple symposia at the ACS Spring National Meeting in Orlando. The plenary event will feature high-profile speakers such as Marye Ann Fox, Chancellor, North Carolina State University; Stephen A. Di Biase, Vice President of PurinoX™ and Emulsified Products, Lubrizol Corp.; and, Fran Keeth, CEO and President, Shell Chemical. Other symposia planned are: Women in Inorganic Chemistry; Collaborations: Networking; Collaborations: Professional Organizations; Early Careers of Chemists; Eli Lilly/WCC Travel Awards: Past and Present; Women Scientists of the Manhattan Project Era; In Memoriam: Nina Roscher – Teacher, Historian, Mentor & Role Model; Chemically Incorrect: Hitting the Glass Ceiling; and Mentoring: A Strategic Tool for Professional Development.

To bring the 75th anniversary celebration to the regional level, and in keeping with the Presidential theme of diversity, the WCC has created a regional award to recognize individuals who significantly foster diversity in the chemical enterprises. The award will be given without regard to age, gender, or nationality of the recipient at each ACS regional meeting in 2002.

Please join in with the celebration of the WCC’s 75th anniversary! Each local section is invited to participate by incorporating the committee’s theme “Diversity in the 21st Century-Advancing Women in Science” into their meetings and special events during 2002. For further information and updates, please visit the WCC web site at http://membership.acs.org/W/WCC.

Happy New Year!

Local Section Members Support the California Academy of Sciences

Four local section members ran in the Run to the Far Side XVII. While they were not costume, they did have a good time and posted great times. Pictured (left to right): Ean Warren, Baird Lloyd, Edward Pease, and Howard Peters.
As the pioneers of PCR technology, Roche Molecular Systems has embarked on an incredible adventure that has not only launched the global genetics revolution, it has unlocked the molecular man and dramatically altered the future of medical care. Every day is a new opportunity to create novel diagnostic tools, close the gap on infection and detection, and take the power of genomics to the next level. It’s an exciting place to be. And the journey has just begun.

We currently seek a capable and experienced Sr. Scientist for our Alameda (San Francisco Bay Area) campus.

CHEMPLOYMENT ABSTRACTS 3586
Position Title: Research Associate I/I: Chemistry
Job Description: Contribute to the design, synthesis & characterization of compounds undergoing biological evaluation.
QUALIFICATIONS DESIRED
Education: BS/MS synthetic chem
Experience: Up to 5 yrs exp in chemical synthesis with a strong background in chromatographic techniques; NMR & MS
LOCATION, SALARY, MAIL ADDRESS
Location: San Diego
Salary: Competitive salary & benefits
Description of Employer: A drug discovery company
Application Instructions: Send resume to: Aurora Bioscience Corp.
Fax: 858-404-6720
Email: hr@aurorabio.com
Web: www.celerajobs.com

CHEMPLOYMENT ABSTRACTS 3587
Position Title: Research Associate I/I: Chemistry
Job Description: Synthesis/purification of fluorescently-labeled peptides & small molecules.
QUALIFICATIONS DESIRED
Education: BS or MS in chem
Experience: Min 1 yr peptide synthesis exp using automated peptide synthesizers or manual synthesis.
LOCATION, SALARY, MAIL ADDRESS
Location: San Diego
Salary: Competitive salary & benefits
Description of Employer: A drug discovery company
Application Instructions: Send resume to: Aurora Bioscience Corp.
Fax: 858-404-6720
Email: hr@aurorabio.com
Web: www.celerajobs.com

CHEMPLOYMENT ABSTRACTS 3588
Position Title: Research Associate/Medical Chemist
Job Description: Carry out synthesis & characterization of small molecule drug candidates & develop clinical drug candidates for oncology, cardiovascular or inflammation based research program.
QUALIFICATIONS DESIRED
Education: PhD org or medicinal chem
Experience: 2 yrs of postdoctoral or relevant research exp, solid grasp of org synthesis as demonstrated by relevant publications; strong analytical skills using NMR, MS, HPLC; Good communication skills & ambition to join a growing team of multidisciplinary scientists.
LOCATION, SALARY, MAIL ADDRESS
Location: South San Francisco
Salary: Competitive
Application Instructions: Send resume to: Celeron Genomics
Fax: 650-846-6650
Web: www.celerajobs.com

CHEMPLOYMENT ABSTRACTS 3589
Position Title: Scientist, Medicinal Chemistry
Job Description: Carry out the design, synthesis & characterization of small molecule drug candidates & develop clinical drug candidates for oncology, cardiovascular or inflammation based research program.
QUALIFICATIONS DESIRED
Education: PhD org or medicinal chem
Experience: 2 yrs of postdoctoral or relevant research exp, solid grasp of org synthesis as demonstrated by relevant publications; strong analytical skills using NMR, MS, HPLC; Good communication skills & ambition to join a growing team of multidisciplinary scientists.
LOCATION, SALARY, MAIL ADDRESS
Location: South San Francisco
Salary: Competitive
Application Instructions: Send resume to: Celeron Genomics
Fax: 650-846-6650
Web: www.celerajobs.com
CHEMPLAYMENT ABSTRACTS – JANUARY 2002

