



SPEECH BY THE MINISTER OF ENERGY AND ENERGY AFFAIRS

SENATOR THE HONOURABLE KEVIN RAMNARINE

THE STATE OF THE NATURAL GAS SECTOR – 2013

HILTON, PORT OF SPAIN

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SALUTATIONS

- Honourable Ministers
- Members of the Diplomatic Corps
- Mr. Selwyn Lashley, Permanent Secretary, Ministry of Energy & Energy Affairs
- Mr. Vishnu Dhanpaul, Permanent Secretary, Ministry of Finance and the Economy
- Mr. Herman G. Acuña, Managing Senior Vice President – International, Ryder Scott Company
- Mr. Richard Oliver, Deputy Permanent Secretary , Ministry of Energy and Energy Affairs
- Mr. Richard Jeremie, Chief Technical Officer, Ministry of Energy and Energy Affairs
- Heads of state agencies, energy companies and associations
- Staff of the Ministry of Energy and Energy Affairs
- Other specially invited guests including those who are viewing these proceedings online
- Members of the media
- Distinguished Ladies and Gentlemen

Good afternoon ladies and gentlemen and welcome to what is now an eagerly anticipated event on the energy sector calendar – the presentation of the 2012 audit of non-associated natural gas reserves for Trinidad and Tobago. This year we have done things a bit different. We are streaming this event live on the Internet and we have increased the cross section of persons invited. I believe that it is important to demystify this sector which could only redound to the benefit of all the people of this country.

Every year we go through this ritual of the Ryder Scott audit. Ryder Scott is a household name in T&T. They need no introduction to T&T but I would add that they are one of the world's leading petroleum engineering consultancies. I think that intrinsically people understand the importance and centrality of natural gas to our economy. Natural gas has been central to our economic prosperity since the mid -1990's when it first eclipsed oil on an equivalency basis.

Audit summary

The primary objective of the audit is to prepare a certified statement of the country's non-associated natural gas reserves in the categories of proven, probable and possible, and make an assessment of the exploration resources in accordance with accepted industry standards.

The audit was facilitated by onsite reviews of the data supplied by the operating companies. The NGC and the Ministry of Energy also provided the supply/demand outlook for the industry.

In its Report on the country's natural gas reserves for 2012 Ryder Scott has quantified the 3P reserves at 26.24 Trillion Cubic Feet (Tcf) and exploration resources at 31.62 Tcf. This compares favourably with the 2011 results in which the 3P reserves were quantified at 26.45 Tcf and exploration resources at 30.5 Tcf. The slide illustration shows the changes in the Proven, Probable and Possible reserves and in exploration resources. I start with the 3P figure because there has been a long fixation in this country with the proven reserve number. I want to again stress that when we look at our reserves numbers we consider all categories of reserves. In fact the major gas producing companies, the NGC and the Ministry use the 2P number for purposes of industrial planning.

Considering the proven reserves, there was a small decrease from 13.26 Tcf to 13.11 Tcf or a decrease of 0.15Tcf or 1.1% over the 2011 proven reserve figure.

Our total production in 2012 was 1.41 trillion cubic feet of gas and we were able to replace 1.26 trillion cubic feet of reserves from the probable up to the proved category through new field discoveries, extensions and revisions to achieve a replacement ratio of 89.3%.

Show waterfall graph

This positive movement of reserves was mainly due to upward revisions for bpTT, arising from the drilling of the Savonette 4 well which resulted in two new field discoveries and the re-mapping and re-evaluating of the petrophysical analysis for its Serrette and Juniper areas.

Exploration Resources

Our exploration resources have also showed positive movement increasing by 1.0 Tcf despite the exclusion of blocks awarded with effect from 2010. In this regard the Ryder Scott Company did not take into account the Blocks NCMA 2, NCMA 3, and 4(b) for which a total of five exploration wells are expected in Fiscal 2013/2014. These blocks are estimated to have a total reserve estimate in the range of 6.06 – 20.28 trillion cubic feet based on company estimates. Excluded also were Blocks TTDA 14, 23(a) and 5(d) which were awarded to BP and BG respectively in 2012.

You would recall that we also signed four new Production Sharing Contracts with BHP Billiton for deep-water Blocks TTDA 5, TTDA 6, TTDA 28 and TTDA 29 off the north and east coast of Trinidad and Tobago and we are currently engaged in negotiations with a consortium comprising BHP Billiton and Repsol for a PSC for Block 23(b) which is located on the East coast. The preliminary estimates of the combined unrisks natural gas resource potential of these blocks are in the range of 2.4 – 23.6 trillion cubic feet. These deepwater blocks have also been excluded from the purview of the audit. When we add the potential resources from these blocks our exploration resources could increase by 8.0 Tcf to 44 Tcf. Trinidad and Tobago ladies and gentlemen is not running out of natural gas.

A review of our proven reserves over the last five years shows marked reduction in the rate of decline. The reduction in 2012 was in the order of 1.1% and 2 % in 2011 compared to 6.6% for 2010, 6.2% for 2009 and 9.5% for 2008. We are arresting the decline in our proven reserves by providing a conducive environment to the energy industry. In particular we have provided incentives and opportunity for upstream companies to explore, appraise and develop new and existing acreages.

