

# Emmanuel O. Egbogah, Special Adviser to the President of Nigeria on Petroleum Matters



**Emmanuel O. Egbogah** is Special Adviser to the President of Nigeria on Petroleum Matters, an appointment he received in 2007. He is the founder and Executive Chairman of Emerald Energy Resources and SPE Director, Africa Region. He has more than 35 years of diversified geological and petroleum engineering experience in Canada, the US, the North Sea, Africa, the Middle East, and the Asia Pacific region. Previously, he was Vice President, International Production, Niko Resources in Calgary; Technical Adviser and Technology Custodian for Petronas; Enhanced Oil Recovery Adviser for Libya's national oil corporation; Petroleum Engineering Manager and Enhanced Oil Recovery specialist for Amerigo International in Calgary and Houston; and Senior Vice President Engineering with Applied Geosciences and Technology Consultants in Calgary.

Egbogah is an SPE Distinguished Member and has served on numerous SPE committees. He received an honorary DSc degree in engineering from the University of Port Harcourt, Nigeria; and has earned a PhD degree in petroleum reservoir engineering from Imperial College of Science and Technology, University of London; a DIC degree in petroleum reservoir engineering from the Royal School of Mines, Imperial College; an MSc degree in petroleum engineering from the University of Alberta; and an MSc degree in applied petroleum geology from Friendship University, Moscow.

## What in your early life led you to choose a career in the E&P industry?

I did not have exposure to the E&P industry in my early life. My father was a civil engineer and my early exposure was to engineering. However, while at the university, one of my professors, a paleontologist, identified me as one who would make a good geologist and actually persuaded me to transfer from civil engineering to geology. I excelled in all my subject areas and gained specialization in applied petroleum geology. Consequently, I gained a master's degree in applied petroleum geology and became a very happy and enthusiastic petroleum geologist.

## What was your first job in the industry, and what was your impression of the industry when you first joined? How has your view of the industry changed?

My first job in the industry was as a field geologist with Pacific Petroleum Limited, Calgary, Alberta, Canada, working in the Blueberry Mississippi oilfield in British Columbia with a field office at St John's. My experience at my job changed my life and practice in the industry. I was working on a waterflood project where I was providing geological input to the reservoir engineering team that, I believed, did not have a good understanding of geology in order to properly represent it in the reservoir model and subsequent simulation.

My original impression was that the industry resisted an integrated approach to problem solving, but that view changed when I started to experience considerable geology and engineering integration in the industry. In fact, an integrated approach to problem solving is now the norm in our industry and you will find that there are now many geologists who are members of our Society of Petroleum Engineers.

## What are the key technology challenges you see for the E&P industry now and in the next 10 years? What can young E&P professionals do to help?

The quest for energy self sufficiency will require the appropriate technology for its realization. Each energy source has its own set of technology-development needs. I would like to re-echo Stephen Cassiani's statement (see SPE's *Talent & Technology*, Vol. 1 Number 3) that the main challenges for increasing conventional oil and gas supplies are improving resource discovery, accessing resources in harsh environments, and optimizing total recovery. For frontier or unconventional oil and gas resources, such as tight gas, heavy oil, shale gas, and shale oil, the major technology-development needs are new and improved/enhanced recovery methods. For deepwater operations with high-pressure/high-temperature environments, we require better quality-assurance technologies to manage and optimize our production operations. Great advances have been made in the area of reservoir description and dynamics, but significant efforts are still required to better describe and characterize reservoirs to aid better reservoir management. These areas should command the attention and innovative concentration of our young professionals.

## This issue of TWA is focused on social responsibility and sustainability. Various industries have different definitions of sustainability. How do you explain the term in relation to the oil and gas industry? As an industry, are we committed to sustainability? How can we measure performance? What can a young professional do to raise the awareness of sustainability in the industry?

Sustainable development is the type of development that meets the needs of the present without limiting the ability of future genera-

*The Way Ahead* Technical Leader Interview invites senior figures who have become pioneers of innovation and technical excellence within the E&P industry to comment. For this interview we travel to the office of the President of Nigeria, for a discussion with Emmanuel O. Egbogah.

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tions to meet their own needs. It encourages people to take responsibility for their own development and promotes development activities that address the actual needs of the people, and requires increasing community contributions to development services and infrastructure. Sustainable development calls for the following:

- Partnership among government, business, nongovernmental organizations, academic institutions, the international community, and rural and urban communities

- Capacity enhancement (human and institutional)
- Good governance, accountability, and transparency
- Democracy and human rights
- Environmental protection
- Peace and political stability
- Gender equality

To pursue sustainable development, strategies that result in a minimum amount of damaging impact but which promote social and economic development, must be adopted. The young professional can raise awareness about sustainability by monitoring the factors listed above. As an industry, we are committed to sustainability, and performance can be measured, for example, through environmental impact assessments and development indices.

