Designing Efficient Petroleum Fiscal System for Mozambique

Mr. Nelson Victor

A Thesis Submitted in Partial Fulfillment of the Requirements

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การออกแบบระบบภาษีปิโตรเลียมที่มีประสิทธิภาพสำหรับประเทศโมซัมบิค

นายเนลสัน วิคเตอร์

จุฬาลงกรณ์มหาวิทยาลัย
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By	Mr. Nelson Victor
Field of Study	Georesources and Petroleum Engineering
Thesis Advisor	Assistant Professor Thitisak Boonpramote, Ph.D.

Accepted by the Faculty of Engineering, Chulalongkorn University in Partial Fulfillment of the Requirements for the Master's Degree

---Dean of the Faculty of Engineering

(Associate Professor Supot Teachavorasinskun, D.Eng.)

THESIS COMMITTEE

--Chairman

(Assistant Professor Jirawat Chewaroungroaj, Ph.D.)

--Thesis Advisor

(Assistant Professor Thitisak Boonpramote, Ph.D.)

--Examiner

(Kittiphong Jongkittinarukorn, Ph.D.)

--External Examiner

(Supalak Pananurak, Ph.D.)

iv

เนลสัน วิคเตอร์ : การออกแบบระบบภาษีปิโตรเลียมที่มีประสิทธิภาพสำหรับประเทศโมซัม
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ระบบภาษีปิโตรเลียมในปัจจุบันมีความซับซ้อนมากเทียบกับปีที่ผ่านมา ทุกวันนี้ ภาษีเงินได้
ปิโตรเลียมถูกกำหนดให้ดึงดูดการลงทุนและรองรับผู้ทำสัญญาด้วยค่าตอบแทนคืนในสัดส่วนการ
ลงทุนเพื่อการเสี่ยงของโครงการ และขณะเดียวกันรัฐบาลก็ได้รับผลประโยชน์โดยการมีทรัพยากรที่
เพียงพอในการเช่า เพราะฉะนั้นจะได้รับผลประโยชน์ร่วมทั้งสองฝ่าย

การศึกษานี้ได้วิเคราะห์การจัดเก็บผลประโยชน์ของรัฐที่ได้รับจากการประกอบธุรกิจ
ปิโตรเลียมของสาธารณรัฐโมซัมบิกในปัจจุบัน และการศึกษานี้ได้นำเสนอระบบที่มีประสิทธิภาพและมี
ความยืดหยุ่นที่มากกว่าระบบปัจจุบัน การวิเคราะห์ระบบปัจจุบันแสดงให้เห็นว่าผลประโยชน์ในส่วน
ของรัฐที่ที่ประมาณร้อยละ ๓๙ ในขณะที่มูลค่าปัจจุบันสุทธิ ของผู้รับจ้างกลับสูงขึ้นเมื่อขนาดของ
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ไม่มีประสิทธิภาพในการจัดสรรผลประโยชน์ที่ได้จากน้ำมัน ระบบที่นำเสนอในการศึกษานี้ใช้ภาษีนิติ
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รัฐได้รับเพิ่มขึ้นหรือลดลงสอดคล้องกับผลประโยชน์ที่ผู้รับจ้างได้รับเมื่อเวลาผ่านไปภายใต้เงื่อนไข
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ผวนของการได้ผลกำไร ระบบนี้สามารถส่งเสริมในนักลงทุนมีการลงทุนในแหล่งปิโตรเลียมที่มีขนาด
เล็กหรือเมื่อราคาน้ำมันมีราคาต่ำ และยังอนุญาตให้ฝ่ายรัฐได้รับผลประโยชน์ที่มากขึ้นในกรณีที่แหล่ง
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Nowadays, tax regime is designed to attract investment and provide the contractor with fair return on investment, at the same time, provide the host government with adequate resources for rent, thereby resulting in win-win situation.

This study analyses the existing petroleum fiscal regime in the Republic of Mozambique and proposes a more efficient and flexible regime. The analysis shows that the government take currently remains at around 39% while the contactors' net present value (NPV) increases as field sizes and oil prices increase. The current system is considered a regressive system which is inefficient in distributing wealth from oil profit. The proposed system uses sliding-scale corporate tax triggered by annual rate of return (RoR) and discards royalty. The study shows that annual RoR demonstrates a good parameter for this system as it is sensitive to boundary conditions such as oil pricing scenarios and field sizes. This makes the government take increases or decreases in relation to contractors' profits over time given varying field sizes and oil prices.

The petroleum fiscal regime proposed is more progressive as the host government and contractors are both subject to profitability fluctuation. This system could encourage more investors to invest in smaller field sizes or when oil prices are low while allow the host government to gain more benefit from bigger field sizes where profitability potential is higher or when oil prices are high.

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List of abbreviations

BLL	Barrel
Bll/Year	Barrel oil per year
Capex	Capital Expenditure
CMG	Companhia Mocambicana de Gasoduto
CMH	Companhia Mocambicana de Hidrocarbonetos
DCF	Discounted Cash Flaw
DHI	Direct Hydrocarbons Indicator
ENH	Empresa Nacional de Hidrocarbonetos
GT	Government Take
HG	Host Government
IRR	Internal Rate of Return
IOC	International Oil Company
ENI	Italian National oil Company
MMBBL	Million Barrel
MBBL	Thousand Barrel
MMBTU	Million British Unit
MMUSD	Million United states dollar
NCF	Net Cash Flow
NOC	National Oil Company
NPV	Net Present Value
OPEX	Operating Expenditure
PSC	Production Sharing Contracts
ROMPCO	Pipeline Investment Company of Republic of Mozambique
RoR	Rate of Return
SPT	Sasol Petroleum Temane
SPI	Sasol Petroleum International
SCF	Standard Cubic Feet
USD	United states dollar

CHAPTER I

INTRODUCTION

1.1 General

Exploration for hydrocarbons in Mozambique dates back to 1904 when the early explorers discovered thick sedimentary basins onshore in Mozambique. There were some attempts at exploration in the 1940s and 1960s, yet in the 1970s all claims were made impossible, due to political instability and lack of markets. Only recently has a hydrocarbon extraction industry evolved to gain an important role in the Mozambican economy, with the production of gas and condensate in the fields of Pande and Temane since 2004.

New discoveries of natural gas in the Rovuma basin, that has a potential of more than 200 TCF, placed Mozambique on the map of the countries with the largest gas reserves in the world. The focus of interest on the part of IOCs has increased, and this tends to continues, if take into consideration the 5th bidding round for exploration and production concession contracts in 2015 that participated internationals big players such as ExxonMobil and PB.

Given these recent phenomenon, and having a field in production, shows that Mozambique is an attractive country for hydrocarbon exploration. On the other hand, these hydrocarbon discoveries draw attention to the country's greater dominance of oil tax regimes.

Petroleum fiscal regime is one of the most important tools for managing oil resources that states can have full control. It is a set of laws, agreements and regulations that guide the wealth distribution between the host government and the investors derived from the petroleum exploration and production. It regulates transactions between the host government and commercial entities involved, often an oil company, (IOCs).

The fiscal systems for hydrocarbon exploration and development have evolved over the last 75 years. Fiscal systems are changing with each passing day, they are more

sophisticated if compared to the ones seven decades ago. The current tax system is designed in such a way that it changes according to the business environment.

This means that the government charges more as project profitability improves and charges less in an unfavourable business environment.

These types of fiscal systems are already being implemented in some countries as is the case of Pakistan, or Trinidad and Tobago. They are gaining extra government take which is captured under the high oil price. Thailand has a price sensitive profit share, Belize and Columbia have especial windfall profit type features.

To date Mozambique's fiscal regime is not designed for this purpose. To meet these new policies, a significant redesign of a variety of oil fiscal resources is needed.

At the moment, the most important issue for Mozambique should be the treatment of the tax terms of the contracts governing the exploration and production of natural gas, since the government and the investor can share a common goal that the project generates high levels of revenue, but other objectives that are not aligned:

Host governments want to maximize the wealth from their natural resources for their countries over time. Oil companies seek to ensure that the rate on return is consistent with the risk associated with the project.

Taking into account these two different point of view, and if the current petroleum fiscal system In Mozambique was designed primarily to attract investments, this topic became very important, since the government has a big challenge of establishing a fiscal regime to balance the interests of national government against the need to attract foreign investment and incentivize companies to conduct investment within the country.

As regards the Mozambique boundary conditions there has been improvement due to the reasons mentioned above, such as new gas field discoveries, and the fact that there is a gas field already under production since 2004. In addition, it also can be seen that:

- The prospectivity of the area turn to be high and the associated risks turn to be low, taking into account to the most recent events of new

discoveries, but also the fact that it already has the gas field in production since 2004.

- In terms of competition for the prospects, Mozambique is a unique country that has discovered huge amounts of gas in the southern African region so far. This encourages investors to bet on Mozambique in this region.

- The expectation of finding hydrocarbon resources became high with the latest events. The production levels in case of discoveries is also expected to be high, if it's believed that the country has high potential of hydrocarbons.

- Expected development and production costs can be controlled or remain low, since there is experience in setting up big projects (gas project, coal project, etc.)

- The country is located on the coast, which allows easier access to markets within the African region, but also in big market such as Asia and Europe.

With the points listed above, demonstrates that Mozambique is in a position to establish a sophisticated petroleum fiscal regime according to its boundary conditions, which will benefits the country more. To achieve this purpose, the fiscal regime has to be designed to keep the system as flexible as possible; cost recovery, bonus, profit oil, royalty, and tax rate have to be progressive, changing with pre-agreed milestone in the agreement. For example, the cost recovery may be high and the royalty rate may be low at the beginning, since the investors will have a large cost to recover within a reasonable period of time. Once investors recover the investment, the cost recovery will gradually decrease, while the royalty rate will gradually increase. Likewise, other percentages of taxation will follow the same principles, changing when pre-agreed milestones are reached. If this tax regime complies with these principles, it can be considered an *efficient fiscal regime*.

Efficient fiscal systems are designed to be simple to apply, stable and provide the contractor with reasonable rate of return on investment commensurate with the project risks, and provide the host government with an adequate resource for rent, thereby resulting in a "win-win situation".

1.2 Objetives

This study has three main objectives:

- To study the status of existing petroleum fiscal system in Mozambique
- To study the parameters affecting of the petroleum fiscal system
- To propose recommendation for the future petroleum fiscal system in Mozambique

The study provides a historical overview of Mozambique's reserves, annual gas and condensate production profiles. Capital investments and operation costs will be estimated from actual data. DCF model will be applied to evaluate criteria such as government take, company take, IRR/RoR, NPV under the current fiscal regime. Then, the current fiscal regime will be improved based on theory to become more flexible and efficient. This means that 2 different legal arrangement will be part of this thesis (current and alternative fiscal regime). Alternative fiscal regime will be designed in such a way to be flexible and efficient according to the country boundary conditions. This study will be useful to the government in the future strategy for development of oil tax regime.

1.3 Statement of propose

The results of this study can provide some direction for Mozambique's government to develop an efficient fiscal system that can provide an adequate source of revenue while also attracting foreign investments.