The industry can be assured that under this Minister of Energy the rug will not be pulled from under them. It was that sense of uncertainty

that caused on major natural gas company to literally stop investing in this country in 2008-2010. We felt the impact of that in 2011 and 2012 and we are now emerging from that situation. The energy sector can also be assured that they have access to the Minister of Energy and I always act in the broader national interest. The last two years have been the most challenging time since Independence to be Minister of Energy. It has not been easy.

Developmental Activity (BP/ EOG/ BHP and BG)

The cumulative impact of the Ministry's strategies is now a buoyant and active upstream sector. In fact one leading energy commentator has described the level of activity as a "frenzy of exploration".

All of the major companies are currently engaged in exploration and developmental activity aimed at increasing gas production and their reserve base. In fact I want to say that two year ago when I became Minister BP, BG and BHP did not have the growth stories that they have today – and if these three have growth stories then the country has a growth story.

BP which is the largest gas producer in Trinidad and Tobago is expanding gas production at its Savonette platform. The company is drilling a new well the Savonette 6 which will come on stream by year end with an estimated gas production of 200 million standard cubic

feet per day. This will complement production of the Savonette 4 well which is currently producing at a rate of 250 mmscfd and can go to 270 mmscfd.

This makes “Sav 4” the highest natural gas producing well in the world. Savonette 5 well is currently online and producing at 155 million standard cubic feet of gas per day but is expected to be ramped up to 165 million standard cubic feet of gas per day. By year end production from the Savonette platform which is currently at 660 million standard cubic feet per day is expected to increase to approximately 900 million standard cubic feet per day.

BP is also in process of developing its Juniper field which consists of the Corallita and Lantana fields. Production from Juniper is expected to peak at 555 mmscfd. Reserves in Juniper are estimated at just over one trillion cubic feet of natural gas. The Ministry of Energy continues to work with BP to ensure the development of Juniper and we are advised that it is the intention of BP to fabricate the topside and jacket for the associated platform in La Brea, thus resuscitating the long dormant fabrication yard in 2014. That means jobs and economic activity in the South West peninsula.

In keeping with strategy of optimizing its reserves bpTT recently finalized the acquisition of seismic data in its acreage in the Columbus basin using Ocean Bottom Cable (OBC) technology which is one of the most advanced forms of technology for acquiring seismic datasets. Processing of the data will take one year and will enable the visualization of prospects below shallow gas zones and faults which previously obscure seismic signal. The survey cost over US\$200 million and is the most expensive survey ever acquired in Trinidad and Tobago. I would say that the results have been presented to me by both here by BP when I visited the Western Geco Blue Fin vessel and by Mike Daley in London only two months ago. The results are the source of great optimism at BP both in T&T and in London.

Other on-stream developments include the commissioning by EOG of production from its Osprey development. The company is drilling four developmental wells. The first well, the OA-4 well is producing at a rate of approximately 28 million standard cubic feet per day. Wells OA-3, OA-2 and OA-1 are expected to be completed by the end of September, with expected production rates of 30 million standard cubic feet per day each. On completion the development will add another 120 million standard cubic feet of natural gas per day to the country's production.

BGTT is also expected to add to these numbers with the development of their Starfish field in 2014 which has reserves of 640 billion cubic feet of natural gas and will produce at a plateau rate of 260 mmscfd. Starfish will backfill for the Dolphin field which has been producing since 1996. The ECMA Dolphin platform will be taken offline in September to prepare for the development of Starfish. BG also has plans for the development of its reserves in Block 5C and Block 5D in 2015.

As for BHP they have started to plan for what is the Angostura Phase 3 development which will bring on 100 mmscfd by 2016.

Exploration/Appraisal Activity

Companies which are in the exploration/appraisal stage comprise BP, BGTT, Niko and Centrica. Both BP and BHP are in process of undertaking seismic surveys and geological studies on blocks recently awarded and have indicated their intent to collaborate on a joint 3D seismic survey of the North East coast deep-water blocks. This to me makes sense and is in the national interest as it means lower cost for both operators and lower cost means they have less cost to recover from the PSC's and hence more profit to share with the Government. It

also means less disruption to the marine environment as there would be one survey instead of two.

Niko Resources which has PSCs for blocks NCMA 2, 3 and Block 4 b is scheduled to drill one exploration well in 2013 and three exploration wells in 2014. Centrica which has PSC's for Blocks 22 and NCMA 4 will drill one exploration well and one appraisal this year. In fact as we speak the Cassra 3 appraisal well is being drilled using the Ocean Lexington semi-submersible. After this, Centrica will drill an exploration well in NCMA 4. There are currently six rigs drilling in our waters and a seventh is on the way to drill for Repsol. In mid 2010 there was one rig drilling in our waters the Constellation 1 which was drilling for BP. The upstream oil and gas industry has made a huge comeback. Let us look at the graph of rig days for the last 10 years.

