



AL HAJAR

Geological Society of Oman
Quarterly Newsletter

5th Anniversary Issue

Ninth Edition

August 2006

President's message

If we take a look back at the first five years of GSO, we find that two words characterize the effort in making the GSO dream a reality: diligence and persistence or hard work and perseverance. Together with passion these are the key drivers to the GSO success. All these elements took the society to another level and will raise it to a new one. The special section in this edition of Al Hajar is a tribute to the passion, diligence and persistence of the GSO members.

Our plan is to continue to deliver talks, fieldtrips, and exhibitions and participate effectively in conferences both regionally and internationally. These activities have been very popular in the past and we expect that to continue. This year the focus will be on the theme of "Working Together" with which we aim to tap into the member's expertise to help us deliver more to the society. The Geoscience Directory, which will be launched this summer, will facilitate this further and allow more interaction between members and others. This interaction will be nurtured further by the rejuvenation of the subcommittee activities. In addition, we'll work to deliver on our commitment to the young with the Continual Education Program, which will be updated to progressively reach mainstream students.

A key target this year is the establishment of a permanent headquarters for the GSO. This, together with maintaining the enthusiasm of its members and supporters and building on the strong partnership with sponsors, will ensure GSO sustainability.

Mohammed Al-Mazrui
GSO President

What's inside

- Geological Society Of Oman: A Protracted Birth Page 2
- GSO: Executive Committees Page 6
- Geological Society Of Oman: The first five years Page 8
- Comments from the Members Page 11
- Welcome to the new Executive Committee (2006-2008) Page 12
- Sultanate of Oman Geoscience Publications 2005: Addendum Page 14
- Praise for GSO Achievements Page 15
- GSO Awards Its 4th Honorary Membership Page 16
- The Geologists Association Page 18
- GSO International News Page 20
- GSO Events Calendar Page 23

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Note from the Editor

The end of April marked a milestone for the GSO, the end of its 5th year of existence. In recognition of this achievement, this summer edition of Al Hajar contains a special section that briefly reviews the birth pains and achievements of the first five years of the GSO. In addition to this special section, the Newsletter also contains a review of the Annual Meeting, introduces the new Executive Committee and reports on our new honorary member. Also included is a reprint of an article from the GA Newsletter regarding their visit to the Sultanate in January (thanks to the GA for permission to reproduce this article).

This newsletter cannot survive without you, the membership. We are particularly keen to receive submissions from our younger members and from the amateur community. In this respect, we will publish letters from the members commenting on GSO activities or on the geosciences in general. What are we doing right, what are we doing wrong, what can we improve? Please send us your letters, but try to keep these to 300 words or less (letters may be edited).

John F. Aitken
Editor@gso.org.om

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Geological Society of Oman: a protracted birth

Oman's diverse and fascinating geology along with the demand to exploit natural resources encouraged the existence and growth of a formalised geologic community in the Sultanate. The first attempt to establish a geological society occurred in the early 1990s, but the legal and constitutional framework to establish vocational societies did not exist. Subsequently, a written request to establish a geological society in Oman was submitted by Mohamed bin Salim bin Mohamed Al-Harthy to the Minister of Oil and Gas on the 4th of February 1998. Unfortunately, there was still no legal framework in

place to allow the establishment of a geological society.

The attempt that led to the establishment of the Geological Society of Oman began in May 1999. A group of five individuals (Hisham Al-Siyabi, Juma Al-Belushi, Ali Al-Mujaini, Mohammed Al-Mugheiry and Hilal Al-Kharusi) approached the Ministry of Social Affairs and Labour and Vocational Training and requested assistance in setting up a geological society, what the process would be and the documentation required. The group was told to initially submit a constitution and a list of founding members (Table 1) to the Governorate of Muscat for preliminary approval.

Name	Organization(at time of founding of the GSO)
Ali Ahmed Abdullah Al-Mujaini	Schlumberger
Hisham Abdulrahman Suwaid Al-Siyabi	Petroleum Development Oman
Juma Darwish Harib Al-Belushi	Petroleum Development Oman
Hilal Ali Saif Al-Kharusi	Petroleum Development Oman
Mohamed Nasser Said Al-Mugheiry	Petroleum Development Oman
Abdullah Ahmed Naseeb Al-Shanfari	Ministry of Oil and Gas
Adel Rabea Jamaan Al-Shejabi	Ministry of Oil and Gas
Suliman Nasir Suliman Al-Riami	Ministry of Regional Municipalities and Environment and Water Resources
Zahir Khalid Suliman Al-Sulimani	Ministry of Regional Municipalities and Environment and Water Resources
Hilal Mohamed Sultan Al-Aziri	Ministry of Commerce and Industry
Harib Mohamed Khalifa Al-Hashemi	Ministry of Commerce and Industry
Mohamed Ali Khamish Al-Belushi	Sultan Qaboos University
Abdulrazak Sidiq Al-Sayigh	Sultan Qaboos University
Adil Mubarak Khamis Al-Kiyumi	Occidental of Oman
Badir Ali Mohamed Nasir Al-Kalbani	Occidental of Oman
Nashwa Mohammed Musallam Al-Rawahi	Petroleum Development Oman
Saada Said Ahmed Al-Rawahi	Petroleum Development Oman
Talib Ahmed Ali Al-Ajmi	Petroleum Development Oman
Salim Abdullah Juma Al-Maskeri	Petroleum Development Oman
Asya Said Ahmed Al-Rawahi	Petroleum Development Oman
Affat Abdullah Mohamed Al-Lamki	Petroleum Development Oman
Alia Said Saif Al-Bahry	Petroleum Development Oman
Nasra Ahmed Salim Al Mahrooqi	Petroleum Development Oman
Ibrahim Ahmed Mohammed Al Zadjali	Petroleum Development Oman
Hamad Said Salem Al-Shuaily	Petroleum Development Oman
Sheikha Ahmed Salim Al-Mahrooqi	Petroleum Development Oman
Mohamed Sulaiman Suwaid Al-Lamki	Petroleum Development Oman
Eitidal Homoud Nasr Al-Busaidi	Baker Atlas
Abdulsalam Mohamed Abdullah Al-Murshedi	Muscat College

Table 1: List of GSO founding members

...a protracted birth

The first meeting of the Society founders took place on the 15th November 1999 at the Oil and Gas Exhibition Center in Muscat. The meeting was called to discuss the newly drafted constitution and, in addition, a transitional Executive Committee was selected to represent the society in its dealings with concerned government entities:

Dr. Hisham Al-Siyabi	President
Mr. Ali Al-Mujaini	Vice President
Mr. Abdullah Al-Shanfari	Secretary
Mr. Talib Al-Ajmi	Treasurer
Dr. Abdulrazak Al-Sayigh	Editor
Dr. Juma Al-Belushi	Executive Director
Mr. Adil Al-Kiyumi	Membership Chairman
Mr. Bader Al Kalbani	Committee Member

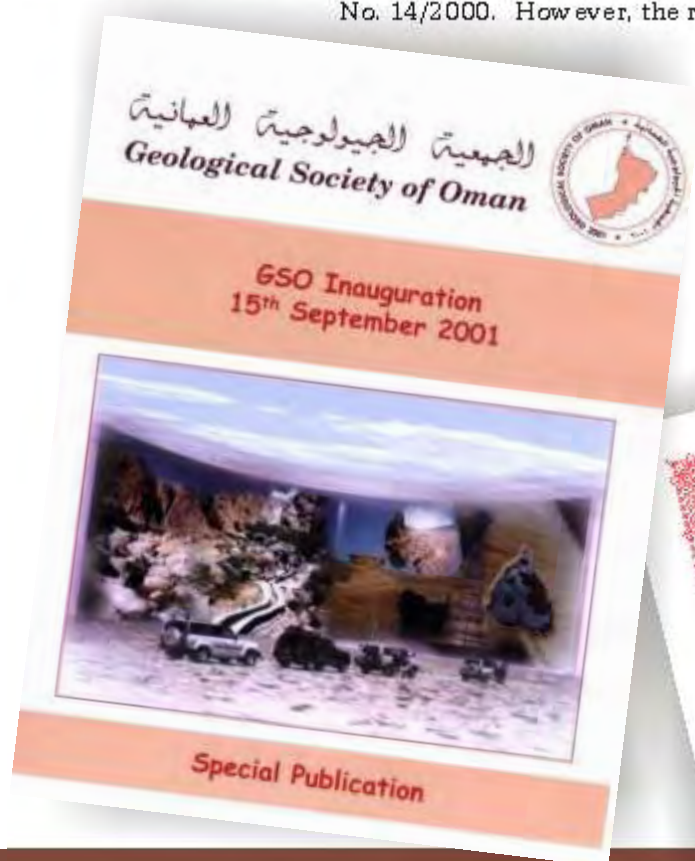
The draft constitution was approved and along with the names of the founding members was submitted to the Governorate of Muscat in December 1999. In January 2000, the transitional Executive Committee was informed that the Governorate would directly transfer the request to the Ministry of Social Affairs and Labour and Vocational Training. On the 13th February 2000, revised rules and regulations for the establishment of new societies and clubs were endorsed by Royal Decree No. 14/2000. However, the real



