FEATURE ADDRESS

by

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To The

Society of Petroleum Engineers
(Trinidad and Tobago Section)

Annual Banquet &
Awards Ceremony

Date: Saturday 26th August, 2006
Festival Ballroom, Crowne Plaza Hotel
Your Theme for this function is and I presume for sometime in the future the Society of Petroleum Engineers (SPE) will be focused on:

“The Challenge of Recruiting E&P Professionals – Whence Shall They Come?”

Two sobering and perhaps, provocative thoughts occurred to me as I pondered over your chosen theme and the substance of my address:

They were:

- Do we really need anymore E&P Professionals?
- Why should a question like that be now posed, some 150 years after Trinidad and Tobago has been in the Oil and Gas Business?

I pose these questions against the background of our history, the reserves picture and the future of the oil and gas industry in Trinidad and Tobago.

We are being reminded every so often about the quantity of our proven reserves:

Oil - <0.1% of the World
Gas - <0.5% of the World

Do those figures justify seeking to expand the cadre of E&P professionals in Trinidad and Tobago.

Should we not simply relax – enjoy the fruits of what we have today and let the BIG-BOYS spend their ‘big-bucks’ – bring in their own experts in E&P and explore, find, produce and exploit whatever remains under the earth?

Some countries of our size and with limited human resources but with extensive hydrocarbon resources, have adopted that position – Why not Trinidad and Tobago?

Having posed the questions, I will also, try to answer it! Usually this is not what Professors, particularly retired ones, do!

The second question relates to the first – Why this question now?

We are informed that oil was first discovered in Trinidad and Tobago in 1866 some 140 years ago – over that period of time our reserves of both gas and oil have been explored and exploited and here we are today – the SPE posing the question:
“Whence shall they come?”

I assume it reminds me to some extent of the crisis in the oldest established Christian Church – the Roman Catholic – who after 2000 years of existence also now have to pose the question – Priests! “Whence shall they come?”

In order to treat with these questions, we need to review the historical growth of the energy industry – including our E&P activity – when for over 100 years of that period – notwithstanding the fact that a great deal of the original E&P work was done by locals - Darwent, Lee Lum etc – the industry was dominated by foreign companies, large and small.

Our history reveals that from 1907 when the first commercial well was discovered and the first cargo of oil exported in 1910, the Industry did not have a NATIONAL IDENTITY – well it did but the Nation was Great Britain as Randolph Rust reminded an audience in those early years:

“It has been manifest that Great Britain before adopting Oil as fuel for her Navy must be sure of a source of supply which the outbreak of war will not cut off, and that it is therefore important that sources of supply should, if possible, be found on British Territory. In light of my discoveries, I felt that
Trinidad, England, most valuable passion in the West Indies, being as it is one of the keys to the Panama Canal, now rapidly approaching completion might herself one day be one of the chief sources of supply of oil fuel, and thanks to that and her unique position become one of our most important naval base.”

With that prompt by 1910, there were over 30 companies operational in Trinidad and Tobago by 1917 - 1.6 million barrels of oil were produced and exported.

As late as 1956, when a debate in Parliament – not our Parliament but that of the United Kingdom – Chancellor of the Exchequer – Mr. Harold Mc Millian, in his contribution on the imminent takeover of TLL by Texaco (a US based and owned Corporation) said:

“I felt a sense of regret, even dismay, at the thought that an important asset of this kind hitherto owned and managed by British interests should pass out of our immediate control”

It is therefore clear that without a Trinidad and Tobago National Identity – there were no driving forces for any young men or women to consider a career in the Energy Sector.
Even when some of us dared our President, Professor Maxwell Richards, Norbert Masson, Senator Bashard Ali, and yours truly, in those early years – the constraints and barriers both overt and covert, surfaced, I remember – the difficulty I experienced in being accepted as an Engineer.

I did not fit the profile – foreign, short pants, tall socks – with an air of arrogance were all accepted characteristics which, hopefully, up to today, I still do not have!!

This brings me to the original question:

“Do we need any more of E&P Professionals?”

My answer is a positive YES.

The need is desperate!! Why the need?

Two (2) glaring Reasons!

(1) More of our hydrocarbon reserves must be found to provide the additional breathing space Trinidad and Tobago needs to complete the job of moving away from our dependence on oil and gas.
(2) Related to that, in that time, we must build up our expertise in more areas with the intent of exporting that IP and knowledge and applying it elsewhere – outside of Trinidad and Tobago both through consultancy, engineering know-how and indeed ownership of offshore assets.

These are now needs in front of the Natural Gas Export Task Force: several proposals for new projects that are gas-intensive.

At this point, those projects are at an advanced stage, the additional production required will be of the order - 800 mmmscf/day.

This number excludes another Train of LNG – Train X. Added to this and with approval of the other projects in the queue and any LNG expansion – another 2,000 BCF/day is needed.

Trinidad and Tobago’s success, as a preferred destination for the Gas Intensive Industry, now presents it with a difficult but attractive problem – allocation and prioritization of our gas reserves. Regardless of new discoveries, this will remain a key question for the Government, but clearly, an easier one as new reserves are found and brought into commercial production.
Clearly – the challenge is there! Will or is there an “ENABLING ENVIRONMENT” for all of this to happen.

In reviewing – the Vision 2002 Report on Energy – still in Draft form, I came across a table that listed the factors for ‘CREATING AN ENABLING ENVIRONMENT’:

Oversight, Policy Making, Strategic Planning, Business Development, Operational

The Table did give some recognition to the human resource factor by listing as an element:

- Educating, Training and Development
- Attract and Retain Right Skills
- Technology Development and Innovation

My own view that this factor in the enabling Environment – the Human Resources is by far one of the more important elements.