CHEMPLAYMENT ABSTRACTS 3590
Position Title: Research Assistant Chemist
Job Description: Develop, improve & evaluate analytical methods for environmental & biological samples. Provide analytical support for manufacturing & quality control.
QUALIFICATIONS DESIRED
Education: BS/MS org chem, or equivalent Experience: At least 1 year exp lab exp. Have solid understanding of org & analytical chem, be familiar w/ std analytical techniques. In-depth knowledge & first-hand exp in HPLC is required.
LOCATION, SALARY, MAIL ADDRESS
Location: Mountain View
Salary: Dependent on experience Description of Employer: Pickering Laboratories, Inc.
APPLICATION INSTRUCTIONS
Send resume to: Human Resources Pickering Laboratories, Inc.
2180 Space Park Way
Mountain View, CA 94043
Email: personnel@pickeringlabs.com
FAX: 650-968-0749

CHEMPLAYMENT ABSTRACTS 3591
Position Title: Customer Support Chemist
Job Description: Handle technical inquiries from end-user & resellers; perform field installation; represent company at seminars, exhibitions & workshops; create & support training programs; provide technical & user inputs for new consumables & hardware products.
QUALIFICATIONS DESIRED
Education: BS/MS org chem or related discipline Experience: At least 1 yr relevant exp is desirable. Knowledge of HPLC; good communication skills.
LOCATION, SALARY, MAIL ADDRESS
Location: Mountain View
Salary: Dependent on experience Description of Employer: Pickering Laboratories, Inc.
APPLICATION INSTRUCTIONS
Send resume to: Human Resources Pickering Laboratories, Inc.
2180 Space Park Way
Mountain View, CA 94043
Email: personnel@pickeringlabs.com
FAX: 650-968-0749

CHEMPLAYMENT ABSTRACTS 3592
Position Title: Research Associate / Sr Research Associate, Exploratory Research
Job Description: Responsible for performing synthesis & characterization of new chem entities, e.g., metallo tetraphenyl & various other porphyrin-like macrocyclic drug candidates for treatment of cancer & cardiovascular diseases & other biomedical applications & technologies.
QUALIFICATIONS DESIRED
Education: BS/PhD in org chem Experience: 1-5 yrs academic or industrial exp in a synthetic research & development environment.
LOCATION, SALARY, MAIL ADDRESS
Location: Sunnyvale
Salary: Competitive salary & benefits/stock options Description of Employer: Pharmaceutical R&D company
APPLICATION INSTRUCTIONS
Send resume to: Pharmacystics, Inc.
Attention: Human Resources
995 E. Arques Avenue
Sunnyvale, CA 94089
FAX: 408-990-7361
Email: ler@psc.com

EMPLOYMENT HELP IN OTHER AREAS OF CALIFORNIA
The following are names and addresses of contacts in other California Sections. You may write to them or call to find out how to receive their job listings or how to place a job listing with them. Do not send self-addressed envelopes unless requested to do so.

California Section
Mrs. Nancy Gephart
American Chemical Society
California Section
49 Quail Court
Walnut Crest, CA 94596
925-287-8055
e-mail: office@calacs.org

California Los Pardas Section
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Chemistry Dept.
University of California, Santa Barbara
Santa Barbara, CA 93106-9510
e-mail: lamb@chem.ucsb.edu

Mojave Desert Section
Dr. Peter Zarras
NAWCWD, Code 4T4220D
1 Administration Circle
China Lake, CA 93555
760-993-1396
e-mail: zarrasp@navair.navy.mil

Orange County Section
Geoff Anderson
Hycor Biomedical
78272 Chapman Avenue
Garden Grove, CA 92641
714-855-9558

San Gorgonio Section
Mrs. Nancy Gephart
ACS job listing

Sacramento Section
John R. Bingham
809 W. Stadium Lane
Sacramento, CA 95209
916-927-7088
916-927-7006 FAX

San Diego Section
Renate Valois
619-260-4513
619-260-2211 FAX
e-mail: pascal@acusd.edu

San Gorgonio Section
Valerie Barrett
Sunkist Growers
e-mail: vbarrett@sunkistgrowers.com

Southern California Section
Send a self-addressed, stamped business envelope to: ACS job listing
14934 South Figueroa Street
Gardena, CA 90248
310-327-1216
e-mail: office@scalacs.org
www.scalacs.org/employ.html
SANTA CLARA VALLEY SECTION
AMERICAN CHEMICAL SOCIETY
P.O. Box 395, Palo Alto, CA 94302

JANUARY 2002 NEWSLETTER TOPICS:

The Role of the USGS in Discovering the 3rd Largest Oil Field in the World
February Dinner Meeting
Chair's Message
Chemistry Babble: A Letter from Joseph F. Bunnett
Strategic Planning committee Update
New Publications at www.chemistry.org/careers
The American Chemical Society Directory of Graduate Research Just Released
Past Chair's Message
WCC Celebrates Its 75th Anniversary in 2002

CHEMPELOYMENT ABSTRACTS

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Treasurer: Hong Gao 650-564-5197 hong.gao@alza.com
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Editor: Laura Rasay 650-859-4782 editor@scvacs.org

Chempeloyment Abstracts

Director: Shirley B. Radding 408-246-2564 sradding@att.net

FUTURE MEETINGS

Jan 10 Executive Committee Meeting
Jan 17 Mosher Award Dinner Meeting
James Morrison, Recipient
Feb 21 SCV Dinner Meeting
Harry Cook, USGS
Feb 24-27 Process Chemistry in the Pharmaceutical Industry
Barcelona, Spain
Mar (TBD) Chemistry Olympiad
Mar 21 SCV Dinner Meeting
David Rakestraw
Apr 7-12 National Meeting
Orlando, FL

For the latest information, please visit SCV/ACS web site: www.scvacs.org