1.4 Outlines of methodology

- Collect field information for current fiscal regime

- Check GT, CT, NPV, NCF, IRR and progressivity using DCF model

- Improve current fiscal regime to become more efficient

- Check GT, CT, NPV, NCF, IRR and progressivity using DCF model

- Evaluate both systems for different price scenario and field size

- Discuss and analyse the results

- Conclusions and recommendations

1.4 Outline of thesis

The introduction, Chapter I, gives the overview of the thesis, the main arguments that will be defended, describes the matter that will be dealt pursued, the importance of this topic for the current and future reality of the country, and the expected results. Chapter II provides an overview of theory and existing literature that frame the current study In Chapter III, provides a conceptual basis of a fiscal regime. The brief history of petroleum exploration in Mozambique is documented in Chapter IV and Chapter V outlines the premises for this study. The development of the thesis and its respective results are discussed in chapter VI and VII respectively. The conclusion and recommendation are discussed in chapter VIII.

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CHAPTER II

LITERATURE REVIEW

This chapter, in general, will provide the elements that will nourish this thesis, basic concepts of a fiscal regime, elements to be taken into account to create an efficient regime. Structure of the tax regime and parameters that play a role in determining a very good petroleum fiscal system.

2.1 Literature Review

Dharmadji and Perlindungan[1], compared the tax regime from Australia, China, India, Indonesia and Malaysia. They concluded that boundary conditions for each country play an important role in defining the rigidity of the tax regime. The good data of the historical exploration, the great reserve and stability of the country can lead the government to develop a rigid fiscal regime.

It is also very important that the government understand the conditions of the reservoir in its country as a way to develop a competitive tax regime that produces a fair share and the same time attracts investors

According to M. A. Main[2], all the systems should be progressive. Progressive system optimally designed, allows the contractor and government to be equally exposed to fluctuations in profitability. This means that revenues will increase by increasing the rate of production or will decrease as the rate of production decreases. The same phenomenon will occur in the variations of parameters, such as product price, costs, reserves, etc. The tax system with a level of government take are normal progressive

Silvana Tordo[3] suggests that in designing a tax system, a government should answer the following questions: The system is flexible, neutral and stable? The system is insensitive to the oil price and the variation of costs? What is the effect of the tax regime on petroleum production? This system encourages or discourages the development of marginal fields? The system conducive to early abandonment? This

system influences the pace of development? These are the types of questions that have to be made to design the tax efficiency system.

According to Pedro Meurs[4], There are three main components to achieve an optimal petroleum tax structure: price, cost and probability and success. Optimal structure can be achieved by optimizing the profitability of the operation at higher or lower oil and gas prices. Optimal structure can be achieved by optimizing the profitability under higher or lower costs. Can also be optimized with a greater or lesser probability of success, and its expectations to discover a smaller or larger fields.

CHAPTER III

LIFE CYCLE AND PETROLEUM FISCAL REGIME

Life cycle of petroleum project will be described is this chapter. The stage of typical petroleum project and legal arrangements in petroleum industry which normally established in the country constitutions will be described in this chapter.

3.1 Petroleum Project Life Cycle

Hydrocarbon field has a long life cycle, from the discovery of a petroleum deposit, (oil/gas exploration), to the production activities, are spread over several decades. Five main steps can be distinguished in the oil project cycle.
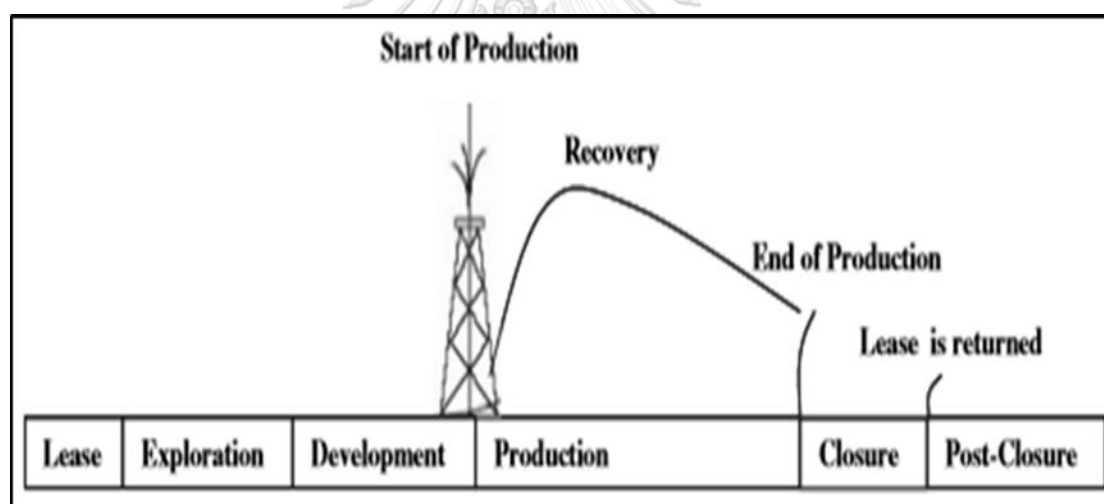
Figure 3-1: Project life cycle (S. Tordo, fiscal system for hydrocarbons, 2007)

The figure 3.1 represents the main stages of the project cycle in petroleum business. The project risk profile changes during the life cycle. The risk is associated with geological, financial and political issues. Geological risk begins to decline after a discovery, while the political and financial risks intensify in term of negotiations, government bargaining power against relative strength of the investors. The host government position is different between exploration and production phase. When the production starts, capital investment is sunk cost, and facilities set up in foreign

countries is vulnerable to the investors[3]. The stage of a typical oil and gas project can be described as follows:

3.1.1 Licensing

After IOCs carry out their pre-feasibility to make decision where and which country they want to develop oil and gas business, first of all they have to obtain license. This document gives rights to engage in petroleum operations. In this stage IOCs try to understand in deep details the set of lows and petroleum regulations for each countries launching bidding round for exploration and production Concession Contracts.

3.1.2 Exploration

When the license is granted to the IOCs or investors, the geologists and geophysicists start to search hydrocarbons deposits beneath the earth. Several techniques can be used at this stage to identify whether or not there are hydrocarbons. Acquisition, initial evaluation or prospect identification, determine probable reservoir, trap or seals, and source rocks, locate exploratory well are some activities that are been done at this stage. If there is any discovery it can go to appraisal, drill new wells to confirm the existence of hydrocarbons and evaluate reservoir quality, size and thickness. Finally, the most important, establish minimum hydrocarbon volume to justify development.

3.1.3 Development

If the economic evaluation shows that it is a commercial reserve, the development of the field begins to take the hydrocarbons from the reservoir to the surface. Start with description of subsurface and surface facilities. Procurement, fabrication, and installation of facilities and commissioning. At this stage it's needed to stablish number of wells to be drilled to reach production objectives, the recovery techniques to be used to extract the fluids within the reservoir, the separation systems

for gas and fluids, the treatment systems needed to preserve the environment. This is the phase where the largest investment occurs.

3.1.4   Production

After appraisals, delineation well are completed, feasibility study its commissioning done, and the next stage is production of hydrocarbons. The production stage can last from 15 to 30 years, and can be extended up to 50 years or more, in case of giant fields. During the production phase many operations might happen, such as work over, well intervention, water injection to recover or increase the production rate. Enhancement oil recovery, might happen to maintain a satisfactory volume of production.

3.1.5   Abandonment

When the hydrocarbon production rate becomes non economical, the reservoir is abandoned. Before abandoning the field, the oil companies, the IOCs must remove the installation and bring back the environment to the initial state. This activities is done according to the law of each country.

Abandonment does not mean that has no more oil or gas underground, many other reason can lead to make this decision, price market, lack of technology, same times tight regulation such as fiscal regime can play a big role to abandonment.

3.2 Legal Arrangement in Petroleum Industry

Legal arrangement in petroleum industry has different types of tax regimes[5], where governments usually select one to use in a particular block. Various legal systems have been developed to address the rights and obligations of host government and of private investors. The tax regime is drawn up before production is to begin. Many times the distribution of wealth does not meet the expectations during the production phase. Same times the government is forced to review the contracts to adjust the benefits between Governments and Investors. That's why it has more tax

regimes in the world than the number of countries. There two major types of fiscal system, tax royalty (R/T) system and contractual system according to the figure 3.2.
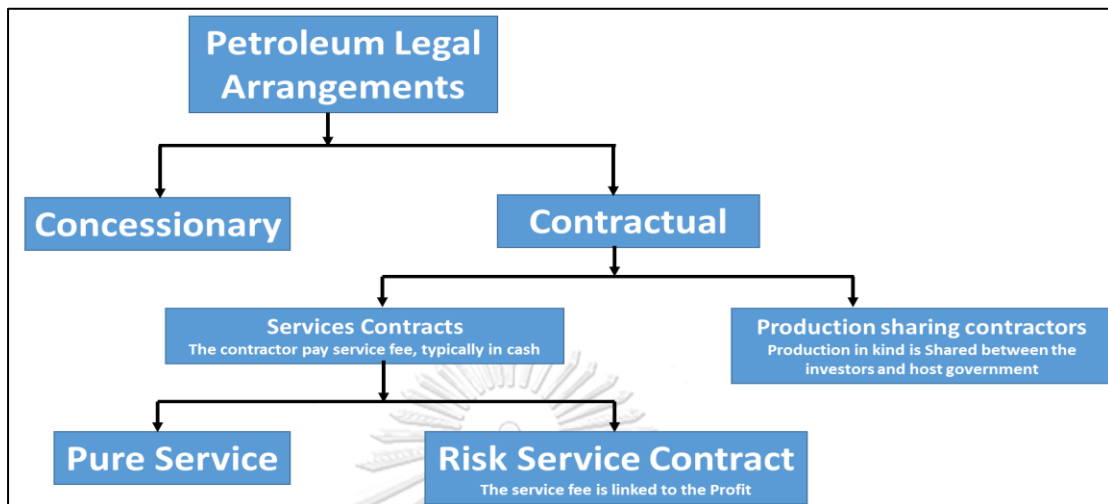
Figure 3-2: Classification of petroleum fiscal system (adapted from Johnston, et.al. 2008)

3.2.1 Concession system

Concession system same time is called Royalty/ tax system[6], it was the first system to be used in the oil industry. Under this system Government grants a right to exploit natural resources to concessionaire, and all discovered hydrocarbons belong to concessionaire. The state receives royalties and taxes by the contractors. Normal royalty is calculated from gross revenues without account for any expenses. Some countries will allow deduction before royalty calculations. State can participate with its National Oil Company. r
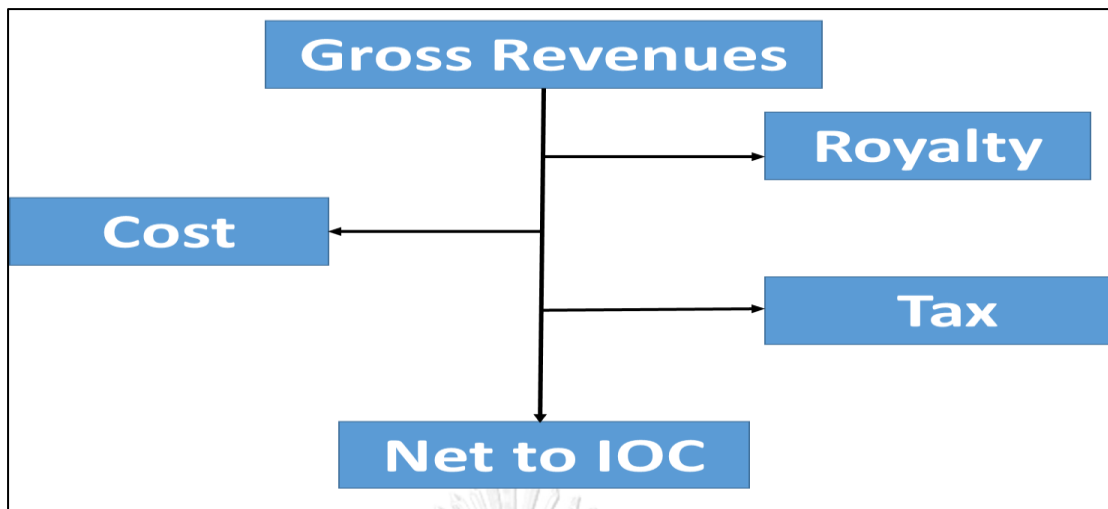
Figure 3-3: Concession system

