

**Society of Petroleum Engineers
Azerbaijan Section
Annual Report 2013**



Collaboration International Connection
Integration Professionals Education
Companies Research Trainings Science
Oil Market Workshops Industry
Students Gas Market Professors
Conferences Network Exhibitions Engineers
Global Society Link Universities
Schools



Letter from the Chairman

The year of 2013 was certainly overwhelmed by huge effort of the section in developing the petroleum community in the country, and at the same time it was very rewarding by what those efforts have turned into. Amongst the memorable milestones at the beginning of the year was securing the section annual budget allocated for sustainable running of our programs and activities by our respective companies inclusive BP, Statoil, Halliburton, Total, Schlumberger, and Baker Hughes.

In the second quarter of the year, the section had its first grand reception with the official introduction of our board to a broad petroleum community. The event was made special by the visit of 2012 SPE International President, Ganesh Thakur and some of the senior management of the organization. Following this visit we as a section moved from the students dominated activities into the society that embraces the interests of the experienced professionals and high level management of the industry in Azerbaijan. As a good example and proof of this was the approval and organization of our first international workshop on Sand Management – by far the most challenging technical topic in the region.

Receiving the Section Award for Outstanding Student Support at ATCE 2013 in New Orleans was a genuine recognition of our hard work from SPE International. This was also the first time when the section board had a good representation at the event of this scale.

Numerous collaborations at various levels were achieved in 2013. A good example of intersociety collaboration was the one with our local professional societies including ASPG, ANGC, and ADEA on establishment of the Center of Professional Petroleum Societies (CPPS).

For me personally as I am sure it is for SPE Azerbaijan the most exciting part of both years that I chaired the section was SPE Azerbaijan team itself – its ruthless effort and commitment to developing eager young minds at universities and providing service to our professional members.

I would like to thank each and every one in the team individually and express my deepest respect for volunteering their free time for the sake of progress of the local community.

2013 SPE Azerbaijan Section Chairman

Ali Naghiyev

A stylized, handwritten signature in white ink, consisting of several fluid, overlapping strokes.

About SPE Azerbaijan

The Society of Petroleum Engineers (SPE) Azerbaijan Section is a unified petroleum engineering community enabling technical knowledge sharing, support of young professionals and students in the country within Exploration and Production sector. We are non-profit, apolitical, nonreligious international professional organization whose mission is to collect, disseminate, and exchange technical knowledge concerning the exploration, development and production of oil and gas resources and related technologies for the public benefit and to provide opportunities for professionals and students to enhance their technical and professional competence.

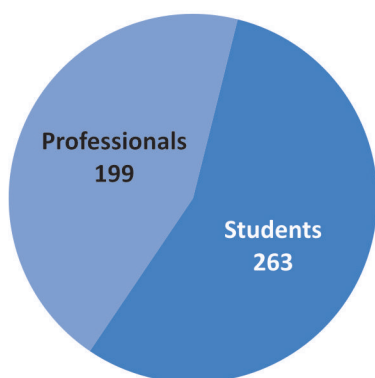
SPE Azerbaijan’s goal is to build a more integrated and cooperative professional petroleum community, facilitate development of students and young professionals, and connect them to the global SPE. We offer a variety of activities for the mutual benefit of professionals, students and academics through its live programs.

Membership and Budget

In 2013 SPE Azerbaijan Section has grown its student members by 95% and professional members by 60%. This directly correlates with the number of activities and programs that the section has put together for our members. Our dominating membership is coming from university students not only from petroleum engineering disciplines but also from the wide range of technical disciplines including applied mathematics, physics and chemistry. Beside student members, we have managed to activate a great number of young and experienced professionals who also benefitted from some of our activities, and this number continues to grow at a steady rate. This brought us to the first place in the membership contest within group B as the fastest growing section.

Our budget in 2013 totaled USD 56,380 of which 94% was donated by International Companies operating in Azerbaijan and the rest was received from SPE International.

