

Inland Geological Society

Newsletter of the Inland Geological Society

Volume 22 No. 9

In this Issue:

- September Speaker: Bruce Sibbett, Page 1-2
- **LSA MEETING LOCATION**; Map on Page 4
- Other upcoming events; Page 3

This Meeting:
Thursday
September
7th

Time:
Social: 6:00pm
Dinner:
7:00pm
Lecture:
7:30pm

NEW Location:
LSA Associates
1500 Iowa
Ave Suite 200
Riverside, CA
92507
(Map on Pg.4)

Coming to Dinner?
Please RSVP:
By Monday
8/4
(951) 782-3295

September Speaker:

Bruce Sibbett, P.G, C.H.G.

Senior Geologist
Shaw Environmental, Inc.

Geology and Geothermal Potential of Ascension Island South Atlantic

Ascension Island is a mid-ocean, volcanic island located about 7° south of the equator. The exposed island is the top of a large volcanic edifice, rising 3,000 meters from the ocean floor and has move with the ocean crust about 90 km west from the median valley of the Mid-Atlantic Ridge. The ocean crust under the island has an age of 5 to 6 Ma. The volcanic edifice has subsided with the crust at lease 3,300 feet as it moved away from the Ridge.

Ascension Island is about 100 km² (38 sq. mi.) in area with relatively fresh cinder cones and lava flows forming its rough topography. It has a desert climate near sea level with sparse to no vegetation. The vegetation increases with elevation to jungle like cover atop the 859 m (2820 ft) high Green Mountain.

The surface exposures consist of basalts and trachyte to rhyolite with a few intermediate rock types. The eruptive deposits include lava flows, cinder cones, ash-flow tuffs and other pyroclastics. *(Continued on Pg 2)*

Ascension Island – Continued from Page 1

There are no hot springs, significant hydrothermal alteration or other surface indications of a geothermal system. However, a geothermal system with temperatures up to 250° C was discovered by the 3126 m deep exploration well drilled in 1986.

Jet fuel is used to provide electricity and desalinization of seawater for the US Air Force Base on the island. Possible geothermal energy for electrical generation and production of drinking water was the justification for exploration on the island. This work was conducted by the Earth Science Laboratory within the University of Utah Research Institute and funded by the US Air Force.



Pictures From: <http://www.ascension-island.gov.ac/>

Geothermal exploration on Ascension Island started in 1982 with geologic mapping. The mapping identified the principle structures controlling the location of volcanic vents. Limited geophysical survey lines were run based on the geology map. The next stage in exploration was deep core drilling and geothermal gradient measurements. A deep geothermal test well was installed near the boring with the highest thermal gradient.

Bruce Sibbett is a geologist with Shaw Environmental and Infrastructure (Shaw). Mr. Sibbett received his Bachelor's of Science in geology from Brigham Young University in 1972 and M.S. in geology from the University of Idaho in 1976. He worked two years between undergraduate and graduate school. He has work in many fields of geology including minerals exploration, geothermal research and environmental engineering and published several professional articles in the geothermal and environmental fields as author and co-author. Mr. Sibbett has worked in most of the western US and on Ascension Island. He worked for the University of Utah Research Institute, Earth Science Laboratory under contracts for DOE and DOD, plus private companies. His work on Ascension Island included geologic mapping, core drilling and deep well installation in search of electrical grade geothermal power. After leaving the geothermal field, he has worked in southern California for IT Corporation and Shaw in environmental engineering.

Upcoming 2006 IGS Talks

Oct 4, 2006 (Wednesday)

Arthur R. (Dick) Brown, Consulting Engineering
Geologist/Dibblee Foundation
"Tom Dibblee, Field Geology's Grand Master"

Nov 9, 2006 (Thursday)

Maggie Gooding,
LSA Associates, Riverside, California
GIS – Talk TBA

Dec 6, 2006 (Wednesday)

Dr. Michael McKibben,
Department of Earth Sciences,
University of California, Riverside

2007 Talks Coming Soon!

Other Announcements

Field Trip Leader Wanted:

Can you lead a trip and talk rocks around the Salton Sea? Field trip is part of a National Association of Geosciences Teachers ([NAGT](#)) Far West Section field conference for March of 2007
Contact: Marc Willis, Fullerton College,
MWillis@fullcoll.edu (714) 992-7100

Call for Papers:

AAPG Annual Convention and Exhibition
April 1-4, 2007 • Long Beach, CA
[Understanding Earth Systems | Pursuing the Checkered Flag](#)

Submit your [technical papers](#) online
DEADLINE: September 27

Conference:

Vapor Intrusion: The Next
Great Environmental Challenge
- An Update
September 13-15, 2006
Los Angeles, CA
Air and Waste Management
Association
<http://www.awma.org/events/upcoming.htm>

Meeting:

Managing Drought and Water Scarcity
in Vulnerable Environments:
*Creating a Roadmap for Change in the
United States*
18-20 September 2006,
Longmont, Colorado
Hosted by Geological Society of America

Call for Abstracts:

2006 AGU Fall Meeting,
11-15 December 2006, San Francisco
The deadline for abstract submissions is
September 7, 2006. For more information, visit
www.agu.org/meetings/fm06/

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Inland Geological Society

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