3.2.2 Contractual system

Production Sharing Contract[2]. These types of agreements, the tittle of hydrocarbon remains to the host government. Production sharing agreements may include royalty and tax payments, but the main sharing is based on the profit sharing concept. If there is royalty, the production after royalty payment is split into two portions: cost recovery hydrocarbons and profit hydrocarbons. End then, the profit hydrocarbons are split between the contractor and the government. Contractors Investment is recovered by the cost recovery. If the costs are not recovered in the first year, they are accumulated to the following years until fully recovered. When the contractor has fully recovered its costs, any excess left from the cost recovery hydrocarbons is again split between the contractor and the Host Government.
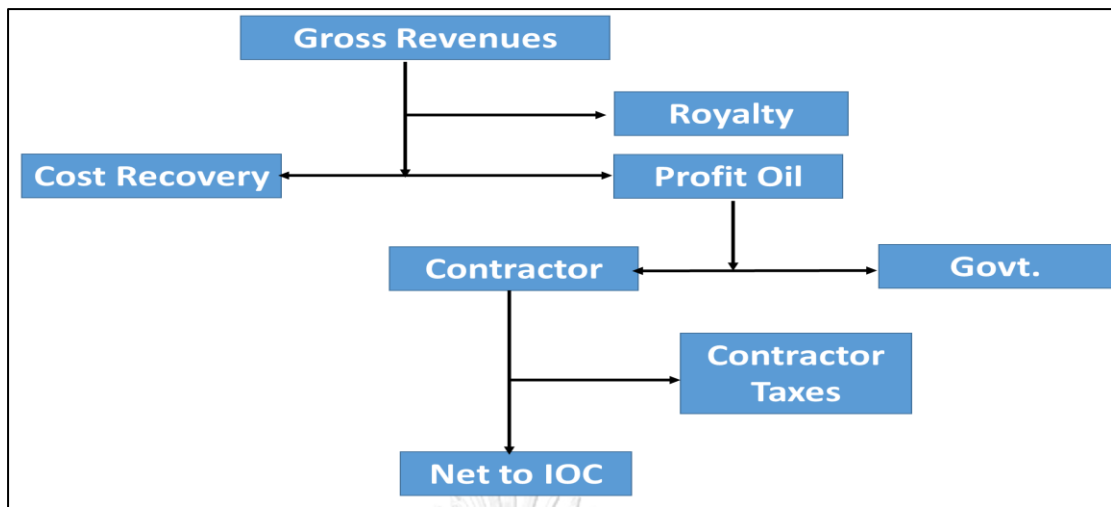
Figure 3-4: Contractual system

3.3 Typical Contract Terms

In order to designing system[2], a government must choose among following and many additional contract terms. These terms include:

- Bonuses - Signature bonus, and other milestone bonuses (cumulative volume, discovery, reaching certain production levels or).

- Work Commitment - Required seismic acquisition, certain number of wells to be drilled, exploration surveys or others.

- Timing – exploration period normal which in the most around 10 years, production period, usually can be 15, 30 years or 40 in case of giant field.

- Government Participation – government have a right to participate

- Contract Stability - the terms are constant during the project life.

- Special Incentives - Tax credits, uplifts, and tax and royalty holidays.

- Relinquishment Rules - abandonment requirements, at the end of exploration and production

- Ring fencing - Tax loss transferability to other projects.

CHAPTER IV

HISTORY OF PETROLEUM EXPLORATION IN MOZAMBIQUE

4.1 Mozambique Basin

The exploration for hydrocarbons in Mozambique dates back to 1904 when the early explorers discovered thick sedimentary basins onshore Mozambique[7]. Lack of funds and technologies impeded the development of the oil industry at the time.

In 1948, some international oil companies moved to Mozambique with the intention of carrying out an extensive petroleum exploration. Most of the exploration activities were onshore, but there were also some activities offshore. These oil exploration activities resulted in the discovery of the Pande gas field in 1961, which was discovered by Gulf Oil Company. Followed by other gas discoveries in Buzi in 1962) and Temane in 1967. Exploration activity declined in the early 1970s due to political instability.

With the creation of the National Oil Company (ENH) and the enactment of Law 3/8, oil activities restarted in the early 1980s. In the following years, starts to work in the appraisal of the Pande Field by carrying out detailed work aimed at mapping out the pande field.

In 1993, it became clear that the Pande field could be mapped using direct hydrocarbon indicators (DHI) from seismic data. The method allowed to see a giant bright spot on top of the reservoir. The method was later used to map the Temane field, and this process produced a satisfactory result.

In Mozambique, only 6 wildcat were drilled from 1970 to 1980, where 3 of them were offshore. Sasol in 2003 carried out a drilling campaign in the Pande and Temane blocks, which included exploration and production wells. This campaign allowed to expand the gas reserves in the Pande and Temane blocks and discover the Inhassoro gas field making a total of 5,504 trillion cubic feet (TCF). Production began in 2004 with a production rate of 120 million gigajoules per year. In 2010, production increases to 183 million gigajoules per year, current production is around 190 million gigajoules per year. Source: (www.inp.co.mz, 2014).

4.2 Rovuma Basin

In the last 15 years, Mozambique has undergone an intense drilling campaign for the exploration of hydrocarbons in the Rovuma basin Offshore[8]. As a result of these exploration activities, huge discoveries were made in 2010, where ENI (Area 4) and Anadarko (Area 1) are the operators in the concessions where the discoveries occurred. The concession of area 1 was awarded to Anadarko, while the concession of area 4 was awarded to ENI. The two operators have exploration rights to explore, develop and produce natural gas reserves in Areas 1 and 4 Offshore in the Rovuma Basin.

Rovuma basin is located northern cost of Mozambique. Are1 and Area 4 are positioned adjacent to one another. Today, Anadarko, ENI and its partners have potential discovered more than 200 trillion cubic feet (Tcf) of natural gas resources and are currently working to develop a liquefied natural gas (LNG) project.
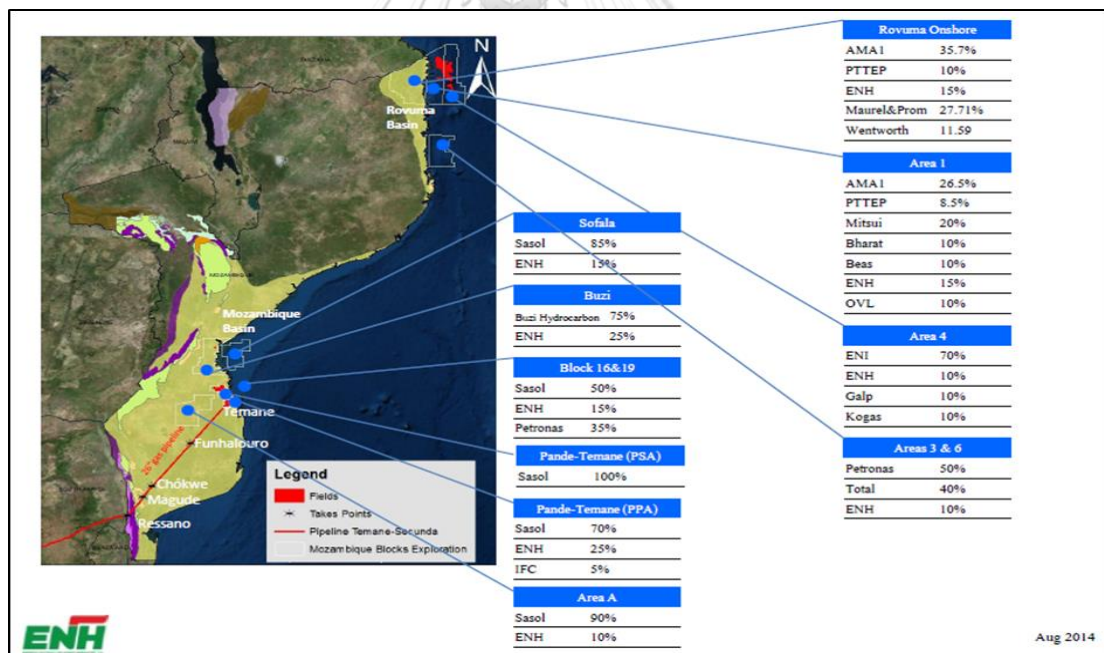
Figure 4-1: Mozambique exploration activities in Rovuma and Mozambique basin, source: www.enh.co.mz

The figure 4.1 represents Mozambique exploration activities in Rovuma and Mozambique basin. Currently, the country has 8 hydrocarbon research areas, located

in the basins of Mozambique and Rovuma. ENH participates in these activities in partnership with other international companies. These activities have the objective of identifying the potential of occurrence of hydrocarbons for the development of new gas field. ENH's participative interests in the different Blocks vary between 10% and 25%, as shown in the figure 4.1.

Currently, Mozambique has three oil tax regimes. The Pande and Temane gas field, which is in the Mozambique basin, is under the concession system for the production of gas and condensate. The light oil in PSA area is under production sharing agreement. While in the Rovuma basin where new gas discoveries of gas occurred recently is under production sharing agreements.

