Presidents Message

Geology is our Heritage

This has been a year that started with great expectations, enthusiasm and many planned activities. I would like to thank all the Geological Society of Oman (GSO) members for retaining the high energy and delivering on our plan. We started the year slowly and soon realized the areas we need to improve on. It rapidly became clear that we needed to work on our membership database if we are to deliver on the Working Together theme. We have successfully worked on the database and the membership should now be beginning to see the impact of this effort. It is now time to build on this and fully develop the Working Together concept. Our membership is now close to 500 (13% increase). A peculiar feature in the increase is the diversity of the backgrounds of our members. I expect this to continue in the coming years.

Our most popular activity for the 2006-2007 has been the monthly talks. Over 600 members attended 16 technical seminars. Two of the seminars were jointly run with the Historical Association of Oman. The GSO also jointly held an Iftar dinner with the SPE-Oman Chapter and the Young Professionals Network. The GSO also ran four field trips and, for the first time, organized an independent core workshop in Oman.

Financially, this year has seen a transformation in the way we generated revenues. In previous years, the bulk of our revenues were from sponsorship. This year only 45% of our revenues came from sponsorship. The rest came from running geology courses and membership dues. We sincerely, thank Petroleum Development Oman for giving us the opportunity to conduct such course and committing to pay for their members.

In terms of education we have been active on two fronts. Firstly, raising the awareness level of school teachers and young school students on an opportunity driven basis. This initiative is fully supported by Shell Oman Representative Office. Secondly, to work with SPE (Oman) and Petroleum Development Oman on a joint effort to introduce Petroleum Geology as a curriculum item from elementary school levels. On the first front, the GSO organized two seminars in the Batinah and Dhahirah Regions. The second front has been more subdued; nevertheless, I believe that we’ll be able to make more headway in the coming year.

I am exited about the coming year and the ventures that the GSO will be involved in. Our theme “Geology is Our Heritage” captures our aims, activities and our ventures. It also builds on the roles and responsibilities of the GSO towards society. The GSO is currently actively involved in a joint effort to preserve the geological treasures of Oman. Another front that this will also be covered is the promotion of the need to look at the rocks. I believe that in this age of technology, where geologists and geoscientists in general, hardly leave their seats and with universities getting stronger in software preaching, we have to focus on the fundamentals that help us understand our rocks and our environment.

Building on last years’ theme and looking at the coming year, I want to put a challenge to all the GSO members and supporters to think of creative ways that would encourage participation in GSO activities. We need creative ideas that would result in making our members feel the worth of their membership and our sponsors feel the value of their sponsorship. This will encourage more people to join and support the GSO and broaden its vision, which, in turn, will help us with establishing a permanent headquarters for the society.

All in all, the GSO has had a bright year and the outlook is even brighter. I would like to extend my thanks to our sponsors, supporters and all the GSO members for making it the way it was. I look forward to more in the coming year.

Regards,
Mohammed Al-Mazrui
Geological Heritage and Conservation

Since its establishment, GSO has realised the danger that faces Oman’s geological landmarks and established a special committee with the aim of liaising with various government organisations to explore ways of preserving the country’s geological wealth.

Several options have been pursued including the possibility of establishing a geological museum, public education as well as meetings with key government officials. Additionally, GSO has published short articles on some of the key localities featuring the Oman Ophiolites, Huqf area and the salt domes. Others are currently being prepared by GSO members.

GSO’s website (www.gso.org.om) contains material covering different aspects of Oman’s geological heritage and natural resources. As an example, a section is devoted to the geological wonders of Oman, presenting some of the key features of the geology of Oman. Another example is the photographs section which contains a collection of high quality photographs covering geological features, natural scenes and another wide collection on the caves of Oman.

Throughout 2006 and the first quarter of 2007, work has continued in the background. GSO has been invited by the Ministry of National Heritage to join the advisory group for the setup of a new museum. There has also been a recent Government directive to document and preserve sites of geological interest in the country and GSO has been invited to participate at a committee member level. The first meeting of this committee was held early April 2007.