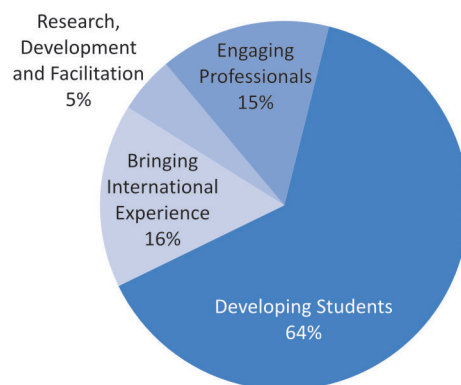
Number of Students and Professionals in SPE Azerbaijan by the end of 2013



In year budget income of SPE Azerbaijan in 2013

<i>BP</i>	15.67%
<i>Halliburton</i>	15.67%
<i>Total</i>	15.67%
<i>Schlumberger</i>	15.67%
<i>Statoil</i>	15.67%
<i>Baker Hughes</i>	15.67%
<i>SPE International</i>	5.98%
TOTAL	USD 56,380

Budget Distribution in 2013





Developing Students

SPE offers free membership to students studying or interested in petroleum related disciplines. Once they become members, SPE Azerbaijan Section opens up the variety of activities and programs that provide huge development opportunity. We try to engage students from all years of undergraduate and graduate studies. All events are highly interactive, educative, and encouraging in respect to career development and academic knowledge.

In 2013 the section conducted some of the most effective from the development stand point programs which we believe played a critical role in creating high level of the future professionals for the industry.

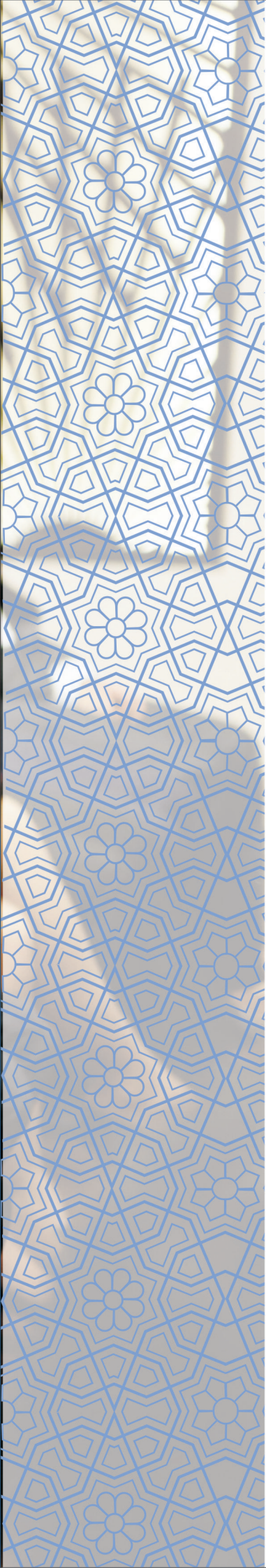
Annual Student Symposium

This event has now become a traditional tool and integral part of our engagement with students and universities. Just like in 2012 this year's symposium turned out to be surprisingly exciting and innovative in the sense that it brought about new sides of the petroleum industry and added new skills to students from technical disciplines. Our section in collaboration with Simprentis Training Company from UK organized 3 days event where 40 students were given a full awareness of life of field development strategy and techniques through a practical web-based simulator - a highly competitive game demonstrating important financial aspects and decision making process within the business of the petroleum industry.

The symposium was a full responsibility of SPE Azerbaijan Technology Transfer Officer, Javid Babayev, BP Reservoir Engineer – the author, coordinator and facilitator of both symposiums in 2012 and 2013. This event also showed a personal commitment of the section board and experienced professionals and management from the petroleum companies operating in Azerbaijan to share the knowledge with the future young professionals.

Amongst the lecturers were BP Director of Exploration and Appraisal for Eurasia, Greg Riley, BP SPE Azerbaijan Section Public Relations Chair, Elshan Rzayev, SPE Azerbaijan Section Board Member, Jabbar Bayramov, and BP Shah Deniz Base Management Team Leader, Emin Babazade.