This thesis studies Pande and Temane tax system, which is concession system. The choice of this field and its tax system is because it was the first to be installed in the country, and has been in production since 2004. Source: (www.inp.co.mz, 2014)
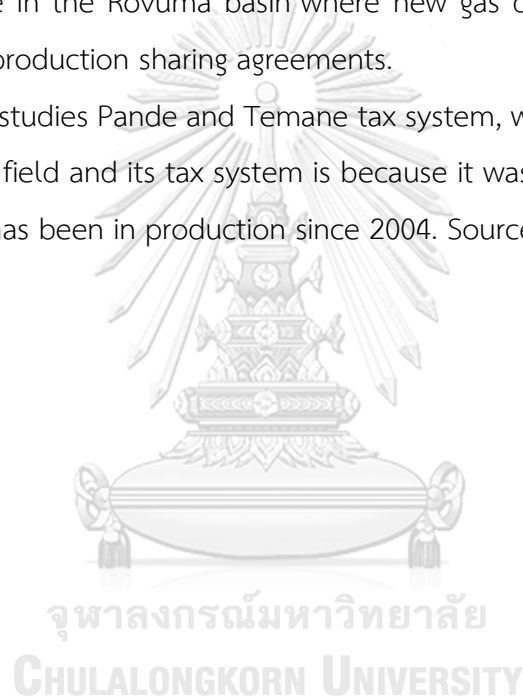
CHAPTER V

METHODOLOGY

5.1 Methodology

The objective in this thesis is to analyse Mozambique fiscal system, its severity, flexibility and efficiency to the country's point of view. This thesis analyses the current fiscal regime being used in Pande and Temane gas field which is under production since 2004. It also presents an alternative to current regime as a way to improve the gains for the government without compromising the interest of the investor's. Alternative fiscal regime is improved based on the theory to become more flexible, efficient and Progressive. DCF model is used to evaluate a wide range of criteria's such as Progressivity, Government take, Company take, net cash flow, net present value and IRR/ROR under current and alternative fiscal regime. To set up a very good fiscal regime is important to understand the following:

5.2 Designing Efficient Petroleum Fiscal Regime

The efficient oil tax regime should be flexible, which gives the government an adequate share of the economic rent under varying conditions of profitability. To establish a flexible structure, it is important to understand the concept of regressive and progressive system.

5.2.1 Regressive systems

Regressive systems are designed in such a way that they do not reward the contractor, usually with flat government take, such as constant royalty. This system does not fit when it comes to marginal fields or in low-priced environment of the product[9]. Regressive systems is front – loaded system, ensure an upfront revenues stream as soon as production starts. Regressive components, such as Royalty, cost recovery limit, exploration tax may distort investment decision if it's in high level. To

mitigate their regressiveness, can be applied sliding contract term have to applied, based on production levels, sales values, water/well depths, or R-factors.

Table 5-1: Example of regressive fiscal system

	Case A High Cost	Case B Low Cost	Case C Zero Cost
Cost	60	30	0
Gross Revenue	100	100	100
Royalty	-10	-10	-10
Net Revenue	90	90	90
Total C/R (Limit 50)	-50	-30	0
Profit Oil	40	60	90
Gvt Share (60%)	-24	-36	-54
Contractor P/O	16	24	36
Unrecoverde Cost	-10		
Taxeble Income	6	24	36
Income Tax (30%)	-1.8	-7.2	-10.8
Contractor Cash Flow	4.2	16.8	25.2
Contractor Take	10.5%	24.0%	25.2%
Government Take	89.5%	76.0%	74.8%

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As depicted in the table 5.1, there is a cost structure reduction, which in turn leads to a scenario characterized by the retrieval of benefits from the contractor in the Government perspective. The percentages of fiscal terms, such as, income tax, royalty or profit oil should change to adjust the revenue distribution. Actually, this case is regressive, once the costs reduces the government take reduces too, leading to an undesirable situation.

When designing a new fiscal system, it is of paramount importance to exercise a test framework so as to avoid the existence of regressive systems, while ensuring that new systems compensate the contractor for reducing costs or for developing marginal fields.

5.2.2 Progressive system

Progressive system are profit based tax. To achieve this objectives while maintaining a reasonable level of investment incentives, it may be necessary to accept a trade-off between regressive components (royalties, cost recovery limits) and progressive components (RoR, or profit based tax component)[3].

For example, 10 barrel is produced in the first year, and produces $100 profit, then it yields $ 40 to host government and $ 60 for IOC, which means 40% and 60% share respectively, as portrayed in the figure 5.1:
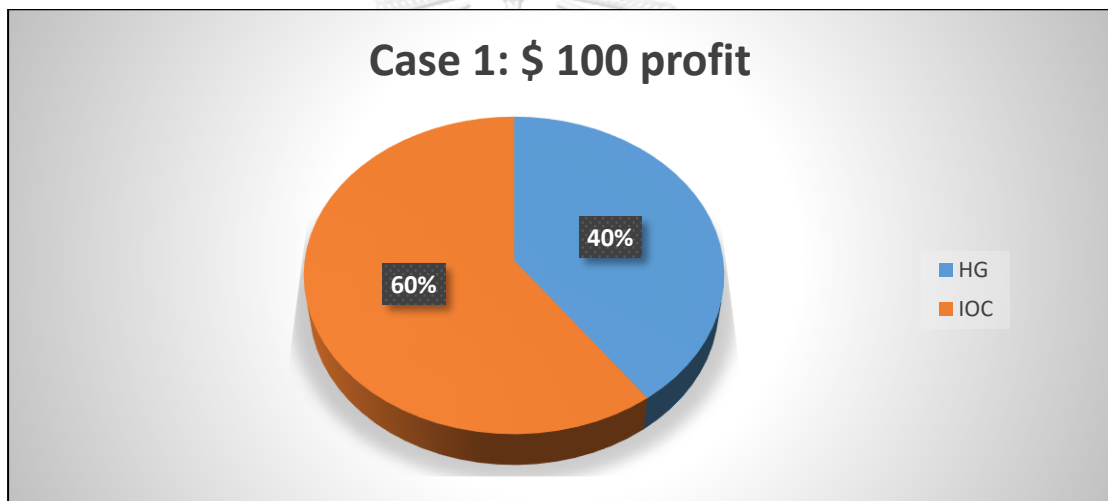
Figure 5-1: Profit share between HG and IOC

In the second case, figure 5.2, with the same condition in a favourable environment, high price for example, can generate $200 in profit. Since the profit has increased, to be considered progressive, the Government share have to increase as well.
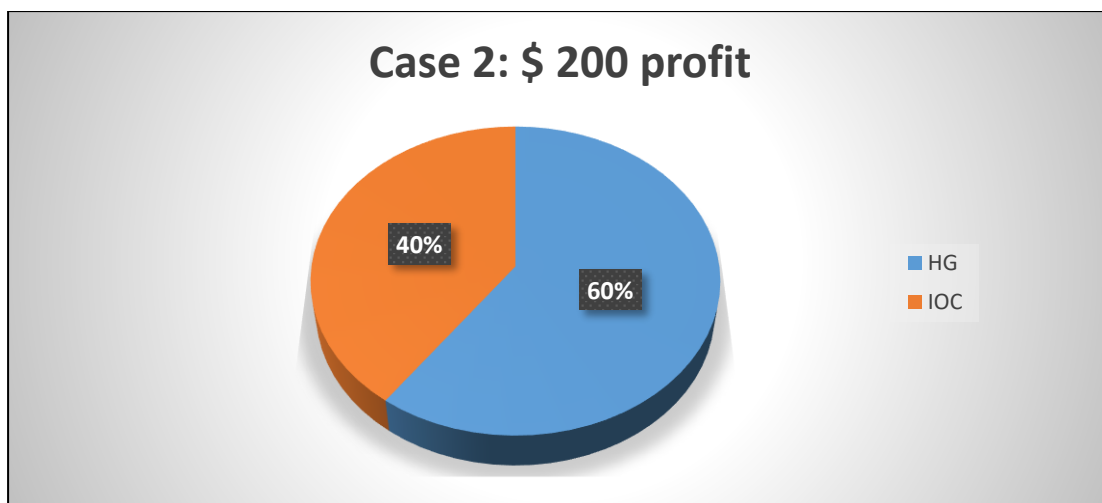
Figure 5-2: Profit share between HG and IOC

Comparing these two cases, it becomes clear that the government share, in the second case has increased with the increase in profit. When this is so, it is deemed as progressive system.

5.2.3 Efficiency of fiscal regime overview

The efficient tax regime is designed taking into account the country's boundary conditions, such as field size, production profile, cost and other key parameters, to transform it into a system of progressivity.[4] This means that large reserves, the high level of production profile, the favourable business environment should generate high profits for the host government, while at the same time it must guarantee the investors' expectations in terms of rate of return (RoR).

Tax systems with fixed levels of government take, such as constant royalties, are usually regressive, especially when it comes to marginal fields or development in a low-price environment, the contractor will suffer.

On other hand, this kind of fiscal system the government will suffer if the positive side of revenue either due to reduced costs or increased reserves and even changes in oil and gas prices. This is because the system will not be able to capture additional benefits on agreed terms if the system is not flexible, the example is given in table 5.3.

Depending on the situation, the contractor will request the renegotiation of the terms and conditions if the terms of the contract are not economically feasible for the contractor, or the host government may change the terms of the tax to capture additional portion of the revenue.

When designing a new tax system, it is important to test to avoid regressive systems. Make sure the new system compensate the contractor to reduce costs or develop marginal fields.

Over the years, terms that have been subject to progressive scale to turn the system flexible includes: royalties, cost recovery, oil profit, taxes, excess cost recovery, economic rent tax and excess profit oil/windfall profit tax. These terms were linked to the oil prices, production rates, cumulative production, contractor's return rate (IRR / ROR), contractor's R-factor, return on investment or a combination of these components.

Oil-producing countries control the terms and conditions under which foreign oil companies invest in their countries, and they can structure the tax system that ensure a balanced distribution of wealth between host government and contractor.

An oil tax regime that captures a significant portion of oil companies' revenues gives host governments a greater share of the wealth of resources, but may undermine the willingness of investors to invest in their country.

It is very important that oil producing countries implement the tax regime that achieves the balance of wealth distribution between the host government and investor (oil companies).

In figure 5.3 shows how the tax burden changes in shares of the total benefits, it means that, in regressive system the tax share reduces as the as the project rate of return increases, while progressive system the tax share increases as the project rate of return increases. The regressive system is the desirable situation.
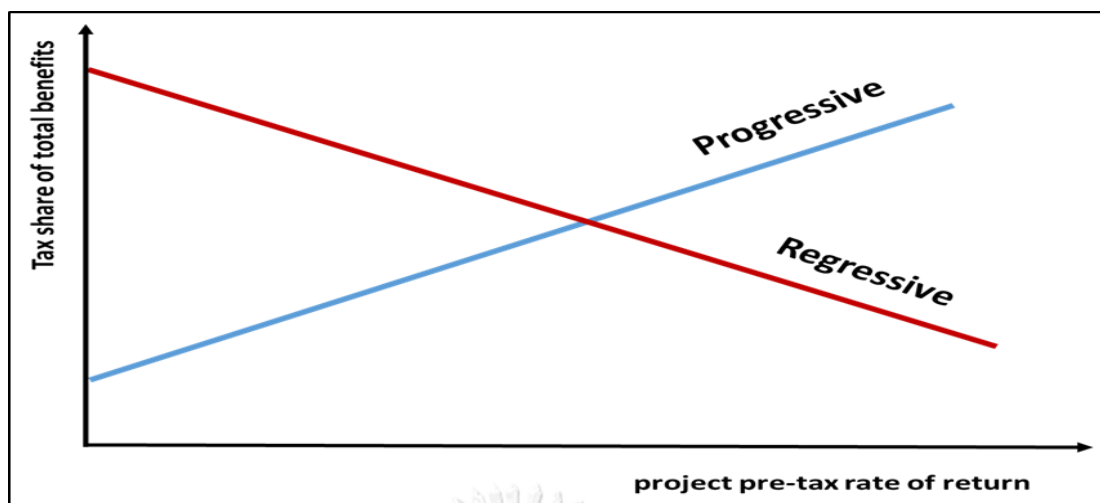
Figure 5-3: Tax burden changes in share of total benefits

To keep the system as flexible as possible; cost recovery, bonus, profit oil, royalty, and tax rate have to be progressive, changing with pre-agreed milestone in the agreement. For example, the cost recovery may be high and the royalty rate may be low at the beginning, since the investors will have a large cost to recover within a reasonable period of time. Once investors recover the investment, the cost recovery will gradually decrease, while the royalty rate will gradually increase. Likewise, other percentages of taxation will follow the same principles, changing when pre-agreed milestones are reached. If this tax regime complies with these principles, it can be considered an efficient fiscal regime.