I have been asked on several occasions, to identify the factors that led to Trinidad and Tobago’s success in the gas industry. Invariably, I have listed four (4) in the order of priority as follows:
(1) A healthy environment for business and Investment:

- Stability
- Production
- Law and Order
- Respect for Contracts
- A Political and Administrative Structure that is Transparent, Honest and Just.

(2) Human Resources

- Availability of an intelligence work force at all levels
- Brain Power, Creativity and Dedication

(3) Infrastructure:

- Transportation
- Electricity
- Water
- Telecommunications
- Housing
- Health
- Education
- Security
(4) Hydrocarbon Reserves – placed 4th!!

Human Resources

There is no question that the need is there for more E&P Professionals! But the filling of these needs must not only be a numbers game but have a visionary element – meeting local demands but with a vision that extends its reach beyond our shores.

Belize, Guyana, Equatorial Guinea – Papua New Guinea – are all seeking the assistance of Trinidad and Tobago.

While the Government can create the umbrella and relationships – the private sector, with its cadre of professional and access to its IP must follow through – expertise, investment, management and operation.

The ‘what if’ syndrome must be addressed now!

Therefore, in treating with the question posed in your theme, I suggest that the challenge must go beyond Recruiting E&P Professionals but must address the educating and training of the Right Professionals for the E&P.
Recruiting suggests – the looking for professionals seeking jobs as oppose to looking for professionals who are seeking business opportunities and the expansion and deepening of our knowledge base.

I am of the view that the next wave of professionals in E&P must have that vision – seeking business opportunities and the deepening of our IP in the area of E&P rather than a job.

Krishna and Lennox Persad and Claude Taylor were the only three (3) in the Committee of forty-three who were charged entrepreneurs with mapping the Vision 20/20 Energy Sector.

I am therefore proposing that you change the tone of your Theme by asking that you consider a new word for ‘recruiting’.

The remainder of the question ‘Whence’ can now be addressed and it is indeed a more difficult question.

A simple answer could be to approach the Government, the State Enterprises, Private Sector to offer a larger number of Scholarships and Bursary to the University of the West Indies, and even the several foreign schools that have excellent programmes. I am not certain that that will be the answer to my changed theme – it will provide recruits but not the
entrepreneurs and some of the visionaries that I think we need.

One alternative – not exclusive, is to seek to influence the educational and training programmes available to which these potential professionals will be undertaking.

Clearly – we cannot depend on the well established schools abroad to mount special programmes to meet Trinidad and Tobago’s needs!

This fact has been recognized elsewhere, in Kuwait for example – 1% of gas reserves but 9% of oil has created the new Kuwait University - **Kuwait Institute of Business and Technology**

As a defining feature – it will graduate students in both business and technology – A bold step.

Two of the several objectives underlay the creation of this new University are:

(1) It will enrich the Kuwaiti workforce, producing technologically skilled engineers, entrepreneurs and business leaders
(2) It will invigorate Kuwait’s existing commercial establishments, providing Research and Development centres of excellence”.

Can we take such a step in Trinidad and Tobago.

We have!

**The University of Trinidad and Tobago**

I make no apologies for providing such an answer. My invitation tonight was to - President and Chairman of the Board of Governors.

Let me clarify and support that bold statement.

The Mission Statement of the UTT states that the UTT has set out:

“To be an entrepreneurial University designed to discover and develop entrepreneurs, commercialize R&D and spawn companies for wealth generation and sustainable job creation towards the equitable enhancement of the quality of life of all individuals, families and communities of the Republic of Trinidad and Tobago and the Caribbean”
A mouthful! A vision!!

How will this Vision be realized?

✓ Quality of Staff
✓ Curricula
✓ Method of Knowledge Acquisition
✓ Rewards for Innovative Approaches – Staff and Students
✓ A Environment that emphasizes teaching through Problem Based Learning and emphasis on Relevant R&D.
✓ Seeking sustainable Alignment with Industry through:
  o Board Membership
  o Advisory Councils with membership drawn from the Industry
  o External alliances that subscribe to the same philosophy as the UTT.

The work has begun. An ambitious and relevant Research and Development Programme has begun with the launching of the Natural Gas Institute of the Americas.

The initial topics will be:

  o Gas Value Chain
  o Pilot Plant Testing
  o Digital Field of the Future
There are several specific proposals now being considered:

- Energy - 6
- Renewable Energy - 5
- Process & Utilities - 10

On the commercial side, UTT sees niches that can lead to new businesses in Trinidad and Tobago – example La Brea, the Bio Remediation of Soils Contaminated by the departed oil companies.

If you accept this challenge of seeking a new type of E&P Professional, the UTT will welcome the SPE either directly or preferably, through the Advisory Council to be pro-active as SPE and UTT pursue this vision.

This evening, as your guest, I have been very polite –as opposed to when I addressed the Geologists!

My understanding is that the tasks of Petroleum Engineers is to prove the guesses of the Geologist to be correct or take the blame when these guesses are all wrong.
My admiration for Petroleum Engineers, as an Engineer, has been increased as I was recently briefed on the Deep Ibis drilling programme – the several technologies and interdisciplinary activities that are required to meet that challenge is remarkable and I know that the Petroleum Engineer is in the middle of it all.

Future challenges are ahead of us and I compliment your Society in anticipating these challenges, raise the issues as projected in your Theme.

I wish you the best in seeking answers and as promised, I now commit – to assist you in solutions.

I thank you for your attention and this invitation to address this distinguished gathering.