We also received support from Caspian Center for Energy and Environment of Azerbaijan Diplomatic Academy where these 3 days event was held. Besides a warm welcome and administrative support with high class auditorium, the academy generously gave out valuable time of some of the staff members who gave talks to students on the



← *Active student chapter officers and Young Talents students at SPE Azerbaijan Grand Reception 2013*



▲ Drilling school program - rig site visit



▲ SPE Azerbaijan Annual Student Symposium, day 3 - team competition amongst the groups.

geopolitical and legal sides of the industry. The lectures were given by the staff members of the Caspian Center for Energy and Environment, Ahmed Gumbatov and Elnur Eyvazov.

Young Talents Program

The section is ambitiously working on attracting talent not only from different universities in the country, but also the talent from non-petroleum disciplines such as applied mathematics, physics, and chemistry. For this very purpose SPE Azerbaijan created Young Talents Program

designed to attract, select and intensively train first and second year undergraduate students. The program was coordinated by SPE Azerbaijan Section Continuing Education Chair, Bahram Novruzaliyev, BP Petroleum Engineer.

In 2013, 16 “Young Talents” students went through a full semester of physical geology sessions given by experienced and young professionals. The topics discussed during weekly seminars were the following:

- “Running Water” by Total Geoscience Manager, Bernard Geiss (SPE Azerbaijan Section Board Member)
- Shorelines by BP Senior Geologist, Mark Burn

▼ SPE Azerbaijan Annual Students Symposium 2013, Ice breaking exercise.



- Earth's Interior by SOCAR AZ-ACG, Agamamed Sultanov (SPE Azerbaijan Section External Relations Lead)
- "Deserts and Winds" by BP Senior Geologist, Stephen Kennedy
- "Groundwater" by Halliburton Country Lab Manager, Gulnara Shamkhalova
- "Minerals and Matters" by Peyruz Gasimov, SPE Azerbaijan Young Talents graduate
- "Igneous Rocks" by Rahman Mustafayev, SPE Azerbaijan Young Talents graduate
- "Sedimentary Rocks" by BP Geologist, Fidan Nabizade
- "Crustal Deformation" by BP Geologist, Turan Eminbeyli (SPE Azerbaijan Section Student Chapter Liaison)
- "Mineral Resources", "Mass Wasting", "Weathering and Soil", "Glaciers and Glaciation", "Geologic Time Scale", "The Structure of the Petroleum Industry by BP Senior Petrophysicist, Elshan Rzayev (SPE Azerbaijan Section Public Relations Chair)

Following the mid-term and final exams, only high performance students were elected to pass to the next seminar series in drilling engineering and reservoir engineering disciplines. The drilling sessions were given by the experts from BP, Schlumberger and Halliburton on a regular basis and organized by SPE Azerbaijan Section Drilling School Lead, Aysel Kazimova, BP Drilling Engineer.

A full syllabus on Reservoir Engineering sessions was prepared and conducted by Faig Hasanov, BP Reservoir Engineer in Shah Deniz Base Management Team.

Drilling School

Increasing demand and a gap in drilling engineering specialists in the country motivated SPE Azerbaijan to initiate a program that would encourage the younger population to pursue a career in drilling. To tackle this problem Aysel Kazimova, BP Drilling Engineer, has developed a comprehensive program for senior year students which allows raising awareness and gaining practical knowledge in drilling and completions.

Following this proposal to the SPE Azerbaijan Section Board during one of the monthly meetings the immediate support from service companies such as Halliburton and Schlumberger was offered. The program includes intensive knowledge sharing, practical exercises and frequent rig site visits. The following topics were presented by the experts in the area:

- "Rig Components and Systems" by Elvin Nasibov, BP Drilling Engineer
- "Drillstring Components" by Tevekkul Alirzayev BP Drilling Engineer
- "Formation Evaluation & Well Control" by Javid Ibrahimli, BP Drilling Engineer
- "Casing Design" by Jahangir Jabbarov, BP Drilling Engineer
- "Application of LWD Equipment" by Frank Besanger & Elnur Amirov, Halliburton Sperry
- "Directional Drilling" by Salahaddin Ayyubov, Halliburton Sperry
- "Cementing" by Alexey Tukshatiyev, Halliburton
- "Well Completions" by Riad Salayev, Schlumberger
- "Drilling Fluids" by Gursel Vahadov, BP Drilling Engineer