This is possible by using "*sliding contract terms*" such as profit oil, Royalty, cost recovery limit and tax rate, to change with pre-agreed milestones in the agreement. These changes are made by "*Triggering factor*" such as production rate, water depth, cumulative production, oil price, rate of return, etc. The sliding contract terms are linked to triggering factor to trigger the change in order to catapult the fiscal regime towards a state greater efficiency. Some sliding contract terms and triggering factors are shown in the table 5.2.

Table 5-2: Flexible contractual terms and conditions

Sliding Contract Terms	Triggering Factors
Profit oil split	Productin Rate
Royalty	Water depth
Bonuses	Comulative Production
Cost Recovery Limits	Oil Price
Tax Rates	Characteristics of Fluid
	Characteristics of Reservoir
	ROR

The table 5.3 is an example of a royalty based on sliding scales which varies with cumulative gas production. It's important to notice that the choice of triggering factor and thresholds are the key issues for fiscal systems. In order to define a petroleum tax system properly, the Government have to make a reasonable assumptions of the field size, production profile, projected price, and also others important parameters such as Capex, Opex, heat value, to be able to determine a fair distribution from the selected triggers factors and sliding contract terms. It's also importance to be able to determine the representative distribution of the parameters chosen as triggers or thresholds.

Table 5-3: Sliding scale for royalty

Accumulated Production (MMGJ)	Royalty Rate (%)
<600	2.5
600 — 1200	5.0
1200 — 1800	7.5
1800 — 2400	10
2400 — 3000	12.5
3000>	15

Note that 3000 MM is what is believed about the size of the field. If this projection loses its accuracy, it means that the tax system may not be fit to the boundary condition.

Unfortunately, cumulative production is not price or cost sensitive, it's also important use to sliding contract terms which are sensitive to price and cost, such as profit oil that can be triggered by IRR, or can be used income tax rate that can be triggered by change in price, as it is portrayed in table 5.4. as an example.

Table 5-4: Sliding Scale for income tax

Gas Price ($/GJ)	Income Tax (%)
<3	50
3 — 3.5	65
3.5 — 4.0	70
> 4.0	75

Note that the price range that is between $ 3 and $ 4 is what it is believed to be, or will be during the life of the project. Once again, if this projection loses its accuracy, it means that the tax system may not be fit to the boundary condition.

Any tax regime should be progressive, allowing the contractor and government to be equally exposed to fluctuations in profitability. This means that revenues will increase by increasing the rate of production or will decrease as the rate of production decreases. Both will also benefit from increases in the rate of production, or reduction in cost. The same phenomenon will occur with variations of parameters, such as oil and gas price, costs, reserves, etc. On the other side, both will also suffer with decreases in the rate of production, increases in costs, and so on.

The strategies to achieve efficient system is the optimization under high or lower gas price. Optimizing under high or lower production rate. Optimize under high or low cost of exploration, optimize under high or low probability of success and expectation to discovery a smaller or larger fields. The tax system have Incentivize investor when prices are low or marginal fields.

It's very important to the oil-producing states to design and implement the optimal fiscal regime that achieves the balance of distributing wealth between both the national government and oil companies.

There are some oil-producing countries that have tried to develop progressive petroleum fiscal regime when start to appear new oil price environment. From attempts of different oil- producing countries trying to improve their fiscal regime, it is easily concludes that it's not easy to set an ideal structure for fiscal regime. So far, hasn't been set up a tax system that cover all the changes that can happen during the project life.

For instance, Mexican royalty. Price sensitive royalty adopted in Mexico set that for crude oil the royalty rate is 7.5% when the contract crude oil price is less than US $ 48 per barrel. Over this price level, the royalty rate is established by the following formula:

Rate = [(0.125 * contract crude oil price) + 1.5] %

Here can be noticed that if the oil price is $ 100 the royalty rate is 14%. Since there is no cap on the formula, when oil price is $ 788 per barrel the royalty rate is 100%. This example shows clearly that the oil-producing countries still have lot to do in this matter. Source: (Pedro Van Meurs, 2016).

5.3 Terms that Affect Oil System Efficiencies

There are many elements that can be applied in a particular tax system. Some are progressive, some are neutral, and some can transform the system to become regressive. The use of these elements in different countries reflects the different plays, associated risks, expenditure and benefit in wealth distribution for stakeholders. This elements can be categorized as in the table 5.5.

Table 5-5: Terms that affect oil system efficiency

Elements	Effects
Signature/ production Bonus	Regressive
Fixed royalty	Regressive
Corporate income tax	Neutral
Fixed profit share	Neutral
State participation	Neutral
Sliding corporate income tax	Progressive
Sliding scale royalty	Progressive
Sliding scale Profit share	Progressive
Profit-based tax	Progressive

5.3.1   Signature/ production Bonus

Amount of money paid to the host government (HG) when the contracts are awarded. The value is calculated according to the geological potential for each country. The production bonus is paid when a milestone is reached under the contract. The milestone can be production flow rate, accumulated production, etc. Both payments are not profit based.

5.3.2   Fixed royalty/ sliding scale royalty

Generally Royalties are a percentage calculated against gross revenues of the sale of hydrocarbon. It can be determined in sliding or fixed rate. Sliding scale royally is function of some criteria such as price, production rate, etc. Normally is paid in kind or in cash, and it usually falls between 2 - 15%. This arrangement applied for crude oil and to natural gas, in concessionary and contractual license systems.

5.3.3   Corporate income tax/ sliding corporate income tax

Corporate tax is calculated on a taxable income (revenue net of royalties, after cost deduction). It can be determined in sliding or fixed rate. In a sliding rate it can be

function of price, RoR, R-factor, cost, etc. which further helps the HG to increase its Government take

5.3.4 Fixed profit share/ sliding scale

Profit sharing is calculated after royalty and cost recovery, the oil is split between the host government and Investors according to the agreement. It can be determined at a sliding or fixed rate. In the sliding rate can be function of price, IRR, cost, etc. It is widely used in production sharing system. This helps HG increase its government take.

5.3.5 State participation

State participation has been common in the oil and gas sector since the 1970s, when a wave of nationalizations occurred. The country has the right to participate in any stage of the project. In general, these notions stems from the need to assure the Government involvement amid the development phase so that the risks during the exploration phase can be mitigated. In many cases, such participation is made through the usage of national oil company (NOC), in which in some countries the government exercises its ownership share through ministries or other governmental institutions.

5.3.6 Profit-based tax

Tax rates are imposed on the profit obtained by the Project. Under a taxation regime based on profit, the state and the extractive corporation share the risk more uniformly than in production-based one. In times of financial crisis, companies and governments see their profits and revenues proportionately reduced. Profit-based tax regimes do not seem to discourage, but to encourage, investments in mining.

5.4 Parameters in Economic Evaluation

As a way to evaluate, compare and create a good Petroleum tax system or to measure fiscal system to one another, it is important to evaluate the results of each

system even before this system is in operation. For this, there are some parameters that are used to conduct evaluation process such as the Net present value (NPV), Internal Rate of Return (IRR), Government Take (GT), Contractor Take (CT) and Progressivity

5.4.1 Net present value (NPV)

The Net Present Value (NPV) is an economic indicator to verify if the project is viable. The difference between the present value of the cash inflows and the present value of the cash outflows should be positive to turn a project feasible. NPV is used in capital budgeting to analyse the profitability of a projected investment or project.

$$NPV = \sum_{t=0}^{n} \frac{NCF_t}{(1+i_d)^t}$$

Equation   (1)

Where:

NCF   = Net cash flow

T   = Time

i_d = Discount rate

5.4.2 Internal rate of return (IRR)

Internal rate of return is a discount rate that makes the net present value (NPV) of all cash flows from a particular project equal to zero. The higher the IRR value, the more interesting the project is. A "good" IRR is one that reflects a sufficient risk-adjusted return on cash investment given the nature of the investment, biased by the investment timeline and the timing of cash flows within that timeline. A company is more likely to invest in a country with a fiscal regime that provides a 90% government take while allowing a rate of return of 20% than a fiscal regime that provides a 50% government take while permitting only a 10% rate of return

$$NPV = 0 = \sum_{t=0}^{n} \frac{NCF_t}{(1+IRR)^t}$$ Equation   (2)

Where:

NCF   = Net cash flow

T   = Time

IRR   = Internal rate of return

5.4.3   Government take (GT)

Government Take is Government receipts from signature   bonus, production bonus, royalties, taxes, production or petroleum profit sharing and Government participation, divided by Economic profit (Gross revenue less gross costs). Government Take is the common denominator that has profit division as a key concern.

Government Take	= Bonuses
	– Royalties
	– Production Sharing
	– Taxes
	– Government Participation

5.4.4   Contractor take (CT)

Contractor Take = total amount of gross revenue, after government take (1- Government Take).

Company Take	= Company's Net Cash Flow
	= Gross Revenues
	– Exploration Costs
	– Development Costs
	– Operating Costs
	– Government Take

5.4.5 Progressivity

Any fiscal regime selected should be flexible and progressive. Progressive fiscal regime provide the HG with increase take as the profitability of the project increases. Progressivity means that as taxable amount increases, the Government take and contractor take increases as well. Flexible fiscal regime provides government an adequate share under the varying condition of profitability. It can be used for example, progressive income tax, sliding scale royalty in case of concessionary system, or progressive government take linked to IRR, or petroleum price in case of production sharing agreements. In figure 5.4 shows an example of progressivity, as can be seen, as the government NPV increases the contractor NPV also increases, both benefit as the profit increases. Regressive system are non-profit based.
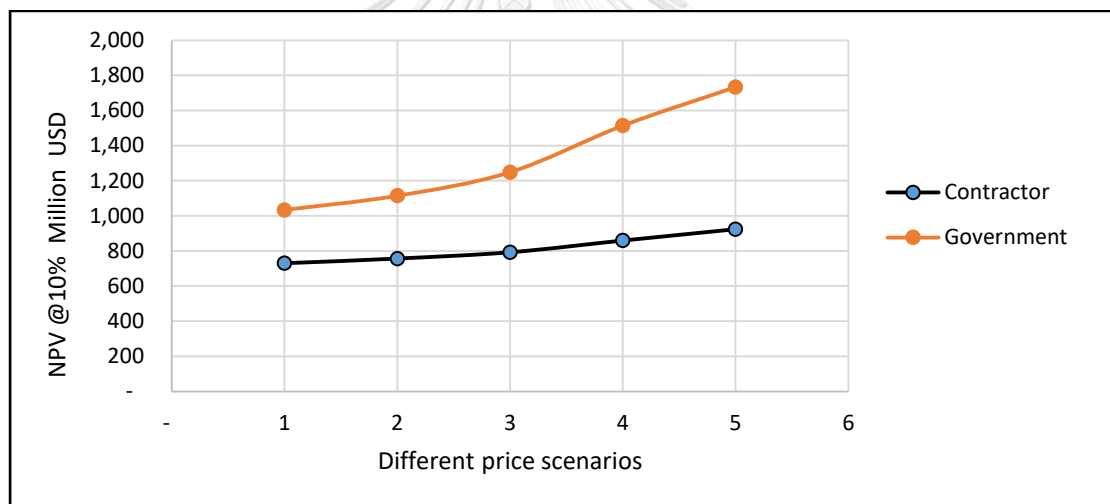
Figure 5-4: Illustration of progressive system