Inaugural event: (l to r) Abdullah Al-Hosni, Farouk El-Baz and Ahemad Al-Ghazali

breakthrough came when the Minister of Social Affairs and Labour and Vocational Training issued Ministerial Order No. 149/2000 on the 12th June 2000, which added vocational societies to the category of societies and clubs initially covered by Royal Decree No.14/2000. Subsequently, the Ministry of Social Affairs and Labour and Vocational Training asked the transitional Executive Committee to submit a formal letter for the establishment of a geological society, which was sent to the Ministry on the 1st of July 2000. In addition, a draft of the constitution and the minutes of the first founders meeting and the minutes of the first meeting of the transitional Executive Committee were also attached

Several amendments and additions to the constitution were requested by the Ministry which were duly adopted and the current version of the GSO constitution was finalised on the 12th July



...a protracted birth



Inaugural event: (l to r) Henk Droste, Jack Filbrandt, Laurent Spring and Jeroen Peters

2000. The constitution coupled with the request to be officially established was transferred to the Minister's office for his endorsement. Final approval, however, would only be granted after the request had passed through additional steps (i.e. Internal Security, Ministry of Legal Affairs and the Council of Ministers). In addition, the Ministry also stated that the society was obliged to continue with the current Executive Committee for a year once the Society had been formally established. Elections would take place after that with each committee holding office for a period of two years. In an effort to speed up the process for the request for formal approval, an audience with His Excellency the Minister of Social Affairs and Labour and Vocational Training was requested. This meeting took place on the 16th December 2000. The intent was to convince His Excellency to grant the necessary



Inaugural event: (l to r) Zahir Al-Suleimaini, Ahmed Al-Ghafry, Aly Al-Marjeb



Inaugural event: (l to r) Ahemad Al-Ghazali, Abdulrazak Al-Sayigh, Samir Hanna and Khalil Al-Riyami

permission before the start of the Oman Geology Conference that was due to occur between the 12th and 16th of January 2001 at Sultan Qaboos University. Although His Excellency supported the idea, he stressed that final approval must come from the Council of Ministers and that it was unlikely that a final verdict from the Council would be available in time to launch the society during the Conference.

The Council of Ministers granted its approval for the Society's establishment in its meeting on the 20th March 2001. The formal announcement of the Society was declared by Ministerial Order No.79/2001 issued by the Ministry of Social Affairs and Labour and Vocational Training on the 15th April 2001.

The Society's inaugural event took place on the 15th September 2001 under the auspices of His Excellency Amur bin Shuwain Al Hosni, Minister of Social Development. The inaugural event was based upon the theme of "Bringing Oman's Geological Community Together". The theme was meant to highlight the most important role of the Geological Society of Oman, which is to serve as a common ground for all geologists in the Sultanate. The event was also meant to highlight the Society's potential to become one of the premier scientific societies in the region. Over 150 geologists from various companies, government agencies and academia attended the event. Keynote speakers included: Dr. Hisham Al Siyabi, GSO's President, who talked about the mission and vision of the Society, and

...a protracted birth

Dr. Juma Al Belushi, GSO's Executive Director, who highlighted the activities planned for the first year of GSO's existence. As an industry representative, Dr. Jeroen Peters, Exploration Director (PDO), provided a historical narrative of past attempts that culminated in the formation of the Society. From the academic side, Dr. Samir Hanna, Head of the Department of Earth Sciences, Sultan Qaboos University, provided an overview of the fascinating geology of Oman.

In its first year, the GSO held a total of six talks with topics ranging from reservoir characterisation to aquifers of Oman and organized two field trips. The first was run by Samir Hanna and visited the al Khod area and the second was a trip to the Muscat area run by Jeroen Peters. On the occasion of the 31st National Day,

the Society organised a geologic exhibition at Al Araimi Shopping Complex on the 28th and 29th of November, 2001. The show was intended to make the public aware of the Society's existence by giving them a flavor of Oman's fascinating and unique geology and consisted of rock, fossil and mineral displays and an automated slide show of various geologic features ran continuously. The event represented the Society's first attempt to try to gauge people's awareness and curiosity on geology, in general, and the Society, in particular. By the end of the first year the membership of the society stood at 160, and has continued to grow ever since.

This article written by John Aitken is based on a previously unpublished note written in 2001 by Hisham Al-Siyabi, the first President of GSO.



GSO: Executive Committees

GSO ExCom 2001-2002



Dr. Hisham Al-Siyabi
President



Mr Ali Al-Mujaini
VicePresident



Dr. Juma Al-Belushi
ExecutiveDirector



Dr. Abdulrazak Al-Sayigh
Editor



Mr. Talib Al-Ajmi
Treasurer



Mr. Adil Al-Kiyumi
Membership Chairman



Mr. Abdullah Al-Shanfari
Secretary



Mr. Bader Al-Kalbani
Committee Member

GSO ExCom 2002-2004



Dr. Hisham Al-Siyabi
President



Dr. Omar Al-Ja'aidi
Vice President



Dr. Khalil Al-Riyami
Executive Director



Dr. Jan Schreurs
Editor



Mr. Talib Al-Ajmi
Treasurer



Mr. Zahir Al-Musalami
Membership Chairman



Mr. Ibrahim Al-Zadjali
Secretary



Mr. Mohamed Al-Harthy
Committee Member

GSO: Executive Committees

GSO ExCom 2004-2006



Dr. Omar Al-Ja'aidi
President



Dr. Bader Al-Barwani
Vice President



Dr. Nadia Al-Abry
Executive Director



Mr. John Willoughby
Editor (2004-2005)



Mr. Harib Al-Hinai
Treasurer



Dr. Mohammed Al-Mazrui
Secretary



Mr. Talal A-Musallami
Membership Chairman



Mr. Adil Al-Kiyumi
Committee Member



Dr. John Aitken
Editor (2005-2006)

BG Oman is part of BG Group, a global natural gas business and a leader in the exploration, production and delivery of natural gas. The Group's expertise and skills across the gas chain, which include liquefied natural gas, transmission and distribution and power generation, enable BG to connect gas reserves to markets, quickly and effectively. In Oman, BG is the operator of Block 60, which contains the Abu Butabul gas and condensate discovery. BG is committed to developing a substantial, long term business in Oman and across the region.



BG OMAN

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Geological Society of Oman: the first five years

Since its founding in 2001, the Geological Society of Oman has grown in stature and in its influence in the Sultanate and wider afield. This is reflected in the steady growth in membership from the 160 members at the end of its first year to almost 450 members at the end of the 2005/2006 year. Additionally, the increased levels of its mainstay activities, talks and fieldtrips from six talks and two fieldtrips in 2001/2002 to 13 talks and six field trips in 2005/2006 also reflects the growth of the GSO. This article briefly reviews some of GSO's highlights and achievements over the last five years.