Field Trips

As part of our activities targeted at fulfilling certain industry needs and developing engineering resources, SPE Azerbaijan runs a great number of field trips providing a valuable opportunity to students to gain hands-on experience in different areas of surface and subsurface engineering. Throughout 2013, the section organized visits to rig site, oil and gas terminal, geological outcrops, mud volcanoes, and service company workshops.

SPE Days

As just as students start their first year of undergraduate studies SPE Azerbaijan team embraces them into the community through SPE days at universities. At these events student chapter officers introduce the benefits of becoming a student member and share all the



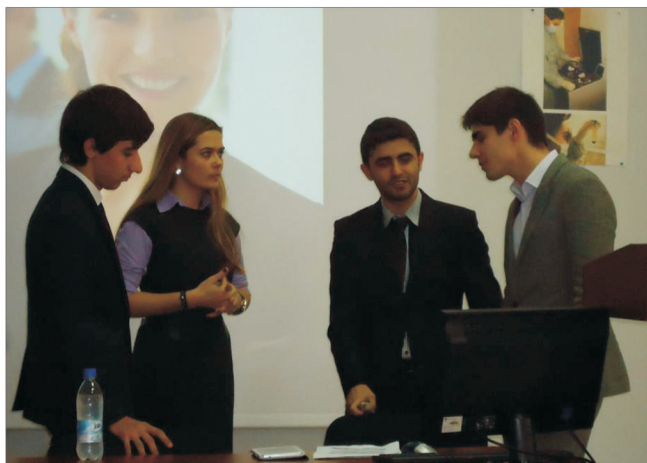
▲ SPE Azerbaijan Annual Student Symposium 2013. The closing ceremony group photo at Azerbaijan Diplomatic Academy

useful skills and fun that they experienced with SPE. This is coordinated through SPE Azerbaijan Section Student Chapter Liaison – Turan Eminbeyli, BP Geologist. Together with student chapter officers Turan managed to conduct 3 SPE Days at Azerbaijan State Oil Academy, Khazar University, and Baku Higher Oil School. This resulted in significant growth of our student members and number of applicants to participate in all our programs and activities.

Student visits to International Conferences

Our student chapters play a big part in representing the section and the country at the international level. We consider it as priority to support our student members in their will and desire to participate at those events. In 2013 Azerbaijani students participated in 3 international events listed below:

▼ SPE Day at Azerbaijan State Oil Academy



▼ SPE Azerbaijan Annual Student Symposium 2013 - the Winning Team




Conference	Student	Chapter	Sponsored by
International Petroleum Technical Conference (IPTC) 2013 in Beijing, China	Rahman Mustafayev Peyruz Gasimov Kenan Khasmammadov Aisha Jafarguluzadeh Farid Seyidov Zibeyda Rzazadeh Narmin Mehraliyev	ASOA Student Chapter ASOA Student Chapter Khazar Student Chapter Khazar Student Chapter Khazar Student Chapter Khazar Student Chapter Baku State University	SPE International SPE International SPE International SPE International SPE International SPE International SPE Azerbaijan
Youth Forum in Kazakhstan	German Abdurahmanov Elkhan Muradaliyev	ASOA Student Chapter ASOA Student Chapter	Schlumberger Schlumberger
Annual Technical Conference and Exhibition (ATCE) 2013 in New Orleans, USA	Nijat Mammedli	ASOA Student Chapter	Halliburton and SPE Azerbaijan

Energy 4 Me

We have pioneered our first application of Energy4Me – learning toolkit provided by SPE International for the school children. Robert Younger, BP Production & Reservoir Performance Team Leader (SPE Azerbaijan Section Board member) gave three hours class on petroleum related topics using this tool kit which children enjoyed very much.