5.4.6 Calculation flow

The deterministic model is used for the analysis process on this thesis, the steps are shown in figure 5.5. The analysis begins with the collection of information related to the Pande and Temane gas field in Mozambique. Information such as reserve, production profile and price. These data, using the deterministic model, will be used to evaluate two different structures of the fiscal regime, this means, evaluate the current fiscal system that has been in production since 2004, to compare to its

alternative, which has been elaborated from theories to become more flexible and efficient. The objective in these thesis, basically, is to observe progressivity, flexibility under the both fiscal system. Is expected to be observed progressiveness in the proposed alternative system and regressiviness in the current fiscal system. For better analysis both system, instead of using only information of Pande and Temane gas field, was also created 4 different hypnotically field size. This means that, at the end will be evaluated 5 different field size under 2 different structure of fiscal regime. For each field size will be evaluated with 5 different price scenario. So in total will be 50 cases to be analysed. For the analysis process to compare both system will be used criteria's such as Government take, contractor take, progressivity, internal rate of return and net present value. The calculation flow will be according to the figure 5.5.
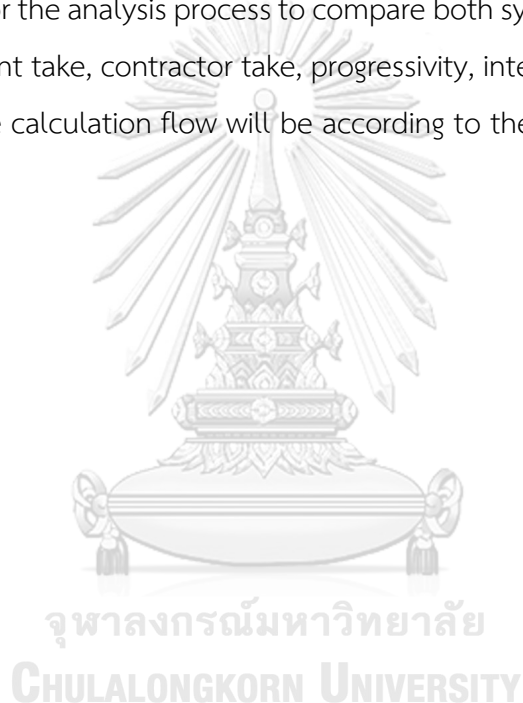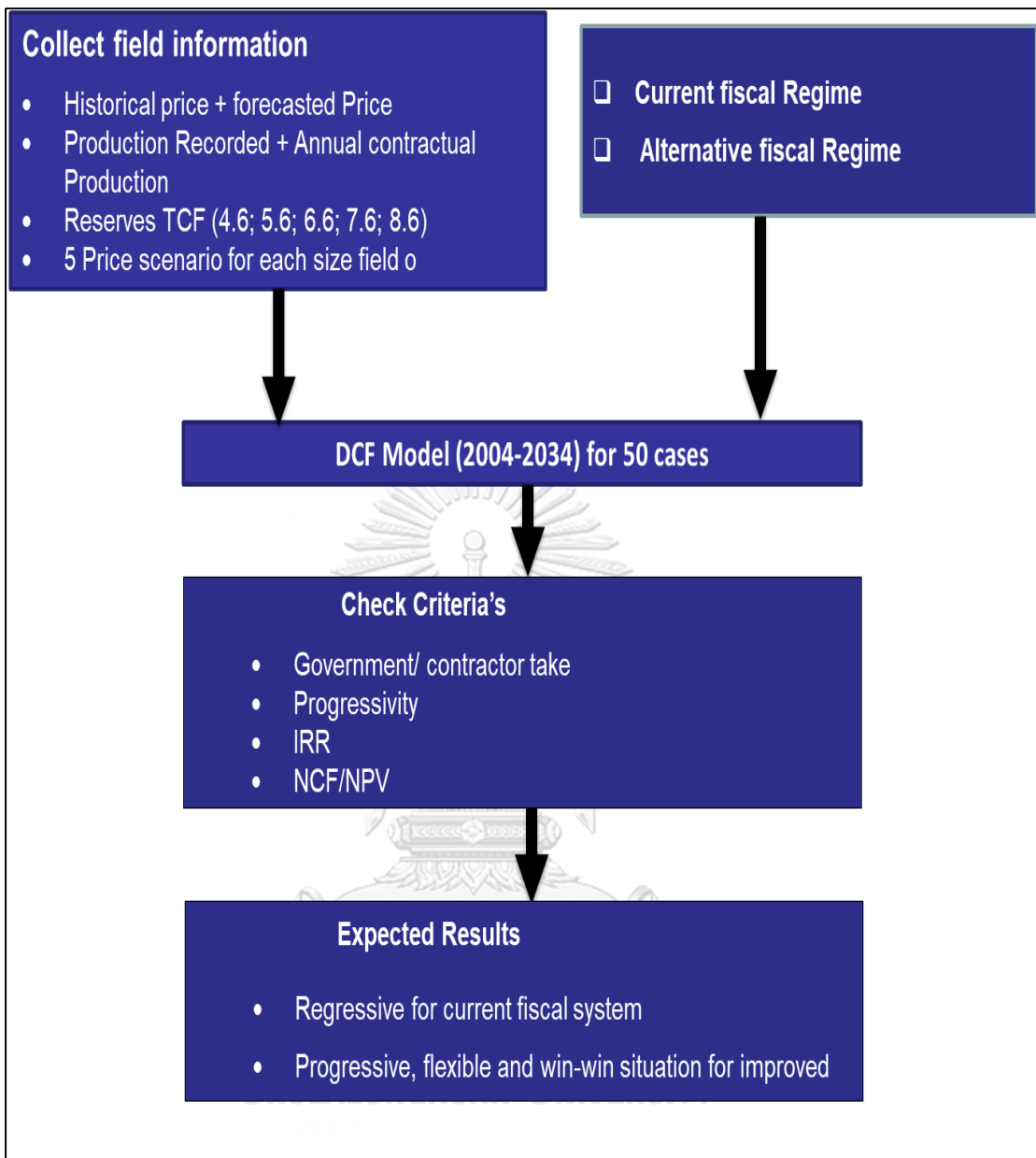
Figure 5-5: Calculation flow

CHAPTER VI

CASE STUDY

6.1 Case Study

The case will be adapted from the actual data from Pande and Temane Mozambique gas field. Same of the information needed in the project will be assumed with reasonable occurrence in order to make reasonable forecast into the future since the decision will be based in an assumption and analyses from framework derived from particular set of data. The value of the petroleum development and production project will be determined using DCF model[2].

6.1.1   The background- Pande and Temane gas field:

The Project reached a major milestone, on the 26th October 2000, when Sasol and the Government of the Republic of Mozambique signed the two major agreements for the project.   These two agreements were the Petroleum Production Agreement (The concession) and Pipeline Agreement for the construction of a transmission pipeline[10]. The production started in 2004.

A Petroleum Production Agreement (PPA) was signed for the Pande and Temane Field Reservoirs for the development, production and sale of the gas and condensate reserves.

Pipeline Agreement has been signed to transport gas from Pande and Temane field to south where was the main market.

6.1.2   Business structure

The project consists of two components as depicted in figure 6.1 and 6.2:

- *The upstream component*: gas field development and gas production;

- *The transmission component*: gas pipeline from Mozambique to the Republic of South Africa.
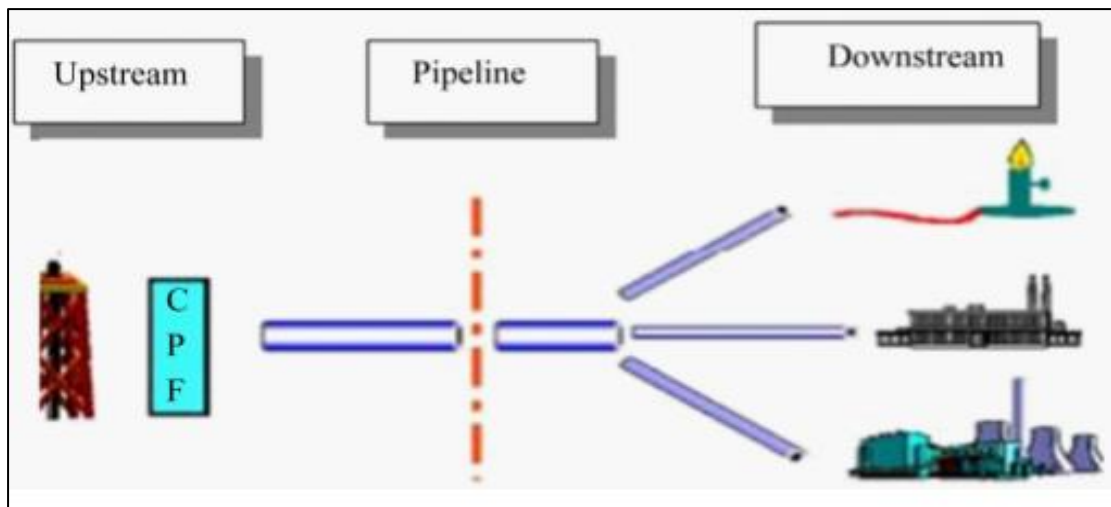
Figure 6-1: Central processing facility, source: www.enh.co.mz
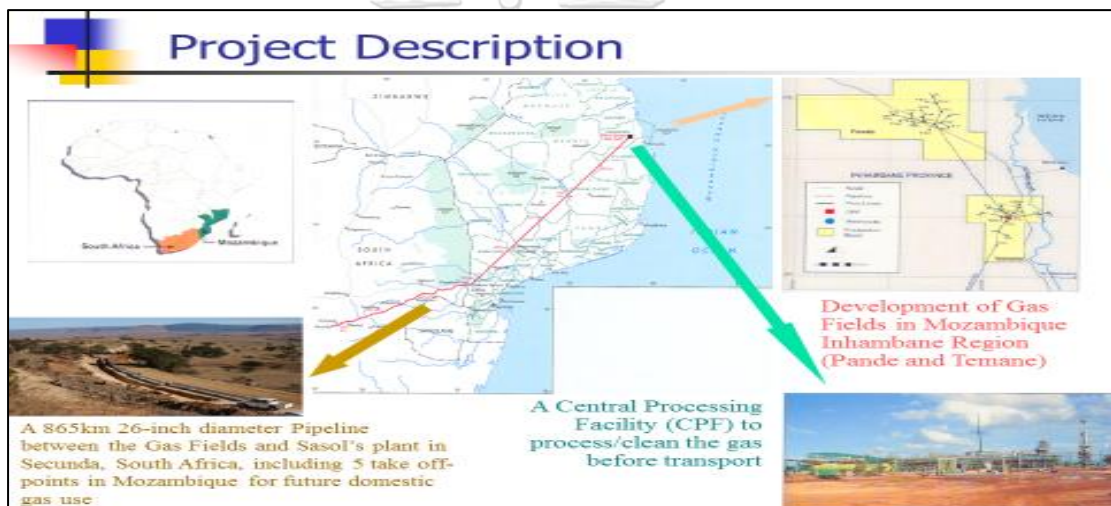
Figure 6-2: Project structure, source: adapted www.enh.co.mz

6.1.3 Project description

The project consist in two unincorporated joint ventures[10], Sasol Petroleum Temane (SPT) and the Pipeline Investment Company of the Republic of Mozambique (ROMPCO), these two companies were created to manage upstream facilities and the pipeline.