GSO have also begun to visit seismic crews in the interior to take to them the GSO message of “Geology is our Heritage”. The main aim is to make them conscious of the national and international geological and environmental significance and the fragility of the environment. The crews are asked to respect the environment and not to remove anything (rocks samples, fossils etc.).

GSO very much welcomes such a positive step which we think is a step in the right direction. GSO’s view in this regard is to build a database of geological sites of scientific interest. The database would include extensive documentation of the site, its location and its importance. This database will enable the identification of top priority sites that require a rapid response for their preservation. The mode of preservation will vary depending on the nature of the site, its location and surroundings. Rare fossils can be displayed at the new museum. Other sites could be transformed into geoparks while others can be signposted. Parallel to this, GSO is calling for the development of legislation that puts the force of the law into the protection of geologically significant sites.

The GSO has been, and will remain, proactively involved in promoting the understanding of geology and seeking to conserve sites of special geological interest.

Juma Al-Belushi
GSO Representative for Geoconservation
The success of any society depends upon its members. There are always several ways to measure the performance of a society; one of which is the number of members. GSOs membership body has kept growing since its establishment. The number of members in 2001 was 123 and has subsequently quadrupled to 489 members in 2006 (Fig. 1). Active members constitute more than half of the society (52%) with associate (15%), junior (13%) and student (19%) members comprising the rest of the membership (Fig. 2).

GSO has attracted a lot of members from a wide range of organisations. As an individual organisation PDO has the highest number of members (35%), followed by SQU (21%). Government institutes including the Ministry of Oil and Gas, Ministry of Regional Municipalities and Water Resources, Ministry of Tourism and the Ministry of Commerce & Industry make up 11% of the membership. Occidental and Halliburton are represented by 4% each. Schlumberger, PTTEP, Indago Petroleum and CGG contain between 1 and 4% of the GSO membership. The remaining 19% of the membership body reside in Baker Atlas, BG Group, Falcon, Petrogas, Petroleum Institute Abu Dhabi, Reslab, Shell, SRAK and Target Oil Field Services (Fig. 3).

Some Quick Statistics:
• Female Members comprise 16% of the total members.
• 65% of the members have not collected their new membership cards.
• The number of Associate members is increasing, the majority without a geoscience background and include academics from SQU and medical doctors.
• In 2006, we updated 370 members information out of 489. We need your collaboration with the remaining 119 members.
• We are waiting for the 500th member who will join most probably in 2007.

Four Honorary Memberships have been awarded in recognition of the individuals contributions in advancing geosciences internationally and enriching our knowledge of Oman's geology:
Prof. Farouk El-Baz (Boston University) awarded in 2001.
Prof. John Grotzinger (California Institute of Technology) awarded in 2001.
Dr. Kenneth Glennie (University of Aberdeen) awarded in 2002.
Mr. Mohamed Al-Harthy (Manager Exploration Gas, PDO) awarded in 2006.
GSO Budget 2006-2007

Expenditure Details

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<thead>
<tr>
<th>Expenditure Details</th>
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<tr>
<td>Monthly Talks</td>
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<td>Field trips</td>
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<td>Miscellaneous</td>
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Revenue Details

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<td>Sponsorships</td>
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<tr>
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<tr>
<td>Petrogas</td>
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<tr>
<td>Daleel</td>
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<tr>
<td>BG (Oman)</td>
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<td>Indago</td>
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<td>GSO Geological Course</td>
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Balance forwarded from last year
OMR 8,445.120

Total Revenue
OMR 14,970.000

Total Expenditure
OMR 13,540.900

Difference between Revenue/Expenditure
OMR 1,429.100

Total Balance Available
OMR 9,874.220
GSO Awards

Sponsors

**Petroleum Development Oman**
For continuous support to GSO

- **Shell Representative Office Oman**
  For supporting the continuous education programme

- **Occidental Oman**
  For sponsoring GSO activities

- **BG (Oman)**
  For sponsoring Al-Hajar 8th edition

- **Indago Petroleum**
  For sponsoring the Jebel Sumeini Fieldtrip

- **Integrated Petroleum Services Company**
  For sponsoring Al-Hajar 9th edition

- **Target Oilfield Services**
  For sponsoring the GSO Awards at the 2007 Annual Meeting

- **Reservoir Laboratories LLC**
  For sponsoring the Haima Core Workshop

GSO Service Awards
This award is presented to individuals who have helped in significant ways in making GSO meet its objectives in the past year.