The staple of GSO activities, the monthly talks and field trip programmes, are amongst the most popular events organised by the GSO, with most field trips oversubscribed. Field trips are largely restricted to the Sultanate, but some have strayed across the border to the UAE and there is a possibility that international trips may be arranged in the future in collaboration with other societies. Unlike the field trips, the talks are not confined to Oman (or even planet earth!) and have

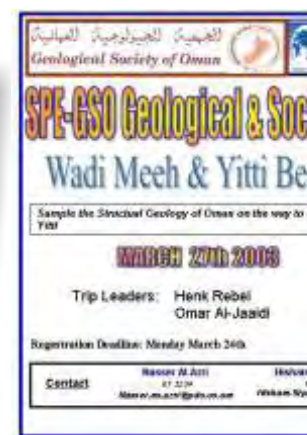
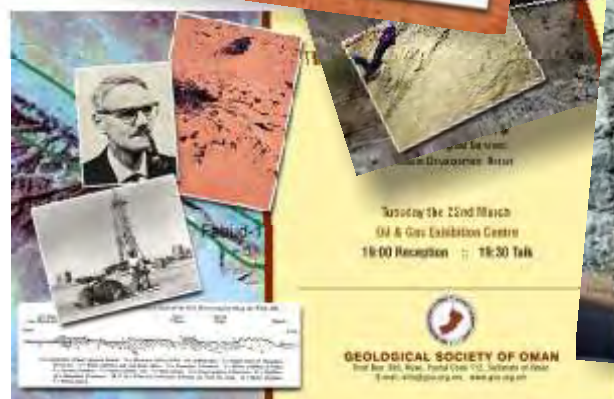
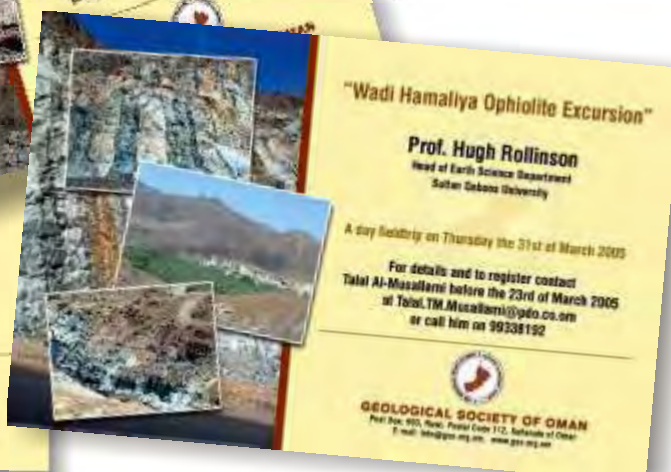
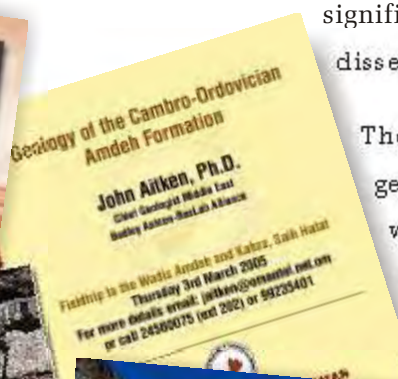
covered Gulf-wide issues, aspects of the geology of Australia, the Himalayas, Kuwait, Saudi Arabia, Siberia, Syria, Yemen and even Mars. The last of these was probably the most publicised lecture that the GSO has organised, receiving much coverage in the local press.

Education

In education, GSO has spearheaded a campaign, since 2002, to have greater focus in school curricula on the earth sciences. As part of this the GSO has run several courses, throughout the Sultanate, aimed at improving geology teaching skills (the Continuous Education Programme, supported and sponsored by Shell Representative Office Oman). The aims of the programme are:

- ▶ to improve the teaching of earth sciences at basic levels of formal education and
- ▶ to emphasise the scientific and cultural significance of the earth sciences by disseminating knowledge to the young.

The programme familiarises participants with geology, in particular, the geology of Oman, with Omani rocks, minerals and fossils used to introduce the participants to the geosciences. The courses have been



...the first five years



favourably received and the number of requests for them has increased over the years. A new development in this programme occurred in May 2006 with the first

course presented to elementary school children, an initiative that it is hoped will expand in the future. Looking further into the future the GSO is currently working on the Early Engagement Programme which aims at introducing geology as part of school curriculum.

Society and Culture

Partially related to education, but with a far broader remit was the establishment, in 2004, of three subcommittees:

- ▶ GeoTourism
- ▶ Geological Heritage and Conservation
- ▶ Geological Museum.

GSO believes that Geotourism will play an integral part in Oman's future tourism ambitions and it formed the GeoTourism subcommittee aimed at providing its expertise to concerned ministries in order to adequately promote GeoTourism in the Sultanate as well as to act as a consultant to various regional and international geotourism companies. The GeoTourism subcommittee has had success working with tour operators in Oman and also assisted the British Geologists Association on its visit to Oman in January 2006 (reported more fully elsewhere in this

Newsletter). Additionally, in 2005, the GeoTourism subcommittee (in collaboration with the Geological Conservation and Heritage subcommittee) presented a paper (oral and poster) on the potential for GeoTourism in the Sultanate at an international conference in Germany. The GSO posters were one of the major attractions in the poster session and important contacts were made within the international community regarding both geotourism and geological heritage.

The Geological Conservation and Heritage subcommittee was established to celebrate Oman's geological heritage and to promote its conservation. The main undertaking of the subcommittee has been to highlight sites of importance from an aesthetic, historical and scientific point of view and to attempt to have these sites protected under Omani law. The committee is currently working with other groups and governmental bodies, including the ROP, towards protecting and promoting these sites. Additionally, the subcommittee has established links with international organisations that have experience of preserving and protecting geologically important sites.

Intimately related to the Geological Conservation and Heritage subcommittee is the Geological Museum subcommittee that was established to pursue the objective of capturing Oman's geological marvels through an independent, stand-alone geological museum to house specimens from throughout the Sultanate that have been acquired by various associations and institutions. Although a geological museum has not yet been established in the Sultanate, the subcommittee has had several notable successes. In particular, the subcommittee is involved with designing the Al-Huta cave tourist development in Wilayat Al-Hamra. The subcommittee is the main technical designer of the Al-Huta cave museum and is working towards a plan for this exhibit. Secondly, the subcommittee, in



...the first five years

collaboration with the Ministry of Education, is establishing a geological display at the Scientific Exploration Centre in the Sharqiya region. This exhibit will act as a basic educational platform providing information for students, teachers and parents by displaying rock specimens, posters and dynamic models.

International Collaboration



Beyond the Sultanate's borders the GSO has been active in forging links with numerous organisations internationally and has been involved with the organisation of several local and international conferences. The Society's first international participation was at the 5th Middle East Geosciences Conference and Exhibition in 2002, subsidised by Gulf Petrolink, the conference organisers. Subsequently, GSO has had a presence at these biannual conferences and has also been involved on the organising committee in 2004 and 2006 and organised a core workshop (2004) and field trip (2004) associated with the conference. GSO was also heavily involved in the organisation of the 2005 International Association of Sedimentologists Conference held in Muscat and has also run field trips for the Arabian Upstream and Gulf Offshore Conference and Exhibition (2003) and the Oil & Gas West Asia Conference (2006).



Links have been forged with a variety of international societies including the American Association of Petroleum Geologists, Geological Society, London, Geologists Association, Society of Petroleum Engineers and European Association of Geoscientists and Engineers, for our mutual benefit. The most outward signs of these links have been the visit by Robbie Gries, the then AAPG President, to the Sultanate in 2002, the AAPG distinguished lecturers who have presented papers to the GSO (Charles Kerans, 2002, and Abdulkader Afifi, 2004) and the EAGE/SEG Distinguished Instructor Short Courses run for members in 2004 and 2006.

Publications

The publication activities of the GSO have, thus far, been modest. The launch of Al Hajar, the quarterly Newsletter, in January 2003, has been a success and has received a favourable response from the membership. The first GSO Occasional Publication is due for publication towards the end of 2006 and there are ambitious plans to begin a series of publications concerning the Sultanate of Oman's geology, further details will be published shortly in Al Hajar.

Thank you

None of the achievements of the GSO in the last five years could have been accomplished without the support of the membership body and our generous sponsors. We thank you all and look forward to the next five years and beyond.