Upstream business structure:

- As it can be seen in the figure 6.3, Sasol Petroleum International (SPT) owns 70%

- Companhia Mozambicana de Hidrocarbonetos (CMH), a subsidiary of the Mozambique national agency ENH (NOC), responsible for oil and gas exploration and development, owns 25%.

- International Finance Corporation (IFC) owns the remaining 5%
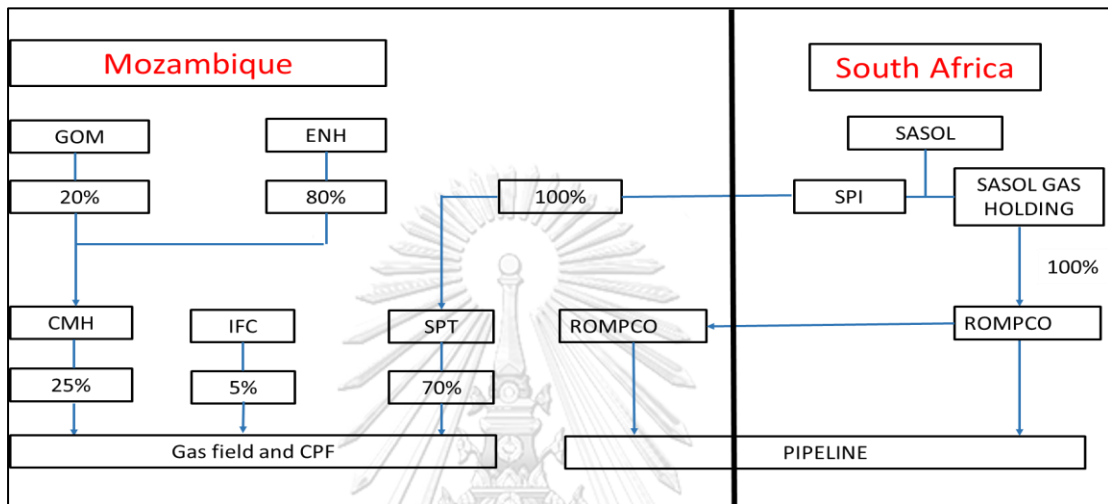
Figure 6-3: Project description, source: www.enh.co.mz

Pipeline business structure:

- Similarly, ROMPCO is a joint venture between Sasol, Companhia Moçambicana de Gasoduto (CMG) - another subsidiary of ENH, and iGas.
  - Sasol owns 50% of ROMPCO,
  - CMH and iGas share the remainder with 25% each.

6.1.4 Field information

As mentioned in chapter 4, the gas reserve is 5.5 TCF, the production rate was set at 190 MMGJ/yr. The total contract quantity in 30 years is equivalent to 4.6 TCF, this quantity is subjected to ramp up over first years. Total project investment according to Fostering Regional Integration in Africa: Lessons from Sasol Natural Gas Project between South Africa and Mozambique was around 600 million USD [10], and operational cost for small on shore gas field is around 5 million/yr USD, source: wood Mackenzie 2016.

6.2 Design Issue

To analyze how GT and contractor's ROR varies with boundary conditions, such as field size and gas prices, current and alternative fiscal regime are evaluated using five different price scenarios for gas and condensate, and five different field sizes. As already mentioned, the field which is under production has a contractual commitment of 4.6 TCF of gas. In order to better analyze current and alternative system, hypothetically others 4 gas fields carrying reserves of 5.6 TCF; 6.6 TCF; 7.6 TCF and 8.6 TCF were created. Each field size was evaluated under five different gas price scenario. The calculation of the cost investment and operating costs of the additional hypothetical reserves were assumed at 12% of the previous one, taking into account the economy of scale. The data of each field can be found in table 6.1.

Table 6-1: Hypothetical reserves and cost

Reserve (TCF)	Contractual Quantity (TCF)	Contractual Gas Quantity (MM GJ)	Contractual Condensate (MM BBL)	Capex (MM $)	Opex (MM $)
Field 1	4.64	5,437.52	18,7	600.78	5
Field 2	5.60	6,182.40	21,7	672.87	5.6
Field 3	6.60	7,286.40	24,5	753.61	6.3
Field 4	7.60	8,390.40	27,2	844.05	7.02
Field 5	8.60	9,494.40	29,8	945.33	7.87

6.2.1 Mozambique fiscal regime

Pande and Temane gas field is under Concession system, it was the first system to be used in Mozambique. Pande and Temane gas field is extensive, measuring 20 km by 25 km, with high calorific, dry gas accumulation. The production started in 2004, and the field has been since then operated by Sasol, a South Africa oil company. It is located onshore about 600 km northeast of Maputo and about 20 km from the coast in Inhumane Province of southern Mozambique, Source: (www.inp.co.mz, 2014).

6.2.2 Current fiscal regime

- Royalty: 5%

- Corporate tax rate: 35%

- Withholding tax at a rate: 5% Government participation 25%

- Deduction of exploration expenditure at a rate of 100%

- Depreciation: 25%
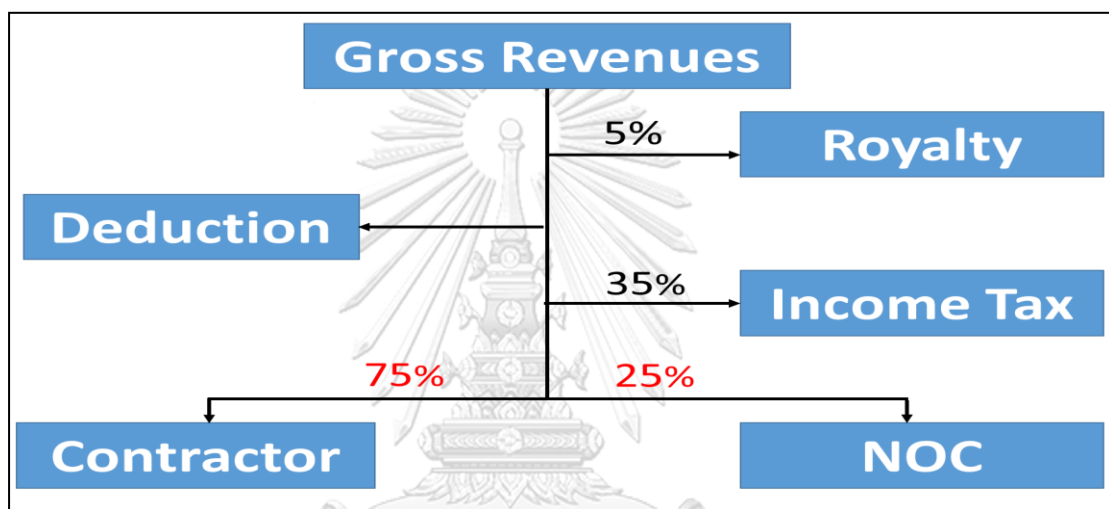
Figure 6-4: Current fiscal regime - Pande and Temane gas field (adapted from actual data's)

The main objective of this thesis is to evaluate the government's take against the Contractor take. In figure 6.4, note that 75% refers to the contractor and 25% refers to the NOC. As it has been mentioned before, the business structure consists in 70%-Sasol (operator), 25%-ENH (NOC) and 5%- IFC (Bank). As a way of evaluating the benefits of the state, considering that IFC and Sasol are foreign investment, so in this thesis both investors were considered as contractors. As a result, figure 6.4 is assumed as current tax regime to be analyzed in this thesis.

6.2.3 Alternative fiscal regime

- No Royalty on the values of natural gas and condensate sales

- Withholding tax at a rate: 5%

- Government participation 25%

- Deduction of exploration expenditure at a rate of 100%

- Depreciation: 25%

The proposed alternative Concession system is designed to be truly progressive system, it is profit based tax. The income tax is linked contractors rate of return (ROR), since it takes into account time value of money. The use of RoR is likely to be more efficient at sharing the projects upside and downside between the contractors and HG, and is also more flexible, which turns it more attractive to the contractors. Corporate tax is subject to progressive corporate tax according to the table 6.2.

Table 6-2: Sliding scale for corporate tax

Rate of Return (%)	Corporate tax (%)
≤10	25
11 ≤ X≤ 15	30
16 ≤ X≤ 19	35
20	40
21	60
22	70
23	85

The choice of the corporate tax rate allocation in the table 6.2 is based on trial and error method as a way to adjust the benefit between the host government and the contractor. It was considered that when RoR is about 21%, the contractor has already recovered much of its investment. So, the host government has the right to charge as much as possible if it is understood that it will be practically at the end of the life of the project, especially in the case of small reservoirs.
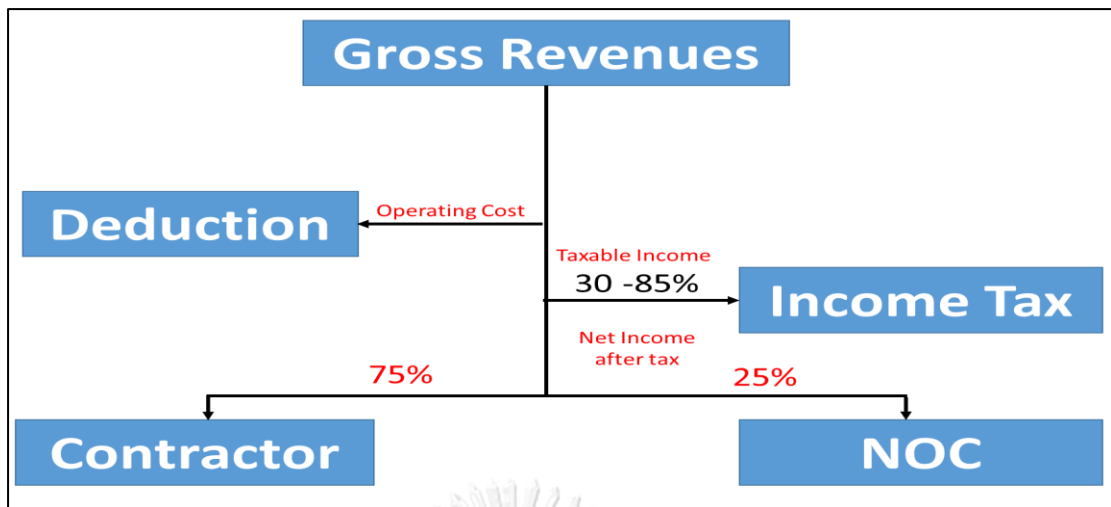
Figure 6-5: Alternative fiscal regime

Alternative fiscal regime in figure 6.5, is a slightly modified version of the current fiscal regime. As it has been mentioned before, it has been improved based on the theory to become more flexible and efficiency. The royalty was taken off to avoid the front tax and the corporate tax is subject to a sliding scale from 30 to 85% according to table 6.2, to turn it more progressive and flexible.