- **Dr Steven Fryberger**
  For jointly leading the Sharqiya GSO Fieldtrip

- **Dr Caroline Hern**
  For jointly leading the Sharqiya GSO Fieldtrip

- **Dr Edward Follows**
  For leading the Muscat Tertiary GSO Fieldtrip

- **Dr John Hurst**
  For leading the Jebel Sumeini GSO Fieldtrip

- **Dr John Millson**
  For jointly leading the Qam-Mahatta Humaid GSO Fieldtrip and the core workshop

- **Dr John Aitken**
  For jointly leading the Qam-Mahatta Humaid GSO Fieldtrip and the core workshop

- **Dr Raimond Van Der Pal**
  For jointly leading the Qam-Mahatta Humaid GSO Fieldtrip and the core workshop

- **Mr Salmeen Al-Marjibi**
  For jointly leading the Qam-Mahatta Humaid GSO Fieldtrip

- **Mr Ahmed Al-Mandhari**
  For supporting GSO publications

- **Ms Wafaa Al-Salmi**
  For her work on continuous education

- **Mr Adil Al-Kiyumi**
  For his work on continuous education

- **Mr Yaqoob Al-Saadi**
  For his work on continuous education

- **Dr Mahmood Al-Mahrooqi**
  For his work on continuous education
GSO Monthly Talks 2006-2007

2006

19th September
How Life Began on Planet Earth?
Prof. Hugh Rollinson
Sultan Qaboos University

7th November
Joint HAO-GSO Talk
“In the Heart of the Desert” The Story of an Exploration Geologist in the Search for Oil in Oman in the 1940s and 1950s.
Quentin Morton
Green Mountain Press

14th November
A Young Passive Margin Multi-disciplinary Study: the Eastern Gulf of Aden (ENCENS Project in the Dhofar Area)
Dr Sylvie Leroy and Dr Ali Al-Lazki
Université Pierre et Marie Curie and Sultan Qaboos University

28th November
Post Glacial Sea-Level Rise Captures a Record of the Northward Movement of the Arabian Plate through an Early Permian, mid-latitude, Southern Hemisphere Desert
Christian Heine
Saudi Aramco

16th December
A Bug’s Life: The story of Microscopic Life in Oman, from Primordial Soup to Bioluminescence, Red Tides & Wadi Trip Hay Fever!
Dr. Gordon Forbes
Petroleum Development Oman

9th January
Model for Carbonate-Hosted Uranium-Rich Breccia Pipes: Global Considerations
Dr. Andy Kwarteng
Sultan Qaboos University

16th January
The global Biogeochemical Changes in the Ediacaran Period: Transition to the Phanerozoic Earth System
Prof. Martin Kennedy
University of California, Riverside

31st January
Small Field Opportunities
Mr. Mark Ormerod
Petroleum Development Oman

12th February
Joint GSO-HAO Talk
Omani Ophiolite: a National Treasure
Mdm Françoise Boudier
Université de Montpellier

20th February
The Umm al Samim Sabkha: Operational Challenges, Observations and Learnings from a Frontier Exploration Project.
Messrs. Paul Matheny and Jeremy Fitzpatrick
Petroleum Development Oman

27th February
AAPG Distinguished Lecturer
Carbonate Analog Through Time (CATT) Hypothesis: A Systematic and Predictive Look at Phanerozoic Carbonate Reservoirs
James R. Markello
Exxon-Mobil

6th March
Factors Influencing the Deposit Geometry of Turbidity Currents: Implications for Sand Body Architecture
Dr. Omar Al-Ja’aidi
Shell Technology Oman

13th March
Evolution of Stress and Fluid Flow in the Jebel Shams High Pressure Cell: Fascinating New Results from World-Class Exposure
Prof. Janos Urai, Dr. Marc Holland and Dr. Christoph Hilgers
University of Aachen

27th March
Application of Stratigraphic Forward Modelling to Carbonate Strata: Uses for Exploration and Production
Dr. Georg Warrlich
Petroleum Development Oman