This feature was written by John Aitken with contribution from Nadia Al-Abry, Badar Al-Barwani, Omar Al-Ja'aidi, Adil Al-Kiyumi, Mohammed Al-Mazrui and Yaqoob Al-Sadi.



COMMENTS FROM THE MEMBERS

Thanks to the vision, dedication and hard work of several Omani geoscientists, the GSO was born when the EP sector was recovering from a dramatic period of low oil prices. Since its birth, the GSO leadership has developed the society into a successful body, with regular local, regional and international events and increasingly more contact with broader society.

Given the ever important role of the oil and gas sector in driving Oman's economic development there is a bright future for the society, both in stimulating earth sciences in Oman and in attracting and motivating the young talent required to discover and develop the next generation of hydrocarbon resources in the Sultanate. I look forward, with confidence, to the first centenary celebration.....

Jeroen Peters

As a co-founder, I am very proud to see the GSO where it stands today. If I have to commend anybody for the great progress made, it would be the executive committee members, many GSO active members as well as the generous sponsors. It is their efforts, dedication, and generous support that have made GSO a great success. I wish GSO a very happy anniversary and a successful journey into the future.

Juma Al-Belushi

Five-years on since the foundation of the Geological Society of Oman and a number of critically acclaimed stratigraphic papers have been published, ranging from the Proterozoic through to the Mesozoic. Coincidence? No, when you consider that the life-blood of Oman's geosciences is the outcrops, but more importantly, the talented scholars of the GSO who have, for the past 5 years, breathed life into these outcrops.

From Adventure Oman to Nature, I was lucky enough to be captured on this bow wave of commendable work, supported all the way by my Omani colleagues in the field, in the core-shed and behind the workstation, in

particular Uzma Mohuiddin, Hisham Al-Siyabi and Juma Al-Belushi posed the questions that we were lucky enough to get the chance to answer. The blend of experience and amateur was always a notable feature of the GSO. The 'mildly' interested would be as welcome as the seasoned professional. It was that feeling that encouraged myself and others to put the stratigraphy of Oman down on paper for the benefit of current GSO geologists, as well as the generation to come. Keep the science going...

Peter Osterloff

It is really impressive how GSO has grown over the past five years. The dedication of the society's leadership coupled with the enthusiasm of the membership has made such growth possible. The challenge for the coming years is to capitalize on this enthusiasm not only to sustain this growth, but also to propel the society towards achieving its vision of becoming the premier geoscience society in the region.

Hisham Al-Siyabi

The success of GSO has been an outstanding accomplishment, which reflects the hard work of the organisers and committee members in both creating and growing the organization. The GSO has highlighted the importance of the geology of Oman in the regional and international scientific and industrial communities, but also, and perhaps more importantly, it has opened up Oman's geological heritage to the student and lay person. As I sit on the flat, overly vegetated coastal plain in Houston, I reflect that the combination of great geology (with full exposure) and dedicated geologists makes the Geological Society of Oman truly unique. All the best to the GSO on its 5th Anniversary!

Mark Shuster

Some of these comments have been edited for the sake of brevity. Thanks to Mohamed Al-Harthy for compiling these comments.

Welcome to the new Executive Committee (2006-2008)

President

Dr. Mohammed Al-Mazrui

Mohammed is a Geophysicist /Quantitative Seismic Interpreter in PDO's Reservoir Characterisation Team. He holds a BSc from the University of Southampton and a PhD from Imperial College London. During his post-graduate studies, Mohammed researched various aspects of 4D seismic surveys in collaboration with Total's Geosciences Research Centre in London. Recently, he has been involved with quantitative interpretation work mainly in Cretaceous Carbonate fields of North Oman and the stringer reservoirs in South Oman. Mohammed was the GSO secretary between 2004-2006. He is affiliated to the European Association of Geoscientists and Engineers.



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Vice President

Mr. Adil Al-Kiyumi

Adil is a Seismic Interpreter in PDO's Exploration Directorate. He obtained a BSc degree from Sultan Qaboos University, Earth Sciences, in 1991 and immediately joined the Ministry Of Petroleum and Minerals (MPM) as a Minerals Geologist. In 1995, Adil joined Fortress Energy Service L.L.C. (Santa Fe International) Oman as a drilling engineer. From 1997 to 2002, he worked for Occidental of Oman as an Operations Geologist including a 7 month assignment in Elk Hills, California, USA. In 2002, Adil started work with PDO where he remains today. Adil is one of the founders of the GSO and is the only member (in the current EXCOM) who has been part of three different committees since the establishment of the society in 2001. He is heavily involved in the Continuing Education Programme.



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Executive Director

Dr. Mahmood S. Al-Mahrooqi

Mahmood is a Seismic Interpreter in PDO's Exploration Directorate. He obtained a BSc degree from the University of Tulsa in 1994 and joined PDO in 1995 as a Stratigrapher and Sedimentologist in the Exploration Laboratories. In 1996, Mahmood



became an Operations Geologist and, in 1997, he joined the special studies team as a Regional Geologist. He subsequently gained an MSc in Basin Evolution and Dynamics from the University of London, 1998, and a PhD in reservoir compartmentalization in 2003 from the same university. In 2004 he joined PDO's NFE evaluation team as a Seismic Interpreter where he worked on prospect maturation and evaluation of fault seal potential within the Permian Gharif Formation. Since 2005 Mahmood has worked in the north Oman evaluation team where he currently focuses on the evaluation of Cretaceous carbonate reservoirs (Natih and Shuaiba Formations). Mahmood participates in part-time teaching of petroleum geology to SQU students and gives short geology courses for PDO's new recruits and summer students. He has been a member of the GSO since 2003.

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Treasurer

Mr. Harib Ali Al-Hinai

Harib is a Senior Operations Geologist in the Exploration Directorate of PDO. He graduated in geology from Sultan Qaboos University in 1992 and has subsequently had a varied career. On graduation Harib joined Haliburton Geophysical Services as an Assistant Seismologist and subsequently moved to CGG in 1994 where he worked as a Seismologist in a 3D processing crew. In 1995 Harib joined MB Petroleum as a Mud Engineer and was assigned to Saudi Aramco to work as a Solids Control Engineer (1997-1998), subsequently returning to Oman as a Senior Mud Engineer. In 1999, Harib joined Dyno Oil Field Chemicals as a Technical Sales Engineer and moved on to Al Amjad Trading Company, in 2001, as a Technical Services Engineer. In 2005, Harib joined PDO. Harib served on the 2004-2006 GSO Executive Committee in the role of Treasurer



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Secretary

Mr. Yousuf S. Al-Sinani

Yousuf is an Area Supervisor for Reservoir Laboratories & Co. LLC (2000-present). He gained a BSc degree from Sultan Qaboos University (2000)



...Executive Committee (2006-2008)

and he has published various pieces of research in rock stability of the Muscat area. His work responsibility focuses on all core handling and conventional core analysis of Petroleum Development Oman cores. Yousuf is a member of the GSO and received a GSO Appreciation Award in 2005. He is also affiliated with the International Association of Sedimentologists and the Society of Core Analysts.

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Membership Chairman

Mr. Issa Ali Al-Mahruqi

Issa is a Production Geologist in Enhanced Oil Recovery in PDO's Study Centre. He graduated from Sultan Qaboos University with a B.Sc. in Geophysics (August, 2005).



Whilst a student Issa held a two month internship with CGG Oman (2002), attended a PDO Dhulaima summer course (2003) and undertook training at Baker Atlas as a Field Engineer (2004). Additionally Issa was the SQU GeoGroup leader and saw through the establishment of the Oman AAPG-SEG Student Chapter. His current professional activities focus on carbonates in general and Shuaiba reservoirs in specific. His main interests include carbonate fracture systems of the Mafrq Field and the application and effect of EOR on carbonate rocks. Issa has been a member of the GSO since 2001 and is also a member of the Society of Exploration Geophysicists, American Association of Petroleum Geologists, Society of Petroleum Engineers and the European Association of Geoscientists and Engineers.