**The public's view of how the industry performs on social responsibility issues has a major impact on the industry's image and also on its ability to operate. What can we do as an industry to handle social responsibility issues and how can a young professional help?**

Our past record in the area of social responsibility was not the best and has really hurt our public image as an industry. In particular, our record on social responsibility performance in underdeveloped or developing economies, which hitherto has portrayed our industry as a callous one with no regard to wellbeing of the communities where it operates, has been our nemesis, but the performance is now on the improvement curve. The industry is beginning to understand that inclusion, rather than exclusion, is necessary for successful operations in any given location and community. We don't have to "beggar" our communities, but must enrich them to create a "win-win" condition, including good management of the environment. The young professionals have a serious responsibility to further advance and improve the current social responsibility record of the industry. Adherence to and implementation of good social responsibility will no doubt endear our industry to the communities where we operate, the land areas from which we make significant shareholder value.

**What can the petroleum industry do to help raise the standard of living for many west Africans? What can successful west Africans do to give back to their countries?**

The petroleum industry can certainly do a lot to raise the standard of living for many communities where it operates, in general, and for west Africans, in particular. A visit to petroleum industry operations in the Niger Delta areas of Nigeria and the sight of the neglect and abject poverty life of hopelessness of the people will bring tears to your eyes. The industry can and should materially raise their standard of living. An investment of a minute fraction of the industry's earnings from these areas will be sufficient to give normal life to these natives. If the industry can put even USD 1 for every

barrel of oil produced back to the community for development, the living standard of the people will definitely be improved. Better treatment of the people, including capacity building, will also produce a happy economical workforce for the industry and will actually help to bring cost of doing business down enough to impact profit margins.

**Do you believe it is important for the petroleum industry to involve other professionals besides those directly involved with the industry, such as mechanical, structural, and chemical engineers or financial professionals, or perhaps other support personnel?**

The petroleum industry operates in multifunctional, multidisciplinary, integrated teams. It is therefore important for the petroleum industry to involve other professionals besides those directly involved with the industry. Even a far-flung discipline like psychology has a room in the industry's multidisciplinary team. The petroleum industry is truly a melting pot for all professional callings. Many people may not even remember that you need cooks and chefs in the industry, but the truth is that you do, and without them, other activities will not happen.

**Do you believe it is important for our industry to focus on other sources of energy beyond petroleum, such as renewable resources like wind energy? How can west Africa diversify its energy resources and how can young professionals help?**

It is important for our industry to pay attention to, but not focus on, other sources of energy beyond petroleum, only from the viewpoint that we probably can develop the technology for exploitation just as we have and continue to do for petroleum and related energy resources. The fact must be faced that alternative or renewable energy sources such as wind, solar, geothermal, biofuels, and biomass present a different set of technical and environmental challenges. Cassiani, in the article I previously mentioned, has enumerated these challenges to include high cost of development, a limited scale of operations, and lack of supporting infrastructure. And while commercial alternative-energy operations are growing rapidly, these energy sources are expected to provide only a small share of the energy supply needs for decades to come and will remain heavily dependent on some form of subsidy.

West Africa is well suited to solar energy and should pursue its energy diversification in that regard. Because it is situated near the Equator, west Africa receives maximum intensity of the sun's energy and should benefit most from solar energy protocols.

**Often west Africa has experienced political unrest, making it difficult to sustain economic growth. What do you see as a way to calm the unrest? Is education both a long- and short-term solution?**

The political unrest in west Africa that has severely hampered economic development can be calmed mainly by education. When the people understand the benefits of democratic governance, transparency and integrity in governance, and the fact that economic development and wellbeing of the people can only come through group and selfless effort, then the nations of west Africa will forge ahead in

economic growth and personal wellbeing. Education is the key and will serve as both the short-term and long-term solution.

**Do you believe it is important for students in west Africa to join SPE? Are there any particular benefits that may boost their careers? What can students and young professionals in west Africa do to better prepare themselves for a career?**

Students and young professionals in west Africa need to dedicate themselves to the highest ideals of technical and professional learning to be able to respond to our industry's challenges. Learning new ways of working in collaborative work environments will be an enabler for achieving career success. They should also be informed of the industry's challenges which require skilled people and effective work processes to develop the needed technology and ensure it is properly applied.

That is why it is extremely important for students and young professionals in west Africa to join SPE. The information-dissemination powers of SPE are great. Student members can gain a lot of industry information that will help boost their careers. Being informed of the industry environment, requirements, and challenges gives SPE student members the power and confidence to succeed and excel in their careers.

**What three changes would you make to the way our E&P industry develops people?**

The three changes I would make to the way our E&P industry develops people are:

- Develop more multidisciplinary work environments.
- Incorporate cross-cultural ingredients in the training and development of industry personnel.
- Encourage industry managers/leaders to take development training in sustainable development and corporate responsibility concepts.

**How did you get involved in SPE? What has your SPE membership meant to you?**

I joined the SPE in 1971 when I joined the University of Ibadan as a lecturer in petroleum technology. I was influenced to join by a friend and mentor, professor Walter Rose, who was a visiting professor at the University of Ibadan's Institute of Applied Science and Technology (now the Faculty of Technology).

SPE membership has meant everything to me. The membership has greatly assisted and enabled my industry career growth and development and given me unprecedented global network and professional reach. I actively participate in SPE activities and have received numerous awards and recognition, including becoming a Distinguished Member in 1995.

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