3rd April
Reconstruction of the Jebel Akhdar Tectonics - Radical New Interpretation
Dr. Mohammed Al-Wardi
Sultan Qaboos University

10th April
The Glacially-Influenced Permo-Carboniferous Al Khliata Formation, South Oman Salt Basin
Dr. John F. Aitken
Petroleum Development Oman

1st May
GSO Annual Meeting
Intercontinental Hotel, Muscat
GSO Field Trips
2006-2007

2006

30th November-1st December
The Sharqiya Aeolian System: Processes, Products and Implications for Hydrocarbon Prospectivity & Production
Drs. Caroline Hern & Steve Fryberger
Petroleum Development Oman

7th December
Tackling the Tertiary on foot
Dr. Edward Follows
Petroleum Development Oman

2007

11-12th January
Geology of Jebel Sumeini area
Dr. John Hurst
Indago Petroleum

15th February
Core workshop
The Cambro-Ordovician Lower Haima Supergroup (Amin, Miqrat and Lower Andam Formations)
Drs. John Aitken, John Millson & Raimond Van Der Pal
Petroleum Development Oman

28th February-2nd March
The Cambro-Ordovician Lower Haima Supergroup: Miqrat Formation, Al Bashair and Barik Sandstone Members (Andam Formation), Qarn Mahatta Humaid area, Haushi-Huqf High
Drs. John Aitken, John Millson & Raimond Van Der Pal
Petroleum Development Oman
Mr. Salmeen Al-Marjibi
University of Aberdeen

GSO Monthly Talks
2007-2008

2007

4th September
Mr. Rashid Al-Hinai
Petroleum Development Oman

23rd October
Salakha Arch
Mr. Mohammed Al-Kindy
Petroleum Development Oman

30th October
The Sharqiya Sands: Implications for Global Aeolian Hydrocarbon Reservoirs
Drs. Steven Fryberger and Caroline Hern
Petroleum Development Oman

2008

10th January
Planetary Geology
Mr. Mohammed Al-Lamki
Petroleum Development Oman

24th January
Block 7: Butabul and Fields
Dr. Alan Heward
Petrogas LLC

5th February
The Geological Evolution of the Laurentian Passive Margin: Late Cambrian-Early Ordovician of Eastern Ontario and SW Quebec, Canada
Dr. Osman Salad Hersi
Sultan Qaboos University

11th March
Stratigraphic Framework of the Mafraq Formation, North Oman
Mr. Hamad Al-Shuaily
Petroleum Development Oman

29th May
GSO Annual Meeting
GSO Field Trips 2007-2008

2007

7th-9th November
Late Precambrian and Early Cambrian (Huqf and Haima Supergroups) Depositional Systems of the Buah Anticline area, Haushi-Huqf High
Drs. John Aitken, John Millson and Raimond Van Der Pal
Petroleum Development Oman

22nd-23rd November
The Sharqiya Aeolian System: Processes, Products and Implications for Hydrocarbon Prospectivity & Production
Drs. Caroline Hern & Steve Fryberger
Petroleum Development Oman

6th December
A Tertiary Walk-About in Muscat
Dr. Edward Follows
Petroleum Development Oman

13th December
The Listwaenite of the Amqat Unit in the Halban area
Dr. Juma Al-Belushi
Petroleum Development Oman

2008

10-12th January
Alphabetical A, Haima-1, Qarn Sahmah, Salt Mining, the Duru and more
Dr. Alan Heward
Petrogas LLC

6th-8th February
Al Khlata and Gharif Formation (Perm-Carboniferous) Outcrops in the Southern Huqf
Drs. Juma Al-Belushi and John Aitken
Petroleum Development Oman

6th-7th March
Shuaiba Formation in the Nakhl Area
Dr. Zuwena Al-Rawahi
Petroleum Development Oman

20th-21st March
Structural Evolution and Fracture Pattern of the Salakh Arch (foothills of the Natih Formation)
Mr. Mohammed Al Kindy
Petroleum Development Oman

3rd-4th April
Evolution of Jebel Akhdar
Dr. Mohammed Al-Wardi
Sultan Qaboos University

10th April
Core Workshop
Block 7, Butabul Shuaiba, Upper Khuff, Lower Gharif, Sahmah and Hasirah Formations
Dr. Alan Heward
Petrogas LLC
GSO Activities

Continuous Education
The continuous education programme continues to be a main element of GSO activities. The programme targets geography teachers and school students, in an attempt to increase society's awareness regarding the importance of geology in the Sultanate. In this respect GSO runs geology workshops and courses at different levels in Arabic and English in coordination with the Ministry of Education and oil industry related companies. This year GSO ran two workshops for school teachers, the first in October 2006 in Samail and the second in March 2007 in Ibbi. Both workshops were well attended.