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Editor

Dr. John F. Aitken

John is a Senior Explorer in PDO's Exploration Directorate. He gained a BA (Hons) degree from the University of Birmingham in 1987 and a PhD from the University of Aberdeen in 1990. He subsequently worked as a Research Associate (University of Liverpool, 1991-1993), Consultant Production Geologist (BP (Venezuela), 1993-1994) and Research Fellow (Oxford Brookes University, 1994-1997). John joined BG in 1997 and worked on a variety of exploration and production projects globally. John then joined the ResLab-Badley Ashton alliance (2000-2005) mainly



seconded into PDO's technical service department undertaking a variety of sedimentological and reservoir studies and, latterly, as Chief Geologist (Middle East), responsible for the entire Gulf region. John's professional activities now focus on the Haima Supergroup of Oman and its hydrocarbon prospectivity. He has published some 25 papers on various aspects of sedimentology, sequence stratigraphy and petroleum geology. John joined GSO in 2001, ran a GSO Field Trip in 2004 and has been the GSO editor since early 2005. John is a member of the Geological Society (London), American Association of Petroleum Geologists, Society of Petroleum Engineers, Petroleum Exploration Society of Great Britain, SEPM (Society for Sedimentary Geology), International Association of Sedimentologists, Yorkshire Geological Society and Quaternary Research Association.

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Committee Member

Dr. Xiomara M. Marquez

Xiomara is a Senior Carbonate Sedimentologist in PDO's Exploration Directorate. She obtained a BSc degree from the Universidad Central de Venezuela (1979) and immediately joined INTEVEP as a Junior Carbonate Sedimentologist. She subsequently gained an MSc in carbonate sedimentology from the University of Toronto (1985) and worked for PDVSA as a sedimentologist in the Exploration Department. She later gained a PhD in carbonate diagenesis from McGill University (1994) and continued to work for PDVSA (end 2002), undertaking a variety of reservoir studies and evaluation of the hydrocarbon potential of the Venezuelan and Caribbean basins. She has published several papers and abstracts on these topics. Following this, Xiomara joined Shell Venezuela (2003) and worked as a Senior Field Geologist. She is a member of SVG, SOVG and GSO and was the secretary of World Petroleum Congress, Venezuelan chapter (2001-2003). She retains interest in teaching sedimentary and petroleum geology in the UCV and ULA. Xiomara joined the GSO immediately on her arrival in Oman in 2005 and has taken an active role since.



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SULTANATE OF OMAN GEOSCIENCE PUBLICATIONS 2005: Addendum

Further papers published in 2005 concerning the Sultanate's geosciences have been discovered since the publication of the list in the January edition of Al Hajar and are listed below. Thank you to those members who have pointed out these omissions.

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Praise for GSO Achievements:

5 years on and the vision for the future

Zuwena Al-Rawahi (PDO)



In just five years the GSO has grown from an idea to being an internationally known organisation with over 500 members. That was one of the messages conveyed at the GSO 5th Annual Meeting which took place under the auspices of the guest of honour, HH Sayyed Tariq bin Shabeeb Al-Said, at the Grand Hyatt on the 27th May, 2006. The meeting, jointly sponsored by Daleel Petroleum, Petrogas and Schlumberger, was well attended with over one hundred members signed up. The talk given by His Highness was well received and appropriate, as he highlighted the importance of non-governmental organisations to the country. His Highness, who is also one of the founders of the Environmental Society of Oman, provided insight into the importance of such organisations for countries, such as Oman, that are undergoing rapid development.

The achievements of GSO in these five years have been down to a committed team of geoscientists and volunteers who realise the need for the society, given the geological wealth the country has to offer. One such individual, who is instrumental and recognised as one of the founding fathers of the society, is Mohammed Al-Harthy. His background and vast experience offered support to the committee through the early years. For his dedication, the GSO awarded him honorary membership.

Among the achievements mentioned, GSO has made great strides in educating teachers and Omani youth of the environment around them. The GSO realised the potential of Oman's geology to tourism. With the involvement of the Ministry of Tourism, they are actively realising Oman's uniqueness in the region for geotourism.



Let's not forget the numerous volunteers who helped in conferences, fieldtrips and teaching. These individuals were rightly recognised at the meeting. An organisation such as ours relies on volunteers and, not surprisingly, the list of awardees was long. Perhaps a different approach to awarding the volunteers should be taken in the future, as it felt too long (on the night). A way would have been to call the names of the volunteers together. One felt that the key note speaker's time could be longer. This naturally leads me to the keynote presentation. The speaker Dr Joe Cann is an emeritus Professor from Leeds University who has spent a lifetime working on mid-ocean ridges. He enlightened us with the activities, and the most recent findings of, the mid-ocean ridges project. For those of us still interested in the volcanic rocks of our distant undergraduate past, this was a welcome reminder of why they are so fascinating. His first-hand experience on board Alvin showed us that it's not for the faint hearted. Black plumes, white chimneys and creatures surviving in fetid conditions reminded me of the Cambrian explosion and the Burgess Shale, with names like Anomolocaris, Opabinia and Hallugenia springing to mind. When the comparison with Oman was made, one felt somehow unsatisfied. It was more scenery than science. Next time please GSO when we have an eminent professor please don't tone down the technical contents too much.

The GSO enters its next phase of growth. Well done to the exiting committee members to reach this far in such a short time. I, for one, share an office with one of the members and see the efforts required to make everything happen. Your efforts will help geologists and non-geologists appreciate the natural uniqueness that is the Oman landscape. Good luck to the new committee. The foundation has been laid; hope your efforts carry it forward to the next level.

GSO awards its 4th Honorary Membership

At the Annual Meeting on 27th May the GSO bestowed its highest award, that of Honorary Membership, on Mohamed Al-Harthy (Gas Exploration Manager, PDO).



Citation:

Mohamed Al-Harthy was the first geologist in the early 1990s to put in writing a request to establish a geological society in Oman. Although the circumstances were not ripe at that time, he planted the initial seeds that would eventually germinate, in 2001, with the establishment of the Geological Society of Oman.

Once the Society became a reality, Mohamed played, and continues to play, a pivotal role in both setting strategic goals, executing various events and rendering valuable advice. GSO executive committee members have benefited greatly from the lengthy conversations and discussions with Mohamed on how to grow activity levels and maintain and increase the Society's membership body. Mohamed still plays that role now, despite his continuously increasing workload. His unquestionable dedication to the Society is reflected in the number of awards he has received thus far:

- ▶ GSO service award in 2003
- ▶ GSO outstanding service award in 2004
- ▶ GSO outstanding service award in 2005

Mohamed deserves this award also because he is a geoscientist! He is a member of the first generation of early Omani geologists who joined PDO in the 1980's. During those years, it was not easy to be young and inexperienced. His personality, curiosity and inclusiveness, however, made it difficult for people to sideline him. Over the years, he proved to be a capable geologist who can tackle any challenges presented to him.

As an explorer he had the opportunity to work on a number of plays from the Fiqa turbidities to the flank traps of the salt domes. As a geologist, Mohamed possesses the ability to simplify complex geological concepts to the lay person. That gift was recognized by his workplace when he was appointed the head of staff development in Exploration, following his return from a cross-posting assignment to Shell Egypt in 2002.

In the role, Mohamed was very effective in both recruiting young Omani geoscientists and advising PDO geoscience scholars. He also played an instrumental role in starting a PDO sponsored MSc program at the Virtual Reality Centre for Carbonate Studies at SQU where young Omani geologists are today earning postgraduate degrees by working on Oman-related research topics. Progressing in his career, Mohamed became the team leader of the Near Field Exploration Team in 2003. In that capacity, he successfully managed the exploration campaign of Shuaiba stratigraphic traps in North Oman, thereby adding valuable barrels to PDO's overall production. In 2005, Mohamed moved on to face new challenges by becoming the Exploration Gas Manager. His career path is an example to many young aspiring Omanis.

By bestowing the Society's highest award, the GSO has recognized Mohamed Al-Harthy as one of the most capable and enthusiastic of Omani geologists.

Mohamed Al-Harthy replied:

To be loved is to receive a glimpse of heaven. My family, brothers and sisters, friends and colleagues, today, you have given me heaven on earth. I humbly accept this honour.