 Robert Younger introducing Energy 4 Me to school children at TISA



 Elshan Rzayev at the Ambassador Lecture



Elshan Rzayev

Young Professionals Chairperson

“SPE Azerbaijan has a long history of investing into potential and talent of young generation in the country since its establishment in 1997. This year I had the privilege of leading young professionals division which delivered the core objectives of the society and led to receiving the Section Award for Outstanding Student Support. While in this role, I discovered that the success of our programs happened for the sole reason of being ready to share, give and commit by those who were in charge of each activity.”



Engaging Professionals

SPE unites the expertise, enthusiasm and readiness of industry professionals to share knowledge and skills for the common good of the society. In 2013 we were able to connect and engage over 50 professionals from 8 companies running, supporting and managing our activities.

Distinguished Lecture Program

In 2013 Azerbaijan Section hosted 2 Distinguished Lectures provided by SPE International. The first Distinguished Lecture for 2013 was given by one of the world's high class professional Dr. Nnaemeka Ezekwe at Khazar University. Dr. Ezekwe discussed some of the new technologies applied in Reservoir Management such as Downhole Flow Control, Distributed Temperature Sensing, and Integrated Field Management software.

The second Distinguished Lecture was held in newly established university, Baku Higher Oil School by Olivier Houzé, SPE International Technical Director for Reservoir Description & Dynamics for 2012–2015. His talk covered Methods and Workflows to Process Dynamic Data in Intelligent Fields.



◀ *Greg Riley receiving honorable membership from the President of SPE International 2012, Ganesh Thakur*

Ambassador Lectures

Ambassador Lecture Program (ALP) is one of SPE Azerbaijan Section programs designed for young professionals and professionals to raise their awareness of innovations and applied techniques in the E&P sector.

Tarald Svanes, SPE Azerbaijan Section Program Committee Member, who has worked 22 years as a reservoir engineer in different projects of Statoil and currently working as Statoil Azerbaijan Subsurface Coordinator, opened the first Ambassador Lecture of 2013. In his presentation he talked about Statoil as Energy Company, role of SPE as E&P organization and the importance of Integrated Uncertainty & Decision Analysis, Monte Carlo simulation, softwares and techniques.

John Freeman, BP Azeri New Well Delivery Team Leader gave a talk on Shale Gas Development which is very new to this region.

Many students and young professionals heard about this for the first time.

Another series of lectures was given by Mike



▲ SPE Azerbaijan Section Ambassador Lecture at Baku higher Oil School by Statoil Senior Management

McLean, BP Global Adviser on Pore Pressure and Fracture Gradient Prediction. Mike explained the basic concepts and practical application of the stress field and mud weight selection for drilling in the subsurface environment.

We had the pleasure to host Statoil's senior management who kindly agreed to give a special ambassador lecture on the innovation and application of the technologies employed by Statoil worldwide. The senior management of Statoil was represented from different parts of the



▲ SPE Azerbaijan Section Ambassador Lecture at Baku higher Oil School by Statoil Senior Management

business of the company including Production Strategy and Business Development VP, Rannfrid Skjervold and Senior VP DPN Operation East, Kjetil Hove.

Leadership Skills

SPE Azerbaijan activities provide a unique opportunity to our members with different level of experience and background to try and develop their leadership skills by being engaged in

▼ SPE International Awards Ceremony Ali Naghiyev receiving Section Award for Outstanding Students Support in New Orleans, 2013



brainstorming with experienced members of the society arranging and managing small and big scale events such as Distinguished Lectures, Annual Symposium, and Technical Workshops.

We would like to share their opinion on how useful the experience with SPE Azerbaijan was for them.



Javid Babayev
Technology Transfer Officer

"I was charged to put together an idea for the Annual Student Symposium for both 2012 and 2013. From the feedback from all attendees I realized how beneficial this was to the community, but I couldn't have imagined the enormous experience that I went through while managing the event from A to Z. This involved active collaboration with training providers, dealing with contracts, communicating with senior management of companies, meeting tight deadlines, working within the limits of the budget and most importantly enjoying the results!"