GSO is also contributing in setting up an educational geology exhibition in Sharqia region where GSO have provided geology books and publications on the role of the geosciences in the hydrocarbon industry, geology posters, rock samples and a drill bit.

Additionally, GSO has joined a co-operative effort with the Society of Petroleum Engineers and PDO to form an early engagement initiative that calls for the addition of hydrocarbon-related education subjects in the curriculum of Oman's schools. A joint committee has been formed which held its fist meeting in June 2006. Several subcommittees were formed and the task of educational data collection was started. A formal proposal, to be submitted to the Ministry of Education, is currently being prepared.

AAPG Distinguished Lecturer
The GSO organized the 2007 AAPG Distinguished Lecturer visit on the 27th Feb 2007. The 2007 AAPG Distinguished Lecturer, James Markello, presented “Carbonate Analogs Through Time (CATT) Hypothesis: A Systematic and Predictive Look at Phanerozoic Carbonate Reservoirs”. The lecture was held at the Crowne Plaza Muscat and was attended by more than 45 people interested in carbonate reservoirs.

GSO International Activities

IPTC 2007
The International Petroleum and Technology Conference 2007, will be held in December under the theme A Changing World - Interdependence, Innovation and Implementation. The GSO is organizing a fieldtrip to the Ophiolite in the Wadi Al-Jizzi area to look at Oman's unique treasures.

Geo2008
The Geological Society of Oman has been invited to participate in the technical committee of the Geo 2008 conference to be held in Bahrain between 3-5 March 2008. The 2008 conference will be under the theme Integrated Geoscience Technical, Business and People Solutions. GSO first participated in the Geo2004 committee and has continued to have a strong presence. GSO has offered several field trips to the organising committee.
In order to highlight our activities and to better keep the membership informed a pop-up window has been added to the GSO website containing details of forthcoming GSO activities. Whilst this is the most obvious change to the website various things have occurred in the background, in particular, the website has been remodelled to support ASP/PHP protocol that provides a secure environment and has been re-organised with storage space minimised for better performance. Additionally, some of the content will shortly be converted to MacroMedia Flash format to improve the overall look of the website.

Two editions of Al Hajar have been published in the year 2006-2007 including a special commemorative section celebrating the fifth anniversary of the GSO. Additionally, these editions have contained the staples of Al Hajar, reporting on GSO activities, including field trip reviews and reviews of other activities undertaken by the society during the year, as well as book reviews and technical articles.

One of the aims of the GSO is to become one of the premier geological societies in the region by actively sharing Oman’s unique and diverse geological heritage with the rest of the scientific community. To this extent, a proposal has been received for a GSO Special Publication that is currently under consideration by the Executive Committee and plans are well advanced to launch a number of GSO serials.

Thanks are extended to BG (Oman) and Integrated Petroleum Services Company for their support of the Newsletter through sponsorship. Support from those members who have contributed to Al Hajar through the year is also acknowledged.

As part of a joint event between GSO and other local/international societies, GSO held its annual joint event with SPE (Oman branch) on the 9th October 2006 at the Intercontinental Hotel. This year the joint event was special because it was held during Ramadan (the month of fasting for Muslims). Additionally, GSO/SPE invited the Young Professionals Network to join the event. There was a good mixture of young and experienced people (Muslims and non Muslims) intermingling and chatting. Following prayers, dinner was served followed by a brief talk by Mr. Suleiman Al-Zakwani (SPE Chairman) where he expressed his appreciation for this joint event and expressed a desire that similar events continue in the years to come to bring members of different organisations together.