...Honorary Membership

Indeed, the GSO that you see today and are proud of did not come out of nothing. Back in 1998, I discussed the vision of having a Geological Society of Oman with H.E. Dr Mohammed Al-Rumhy, the Minister of Oil and Gas, who welcomed the idea and encouraged me to submit a written proposal to the Government. The meeting I had with him back then was truly historical and greatly facilitated the establishment of GSO.

I believe that vision without action is a daydream and like having one's head in the clouds. Action without vision can be a nightmare and may bring accidental consequences. I can proudly say that GSO was established through a clear vision which was followed by actions; the sequential attribute of ultimate success. The GSO that we are all proud of today is the result of a solid commitment of team work, pro-activeness, effort and personal sacrifice of many earth enthusiasts.

Over the past 5 years, I have worked closely together with two presidents, Dr Hisham Al-Siyabi and Dr Omar Al-Ja'aidi. We have worked for our country and its people through the GSO circle of influence and I have to say that GSO could not have asked for more committed and focused presidents, especially during the early stages of its formation.

I believe that leadership success was attributed to the president's ability to pull together a fantastic core team of genuine and dedicated professionals including Nadia Al-Abri, Juma Al-Belushi, Mohammed Al-Mazrui, Badar Al-Barwani, Adil Al-Kiyumi, John Willoughby, Talal Al-Musallami, Talib Al-Ajmi, Zaher Al-Musallami, Harib Al-Hinai, Khalil Al-Riyami, John Aitken and the rest of the 2001 to 2006 committee members.

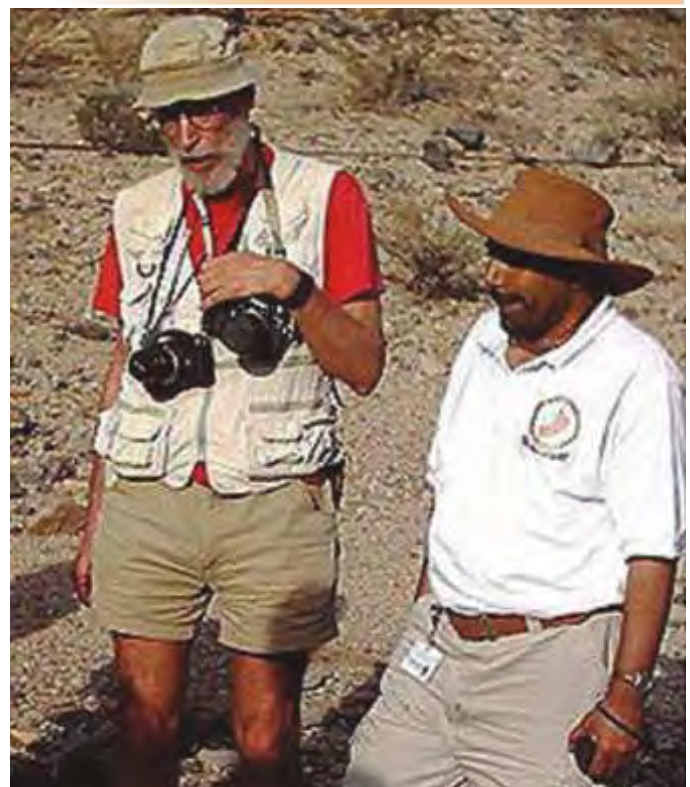
To have people such as, Samir Hanna, Alan Heward, Jan Schreurs, Yaqoob Al-Sadi, Jeroen Peters, Mark Shuster, Zuvena Al-Rawahi, Abdulrahman Al-Harthy, Ali Al-Azki, Henk Droste, Mia van Steenwinkle, Volker Vahrenkamp, Lynda Armstrong, Mundhir Al-Barwani, John Malcolm, Martin Stauble and many others has been a great support and provided a pillar for our success. I apologise for not being able to acknowledge all people due to any lapse of memory or shortage of space.

It is true that I initiated and kicked off the first proposal for establishing what is now known as the GSO but without your hard work, perseverance, sacrifice and leadership GSO would not have been what it is today; a reputable professional organisation that Oman can be proud to have. I acknowledge the core members who demonstrated strong leadership and programme management skills; the like of Juma Al-Belushi and Nadia Al-Abri.

Enjoying memories is a good thing, cherishing the ones to come is even better. As I look back at what GSO has achieved in a few years, through the leadership of Hisham Al-Siyabi and then the leadership of Omar al-Ja'aidi, I am confident that the current committee, under the leadership of Mohammed Al-Mazrui, will continue to deliver and take us to new horizons. Simply, the past is the key to the future!

You have been the people behind what I proudly consider an honorable recognition from a professional society and great individuals. I thank you for your kindness and support.

With my greatest respect,
Mohamed Al-Harthy



The Geologists' Association

Guests of the Geological Society of Oman

Susan Brown, GA President 2000-2002.



The third visit of the Geologists' Association (GA) to Oman began as the group left London on a cold January

evening in 2006. This visit was hosted, as I believe the previous ones had been, by the Geological Society of Oman (GSO). We are immensely grateful to the GSO for the superb programme they devised for us and for their generosity and friendship shown to the group during the visit.

The details of our visit are reported in various articles in the June issue of the "Geologists' Association Magazine" and a formal field trip report will be published in the "Proceedings of the Geologists' Association" in due course. The focus of this article is to highlight some of the potential opportunities and benefits for both the GSO and the GA that could arise as our relationship develops in the future.

Background to the GSO

The GSO celebrates its fifth anniversary in April 2006 and has clearly achieved much during its short lifetime. Its membership is increasing as are the opportunities available for members to develop their geological knowledge and expertise through the regular and increasing number of lectures and field trips it organises.

In its outreach activities, the GSO is mindful of the importance of education and organises courses for teachers and students on the geology of Oman. Its Quarterly Newsletter, published on its web site is freely available for downloading.

The aims and objectives of the GSO, as exemplified through its three main subcommittees: Geological Museums, Geotourism and Geological Heritage and

Conservation, indicate a real commitment to managing the country's environment and ensuring that its unique geological heritage is preserved, not only for people of today, but, also, for future generations to enjoy.

Background to the GA

The Geologists Association, established in 1858 and soon to celebrate its 150th anniversary, shares similar aims to those of the GSO. The GA has many members who are involved in museum management and who excel at promoting geology to the public. For the past twenty years or so, the GA has actively supported geoconservation and the management of the nation's geological heritage through its Curry Fund grants. And, since its inception in 1858, it has been a keen proponent of geotourism through its field excursions to many parts of the world and traditionally fully reported in the Proceedings of the Geologists' Association.

Rockwatch, the junior club of the GA, was established some fifteen years ago. It actively promotes geoeducation through the many and varied activities it offers both to its members and to the general public. Indeed, a number of its early members are now pursuing careers in geology, thanks in large part to their interests being nurtured through membership of Rockwatch.

As already noted, the visit to Oman by the GA in January 2006 was its third to this beautiful country. The stunning and classic geology certainly are a magnet for those interested in geology and the natural environment.



...Guests of the Geological Society of Oman

The GSO organised a welcome reception for the group on its first evening in Muscat which enabled us to meet the President, Dr. Omar Al Ja'aidi and a number of his GSO colleagues. The GA made a presentation to the GSO for its library, comprising a number of GA Field Guides to classic UK geological sites and wished the GSO every success for its future. The evening continued with a very interesting talk by the President, giving us an outline of the history of the GSO since its inception in April 2001 and showing us some of the amazing geological treasures of Oman. This was followed by a short briefing on the forthcoming field trip. Superbly professional handouts for each day were provided for the group by the GSO and each day of the visit was led by a GSO member, all specialists in their own field and a real privilege for us.

On the final evening the GSO hosted a farewell reception for the GA at the PDO Oil and Gas Exhibition Centre. After an excellent talk by Alan Heward on petroleum development in Oman, the GSO President, Dr Omar Al Ja'aidi, presented the GA with a commemorative plate of the visit.

Many times during the trip, we all discussed at some length with colleagues from the GSO, areas of mutual interest and concern where we may be able to work together, supporting initiatives that are dear to the hearts of both organisations. Should the GSO wish to liaise with the GA on any of its projects where we may be able to offer support, we will be happy to do so.