Aysel Kazimova
Student Chapter Liaison

"For the past years I had the pleasure to manage our two big student chapter, including students who have not yet established their own chapters at different universities. In the beginning of my role as a Student Chapter Liaison I had to put in a lot of energy encouraging students to be active and take care of their career while they are studying at university. Once they got active I became a bridge between the students' wish list and the section board. I certainly learned how to match students' needs with the strategy and the capacity of the section given the human and financial resources. Nowadays I enjoy watching the student chapters becoming an influential group within SPE Azerbaijan."



Bahram Novruzaliyev
Continuing Education Chairperson

"Being the graduate of the Young Talents Program I have always wondered how it was to be on the other side of the fence. Today in my capacity of SPE Continuing Education Chair I had this chance to test myself in participating in development of students early in their undergraduate studies. I now realized that a continuous monitoring and frequent motivational talks are necessary parts in driving the development of students. This role gave me a chance to understand what it takes to develop an individual through the right choice of communication and mentorship style whether strict and direct or soft and flexible."



Agamamed Sultanov
Membership Chairperson

"My experience with SPE Azerbaijan was very diverse. In my supporting role as membership chair person I was heavily involved in linking the national oil company with SPE Azerbaijan. This involved a very fine diplomacy that I had to learn which brought the relationship of two organizations one step further. Another great experience to share is about being the youngest program committee member for our first upcoming international workshop-sitting and discussing technical and organizational issues side by side with senior management of many international and local companies."



Research & Development & Facilitation

Human resources and technology are the key driving elements of the sustainable development and growth of the industry. One of the major roles of SPE is to provide the necessary tools to facilitate this growth. In Azerbaijan our team has initiated a project to aid development of human resources and adopt deployment of new technologies through building in-house capability. The vision of SPE Azerbaijan is to achieve this by linking industry with education and science. We believe that research at universities aiming to solve problems and drive innovations in the industry is the way forward.

In November 2013 the section established a new group which deals with Research Development and Facilitation led by Jabbar Bayramov, BP Reservoir Engineer. The group organized “Science Day” forum establish a dialog between the industry specialists and scientists from the local universities and the National Academy of Sciences. During the session Bernard Geiss, Total Geoscience Manager (SPE Azerbaijan Program Committee member) shared Total's global experience on collaboration with universities and scientists. Bernard stressed the importance of the research centers at universities and within the company as the key elements in establishing the connection between the industry and academia for the mutual benefit of the both.

The second part of the session was dedicated to the real industry problems requiring deep research and scientific approach in their solution. Jabbar Bayramov and Elshan Rzayev presented five research topics of the critical interest for the region and discussed some of the aspects of possible solutions and their practicality.

The session was finalized with a forward action plan on concept of the “research center” within universities acting as a link between the industry and the higher educational institutions. We also received supporting words on this from the Executive Director of the Science Development Foundation, Elchin Babayev who was also present at the event.

Our team will continue working on development and facilitation of the research at university

departments with the focus on application of the concept in practice. We believe that through research centers attached to university departments or faculty we can boost the education, attract youth to take on an academic career, but also add business value and progress the industry.



Jabbar Bayramov
*Research & Facilitation
Program Lead*

“After the “science day” I realized the role of SPE Azerbaijan in bridging the boundaries between the industry and academia. It was a completely new experience to be discussing the real industry issues with professors from different universities and scientists from the National Academy of Sciences – a dialog that has long waited its moment.”



Bernard Geiss
*Program Committee
Member*

This forum was a successful example of how industry can start a dialogue between each other. For me, it was also a good way to share how Total worldwide efforts in research and development aim to fulfill its commitment to better energy. The forum allowed to exchange ideas and concepts of how research can be done for the industry in the areas of most interest in the modern world. Hopefully, the future forums will develop further in this direction and facilitate the collaborative research between the industry and academia.



HALLIBURTON



Schlumberger



www.spe-azerbaijan.org