(Show rig days graph)

The current developments in the sector will be augmented by the exploration and development activities arising from the Onshore Competitive Bid Round which was launched in May 2013 and which now closes on October 31st 2013 – an extension from the original close date of August 30th 2013. The response to the onshore bid round has been overwhelming. We have sold 14 data packages to date a price of \$US 40,000 per data package. With regard to the deepwater we will

open the 2013 deepwater bid round in August 2013 and it will close on January 31st 2014. Again the response as gauged by nominations has been positive. I would also add that there are now a total of six deepwater blocks under production sharing contract (2 -BP and 4 - BHP). These were all signed in 2012 and 2013. These are the first deepwater PSC's to be signed in over a decade.

Cross border gas field development with Venezuela

Turning now to Cross Border natural gas development, you would have read that the Second Meeting of the Joint Steering Committee for the Unitization of Cross Border Hydrocarbon reservoirs that extend across the delimitation line between the Republic of Trinidad and Tobago and the Bolivarian Republic of Venezuela was held here last week. The meeting was co-chaired by Permanent Secretary Selwyn Lashley and Vice Minister of Hydrocarbons for Venezuela Angel Gonzales Saltron.

The meeting finalized the draft Functional Structure and Governance of the Unit Operator for the Loran-Manatee Unit Area and presented final reports for the distribution between Trinidad and Tobago of natural gas reserves for the Kapok-Dorado and the Cocuina- Manakin fields. These matters are to be presented for approval to the Joint Ministerial Commission to be held in Caracas, Venezuela in the coming month.

Following approval, development plans for the blocks are to be prepared for consideration by the parties. This is a historic advancement and I commend PS Lashley and his team. We have moved Loran-Manatee more in two days than we have moved it in two years.

Sector Performance

The cumulative effect of exploration and development activities to date has resulted in an improvement in the performance of the sector. The Central Bank for the First quarter of 2013 reported 0.5% growth in GDP for the sector as compared to flat growth in the fourth quarter of 2012 and 0.5% growth in the third quarter of 2012. This was due mainly to a 1.9% increase in natural gas sales. This trend continues into the second quarter of 2013 with a 3% increase in natural gas sales. Preceding the third quarter of 2012 there were several quarters of negative growth. We have now stabilized the sector and it is growing again.

Key elements in the performance of the sector were the improvement in natural gas production, sustenance of rig activity at elevated levels and the impact of increasing foreign direct investment in the sector. In fact in 2012 we recorded some \$US 2.6 billion in FDI in T&T of which 90% is attributable to the energy sector.

Show FDI slide

Most of that money is of course pouring into our upstream sector and supporting the heightened drilling campaign.

Maintenance – Cassia B and Dolphin

I am sure you are all familiar with the parable of the Goose and the Golden egg. It is applicable to maintenance and asset integrity. The assets that underpin our gas sector are ageing. In the third quarter of this year BP and BG will engaged in activities related to the Cassia B and Dolphin platforms. Cassia B is BP's largest offshore installation is a critical hub.

The Dolphin Platform is BG's main facility on the East Coast. I will provide more details about these two planned events in the coming days via a press release. I would however allay the fears of the Central Bank by saying that the impact of these two scheduled maintenance events has now been significantly mitigated compared to the picture that was presented to the Bank at the start of the year. The Ministry has worked with both BP and BG to minimize the impact and we have also coordinated with the NGC, Atlantic and the Point Lisas Estate Association to coordinate maintenance there so as to minimize the loss of natural gas production for the country.

With all the activity, the domestic energy sector is definitely on a positive growth path. I have posited that once we get the September/October maintenance out of the way the outlook for 2014 is positive.

Sector Development

Ryder Scott Company in its reports over the years has continuously advocated that Upstream companies in the oil and gas sector be encouraged to explore, appraise and develop acreages in their possession and that opportunity be provided on sustained basis for the exploration of the country's hydrocarbon resources. The Government is doing its part to make this happen. Our policy is simple and rest on two pillars:

- 1) Make more acreage available (and do so on a continuous basis)
- 2) Improve the attractiveness of the fiscal regime

Earlier this year Government appointed a Petroleum Fiscal Review Committee to review the current fiscal regime and to make appropriate recommendations. The Committee met with the industry and received your proposals. These proposals have been evaluated and the Committee is in the process of finalizing its recommendations for further improvements in the fiscal regime for the upcoming fiscal year.

One recommendation that I can share is the incentivisation of investment in compression which invariably allows for more gas to be drained from producing reservoirs. I also wish to announce that Cabinet also recently approved expenditure for a new natural gas master plan. The last such plan was submitted by Gaffney Cline in January 2002. The new plan will speak to the policy and road-mapping for our gas sector in the period 2014 to 2025. The RFP will soon be advertised. The Ministry is also working on the Terms of Reference for another consultancy that will look at the optimization of the entire natural gas grid. That has never been done. We believe that there is room for greater efficiency in the country's natural gas grid.

In closing I wish to thank Ryder Scott Company for the professional approach and production of Audit Report of the Non- Associated gas reserves for 2012 for Trinidad and Tobago. The results of the audit show that the strategies employed by Government in addressing our gas reserves situation are working as we are seeing signs that we are arresting the decline in natural gas reserves.

Ladies and Gentlemen I thank you.