Education

Rockwatch is already in the early stages of setting up links between Omani and UK primary schools, not only to encourage geological links and understanding, but cultural, historical and environmental ones also. The children are our hope for the future and if we can educate, enthuse and inform them about the huge potential for geological development and conservation, as well as protection of their cultural heritage, in this wonderful country, we will have won half the battle!

It seemed to us during our travels around the Sultanate, that, with its stunning geology and magnificent natural environment, it is ripe for geotourism. However, there are already signs that these precious natural resources need to be carefully managed before they suffer permanent

damage and loss. Education is the key here. Education of local people to encourage and inform them how to value and protect their local environment and education of tourists showing them how to protect those natural resources they have come to see and enjoy.

And looking to the Future...

Whilst recognising that the GSO is still in the early stages of development, at least in terms of the geological timescale, it came as something of a shock to us to learn that the Society does not have its own headquarters or even its own library. Were the Society to have a permanent home with a small staff, it could more readily support the membership, develop its burgeoning outreach programme more effectively and promote its aims and objectives as recognised by its subcommittees on Geological Museum, Geotourism and Geoconservation more successfully.

Much has already been accomplished by the GSO in its short lifetime, more is to be done. It is clear that the will is there. Time, resources and a clear mandate are needed to do what is necessary. We wish our colleagues at the GSO every success in their endeavours and offer our support in achieving their goals.

We have already tentatively discussed the possibility of a visit by the GSO to the UK during the GA's 150th anniversary year, 2008. We would be delighted to show our guests some of the geology of the UK, including our Geoparks, the UNESCO World Heritage Coast of East Devon and Dorset and sites of geoconservation.

The wonderfully warm welcome given to the GA by the GSO will be remembered for many years to come and the commemorative plate, displayed at our monthly lectures, will be a constant reminder of a very successful visit and highlight our hopes for the future.





GSO INTERNATIONAL NEWS



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INDIA



The Indian government has rejected a joint venture formed by BG and ONGC to explore three deepwater blocks in the Krishna-Godavari Basin. Consequently, the KG-OS-DW, KG-OS-DW Extension and KG-OS-DW-III will be offered for competitive bidding in future rounds of the New Exploration Licensing Policy (NELP). The blocks, which were awarded to ONGC on a nomination basis, were promoted for farm in under the NELP fiscal regime in 2005. While Anadarko, BHP, BP, Petrobras and Petronas submitted Expressions of Interest, BG was the only company to submit a firm bid.

IRAN



Described as a supergiant find, and one of the most important gas discoveries in the world in recent years, NIOC has summarized drillstem test results for the Kish 2 well. Tests in three separate formations flowed a cumulative 75 MMcfg/d while tests in two other intervals flowed salty water. Details of the formations tested and choke sizes can be found in the various GEPS reports. Kish 2 is deemed to have found reserves officially estimated at 36 Tcf, plus condensate.

Local media reports suggest that the Exploration Department of National Iranian Oil Company (NIOC) plans to tender 12 new blocks, onshore and offshore in the Persian Gulf, and that these have been forwarded to the Economic Council (EC) for approval. If confirmed, this will mark a change of policy with new blocks being offered, in contrast to previous reports that indicated that the remaining unlicensed blocks for the first bid-round held in 2004, were to be re-tendered. The new license offer has been delayed for several months pending the completion of revisions to buy-back contract terms. In June 2006 a "limited production sharing" agreement was thought to be under discussion as a replacement for the buy-back contract. Under the

current system the contractor is not concerned about the long term viability of the project, but opts for a design to maximize the short-term return on its investment. As with the buy-back scheme, the new proposal is expected to require the contractor to be in charge of development, with an NIOC subsidiary designated as operator. It is likely that for a given project, a company is established with 51% of its shares held by Iranian companies, and the remaining 49% allocated to the foreign partner. The Iranian part of the company would only provide 26% of the capital investment, with the foreign partner providing the remaining 74%. Such schemes would only be applied to fields that are too complex to be handled by domestic contractors, as technological transfer would be an important aspect of the project.

IRAQ



Perhaps not surprisingly, the Kurdish Regional Government reportedly rejected Baghdad's interpretation of the constitution and insists regional governments have jurisdiction over undeveloped oilfields. The newly appointed oil minister Hussain Al-Shahristani announced on 23 May 2006 that only the Iraqi Central Government that should handle all petroleum exploration and production affairs. This will almost certainly result in a conflict between central government and the Kurdistan regional government, which has signed several PSAs with foreign companies. In addition, Lebanese company Make Oil AG has signed a memorandum of understanding with the Kurdish Regional Government for the construction of a US\$ 2.9 billion refinery in Iraqi Kurdistan. The refinery, which is expected to have a capacity of 250,000 b/d, is to be built over the next two years.

In June 2005, Arabian Oil Company (AOC) signed a memorandum of understanding with Iraq's Ministry of Oil to provide technical assistance for among other things, a comprehensive study of the Tuba field together

GSO INTERNATIONAL NEWS

with a development plan. The Iraqi Oil Ministry now says that the workover of four wells in the field has been completed and that these have been put onstream, although it did not comment on the field's output. The Tuba field lies in the Dibdibah Sub-basin (Central Arabian Province) to the east of Rumaila South and to the north of the Kuwaiti border. It was discovered in 1959 and holds an estimated 500 MMbo and 359 Bcfg in six reservoirs between 2,310 and 3,850m, the principal reservoirs being in the Turonian to Cenomanian dolomites and limestones of the Mishrif Formation

PAKISTAN



The Pakistani government has awarded BP three exploration licenses (ELs) for deepwater blocks in the Indus Delta. No wells are known to have been drilled to date on any of the three blocks, which total about 21,100 sq km. According to local press reports, BP has a minimum investment obligation of US\$ 16 million, but the company has plans to initially invest more than US\$ 50 million. Offshore Indus-U 2266-9 EL, Offshore Indus-V 2265-4 EL and Offshore Indus-W 2264-1 EL essentially surround OGDC's Offshore Indus-G EL on three sides. Reportedly, OGDC is attempting to farm-in to both Offshore Indus-U 2266-EL and Offshore Indus-V 2265-4 EL for a 15% stake in exchange for BP taking a 30% interest in its Offshore Indus-G EL. All three BP blocks were offered for competitive bidding that closed on 31 March 2006. No rival bids were submitted.

Virtually all of Pakistan's unlicensed offshore acreage is included in an exclusive application submitted by Global Geo Services (GGS). Offshore 2065-1 RP (Makran Offshore/Indus Delta) covers 140,845.15 sq km. Three wells are known to have been drilled on the acreage, all of which were plugged and abandoned: Wintershall's Indus Marine B-1, which reached a total depth of 3,804m in the Miocene Gaj Formation in 1973; Wintershall's Indus Marine C-1, which bottomed at 1,942m in the Eocene Ghazij/Laki Formation in 1975; and Husky Oil's Karachi South A-1, which reached a total depth of 3,353m in the Cretaceous Mughal Kot Formation in 1978.

QATAR



ExxonMobil has signed agreements with the State of Qatar and Qatar Petroleum that mark the development of the Al Khaleej Gas-Phase Two (AKG-2) project. This follows the completion of the initial stage of the project, AKG-1, which started up in November 2005. When operational in 2009, AKG-2 is expected to produce 1,580 MMcf/d of North Field gas for processing to sales gas for domestic markets in Qatar, while recovering associated condensate and natural-gas liquids. Al-Khaleej Gas is being developed concurrent with the Ras Laffan LNG Expansion Project to maximize synergies between the Ras Laffan Liquefied Natural Gas Co.Ltd and AKG-2 projects. Total investment in AKG-2 is expected to be more than US\$ 3 billion involving the construction of both offshore and onshore facilities including two wellhead platforms, gas treating and liquids recovery facilities and fractionation operations.

SAUDI ARABIA



In Contract Area 2 Isharat 1, the first of three wells planned by the South Rub Al Khali Company Ltd (SRAK) in the Rub'al Khali Basin, was spudded on 6 July 2006. Little is known of this wildcat other than it is located just 70km from the border with Yemen and, with a planned total depth of 4,600m, it is probably seeking objectives in the Permian to Carboniferous Unayzah clastics. The second well also planned for the same contract area is at a location over 1,000km away. The program will be concluded in 2007 by the first high-temperature, high-pressure well in Contract Area One, using a 15,000 psi drilling rig from KCA Deutag, which has secured a US\$ 14 million contract for all three wells.

ENIREPSA Gas Ltd, the operating group comprised of Eni (50%), Repsol (30%) and Saudi Aramco (20%), is currently drilling the first of four exploratory commitment wells in its 51,400 sq km Contract Area C. The company is required to invest US\$ 100 million in its initial 10-year exploration campaign. The first five-year exploration period has a minimum commitment to

GSO INTERNATIONAL NEWS

acquire 3,000km of 2D seismic and the drilling of two exploration wells. If renewed for the second period of three years, there will be a 50% acreage relinquishment and an obligation to shoot 2,000km of 2D seismic and drill two exploration wells. If renewed for the third period of two years, there will be a further 50% acreage relinquishment and an obligation to drill another two exploration wells. ENIREPSA completed the acquisition of 5,220 km of 2D seismic during 4th Qtr. '05. In the event of a commercial discovery, the Saudi Arabian government will pay for the construction of a gas pipeline from the gathering station to the country's Master Gas System (MGS), subject to a minimum supply volume of 350 MMcfg/d.

TURKEY



Currently one third of the way through a three-month Ultra Short Radius drilling program on its Selmo oil field, Perth-based Incremental Petroleum has been boosted by the news that its 100%-owned Selmo oil field contains 12.04 MMb of proved and probable reserves. Located in the Siirt petroleum district of south-east Turkey, the field was discovered by Mobil in 1964. Production is from fractured Middle and Lower Sinian Dolomites and currently averages 1,500 bo/d from 23 pumped wells.

UNITED ARAB EMIRATES



Seen by many analysts as a move to help alleviate the country's declining oil output, the Emirate of Dubai is terminating concessionary rights currently held by Dubai Petroleum. The company, a consortium comprising ConocoPhillips (32.5%), Total (27.5%), Repsol-YPF (25%), RWE Dea (10%) and Wintershall (5%), first produced oil in 1969. It has been operating Dubai's major offshore oilfields Fateh, Southwest Fateh, Falah and Rashid and the current concession is due to expire in 2012 but is being terminated early by mutual consent. Oil production in Dubai has fallen over the past 10 years and is currently around 100,000 b/d and is expected to be depleted in 20 years. The move is not entirely unexpected since the government recently

established Dubai Petroleum Establishment (DPE). With effect from 2 April 2007, DPE will be responsible for operating the oilfields and for all future business related to the production of oil and gas in Dubai.

YEMEN



Oil Search has successfully farmed out interests in three blocks to Moravské naftové doly, a.s (MND), the biggest company in the Czech Republic engaged in both upstream and downstream operations and underground gas storage. MND has secured a 15% interest in the 12,570 sq km offshore Mukalla Block 15 concession. Oil Search is currently planning to initiate a two-well exploratory drilling program in Block 15 commencing January 2007. Riyan 1 will be drilled in 650m of water with an Oligocene sand objective to test a tilted fault play structure with a potential 150 MMbo recoverable. Shayyur 1 (PTD 1,850m) will be drilled in 350m of water to test a pre-rift Cretaceous clastics play with a potential 165 MMbo recoverable. The Northern Offshore "Energy Searcher" D/S has been contracted. MND has also secured a 10% interest in the 7,367 sq km onshore Al Hood, Block 35 concession in the Sayun-Masila Basin where there has been suggestions of a well before the end of 2006. Finally MND secured a 20% interest in the 2,953 sq km onshore Gardan Block 3 concession in south-west Yemen. This license was officially awarded to Oil Search on 15 May 2006 for a work obligation that is believed to require the acquisition of 600 sq km of 3D seismic and the drilling of at least two exploratory wells.

With thanks to IHS Energy For further information please contact Ken White or Stuart Lewis

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web site : www.ihsenergy.com



The Source

for Critical Information and Insight™

GSO EVENTS CALENDAR

2006

September

19th September

How life began on Planet Earth?

Prof. Hugh Rollinson

Department of Earth Sciences, Sultan Qaboos University

November

1st November

Carbonate platform margin facies - the Triassic to Middle Cretaceous of the Dibba Zone

Dr. Chris Toland

Oolithica Geoscience Limited

2-4th November

Carbonate platform margin facies - The Triassic to Middle Cretaceous of the Dibba Zone

Dr. Chris Toland

Oolithica Geoscience Limited

7th November

Joint meeting with the HAO

'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

UK

14th November

Powerful application of sequence stratigraphy tools: from carbonate platform evolution to identifying controls on diagenetic processes

Younis Al-Tobi

Department of Geological Sciences, University of Texas

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

30th November-1st December

The Sharqiya aeolian system: processes, products and implications for hydrocarbon prospectivity & production

Dr. Caroline Hern & Dr. Steve Fryberger

Petroleum Development Oman

December

7th December

Tackling the Tertiary on foot

Dr. Edward Follows

Petroleum Development Oman

9th December

An evolution of remote sensing data for mapping saline soils and related vegetation in the Batinah coastal region, Oman

Issa Al-Qussaimi

Petroleum Development Oman

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

2007

January

9th January

Model for carbonate-hosted uranium-rich breccia pipes: global considerations

Dr. Andy Kwarteng

Department of Earth Sciences, Sultan Qaboos University

11-12th January

Geology of Jebel Sumeini area

Dr. John Hurst

Indago Petroleum

23rd January

Small Field Opportunities

Mark Ormerod

Petroleum Development Oman

25th-26th January

A transect through the Oman Ophiolite

Dr. Khalil Al-Riyami

Occidental of Oman

February

6th February

Factors influencing the deposit geometry of turbidity currents: implications for sand body architecture

Dr. Omar Al-Ja'aidi

Shell Representative Office Oman

8th February

Geology of the Nakhl area "Alhasanat"

Dr. Zuwena Al-Rawahi

Petroleum Development Oman

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

17th February

Umm A Samim: Recent Learnings

Paul Matheny

Petroleum Development Oman

27th February

Sand Beach, Mechanical Rig & Structural Geology

Dr. Badar Al Barwani

Occidental Oman

GSO EVENTS CALENDAR

2007

February

28th February-2nd March

The Miqrat Formation, Al Bashair and Barik Sandstones Members (Andam Formation), Cambro-Ordovician Haima Supergroup in the Qarn Mahatta Humaid area, Huqf High

Drs. John Aitken, John Millson & Raimond Van Der Pal

Petroleum Development Oman

Mr. Salmeen Al-Marjibi

Aberdeen University

March

6th March

Oman's Geology Through a Geophysicist's Eyes

Dr. Mohammad Al-Mazrui

Petroleum Development Oman

8-9th March

Reconstruction of the Jebel Akhdar Tectonics...radical new interpretation

Dr. Mohammed Al-Wardi

Department of Earth Sciences, Sultan Qaboos University

13th March

Reconstruction of the Jebel Akhdar tectonics...radical new interpretation

Dr. Mohammad Al-Wardi

Department of Earth Sciences, Sultan Qaboos University

21st-23rd March

Haima-1 and Qarn Sahmah-Alphabetical A, Salt, the Duru and more

Dr. Alan Heward

Petroleum Development Oman

27th March

Application of stratigraphic forward modeling to carbonate strata – uses for exploration and production

Dr. George Warrlich

Petroleum Development Oman

April

10th April

Sedimentology of the glacially-influenced, Permo-Carboniferous Al Khlata Formation, South Oman Salt Basin

Dr. John Aitken

Petroleum Development Oman

24th April

Application of remote sensing in assessing and mapping sustainable resources. Case study: assessment of vegetated sandy depression "hayla" in stony desert

Rashid Al-Hinai

Petroleum Development Oman

May

29th May

GSO Annual Meeting

Copy deadline for future Issues:

Autumn 2006

Wednesday 27th September 2006

Winter 2006

Wednesday 29th November 2006

Spring 2007

Wednesday 28th February 2007

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