6.2.4 Assumptions for both fiscal regime:

- Gas Reserve: table 6.1 - Hypothetical reserves and cost

- Capex: table 6.1 - Hypothetical reserves and cost

- Opex: table 6.1 - Hypothetical reserves and cost

- Duration of contract: 30 years

- Discounted cash flow will be calculated in mid-year

- Discounted rate is constant: 10% per year (2004 is assumed as year zero)

- Depreciation: 25%

- Conversion: 1SCF = 980 BTU

- Conversion: 1MBTU = 1.05 GJ

- Conversion: Energy (GJ) = 376 (scf) × 2.8692044809344E-6 (GJ / scf)

6.2.5 Gas and condensate production profile

In the current and alternative tax system, will be used production profile shown in figure 6.6 and figure 6.7, which is subjected to ramp over first years. The production profile is also subjected to the field size according to the table 6.1. As it can be seen in the figure 6.6 and 6.7, the data follow the following order:

- 2004-2015: recorded production profile for Gas and Condensate, Figure 6.6

- 2015-2034: Annual Contractual Quantity, figure 6.6; field 1

- 2015-2034: There is no Annual Contractual Quantity for condensate, since this is natural gas reservoir, so in this case will be used average of the condensate produced so far, it can be seen in figure 6.7; field 1.

- In order to analyze these fields, the gas and condensate production profiles were considered according to figure 6.6 and 6.7, (field 1 to field 5).

- Field 1, (with plateau: 190 million GJ), refers to the current conditions of the project, adapted from actual data. While other 4 fields were created to better analyze both tax systems. The data of each field can be found in table 6.1.

- Gas and Condensate production profile figure 6.6 and 6.7 (Field 1), were considered as base case.
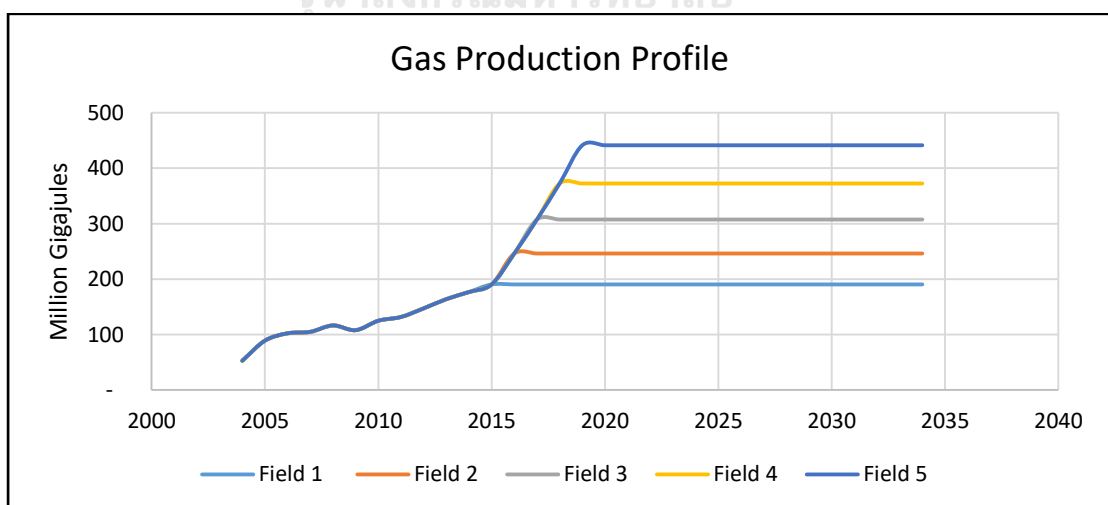
Figure 6-6: Gas production profile (adapted from actual data)
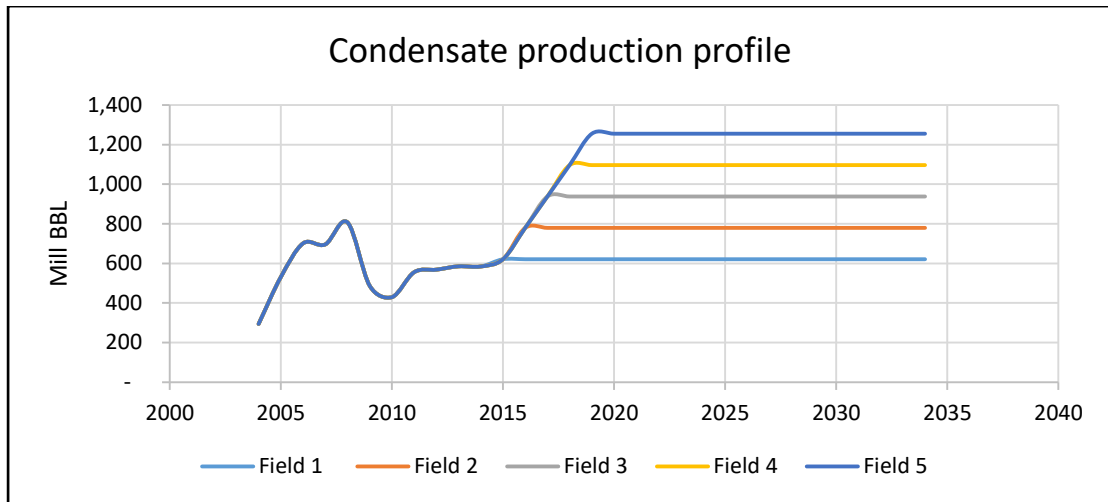
Figure 6-7: Condensate production profile (adapted from actual data)

6.2.6 Gas price scenario, figure 6.8:

- 2004-2015: recorded historical price for Gas

- 2015-2034: projected gas price scenario 1, was calculated based on historical price. Assuming that the current prices are very low and cannot decrease further, otherwise the business will not have sustainability. Therefore, it is assumed that from 2016 the price has started to increase at 1.5% escalation rate until the end of the project. So this was assumed as lowest price possible, and was considered as based case (figure 6.8, gas price 1). In cases of price scenario from 2 to 5, the rate of increase was 3%, 5%, 8% and 10% respectively.
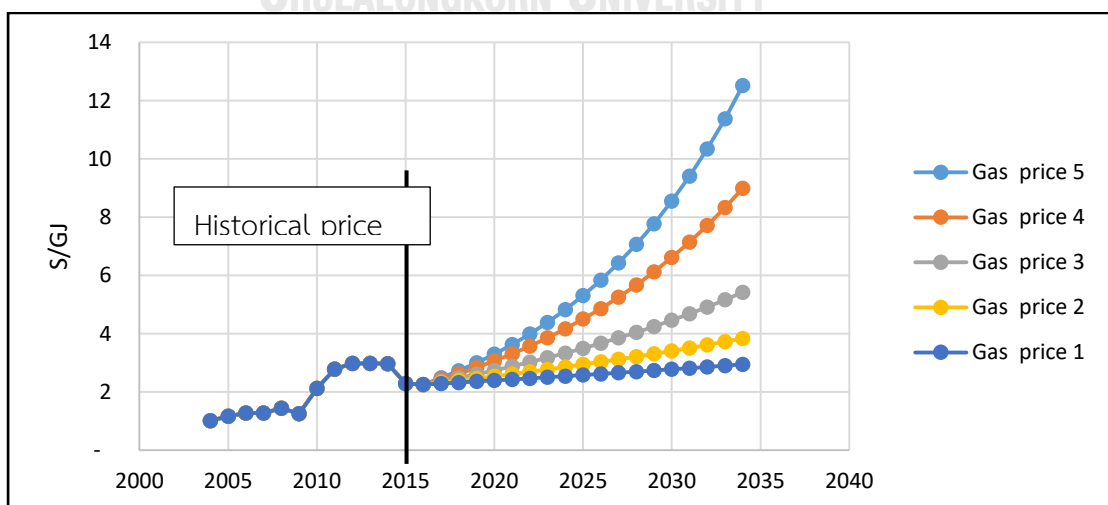
Figure 6-8: Gas price scenario

6.2.7 Condensate price scenario, figure 6.9:

- 2004-2015: recorded historical price for Condensate

- 2015-2034: projected condensate price scenario 1, was calculated based on historical price. Assuming that the current prices are very low and cannot decrease further, otherwise the business will not have sustainability. Therefore, it is assumed that from 2016 the price has started to increase at 1.5% escalation rate. This was considered as base case (figure 6.9, condensate price scenario 1). In cases of price scenario from 2 to 5, the rate of increase was 3%, 5%, 8% and 10% respectively.
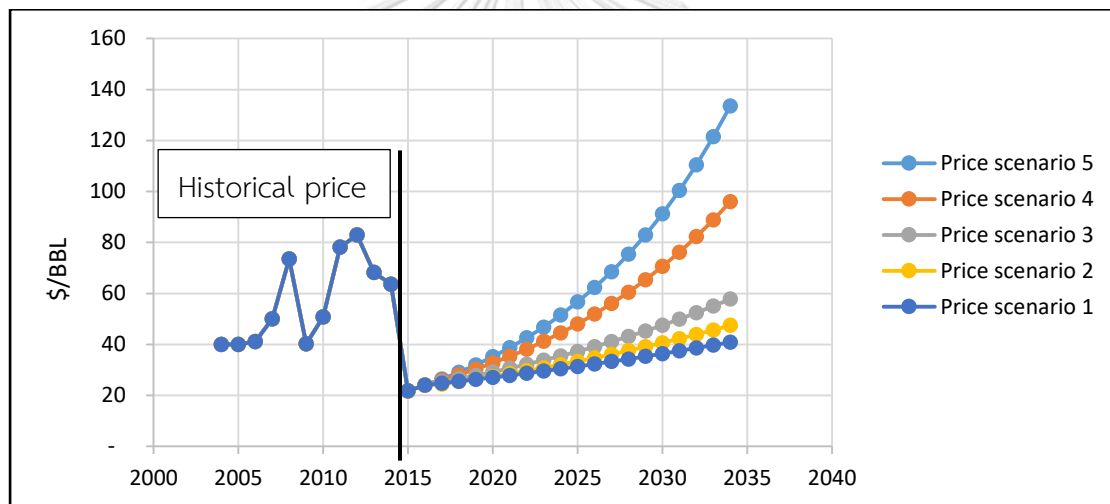
Figure 6-9: Condensate price scenario

Price scenario 1 (Gas and condensate price), and field 1 carrying reserve of 4.64 TCF was considered as base case to analyze both systems, given the fact that with this price and this field size, they have the same results in terms of government take in global way. In figure 6.10, shows that that the overall result for government take for both systems is the same, 39%. Despite the Figure shows a different government take trends over time, it can be noticed that the alternative system was designed to be progressive, that's why there are sharp drops if compared with the current system. It can also be realized that the chart started in 2008 because in the early years the

project has not started to make a profit, so, it can't have Government and Contractor take.
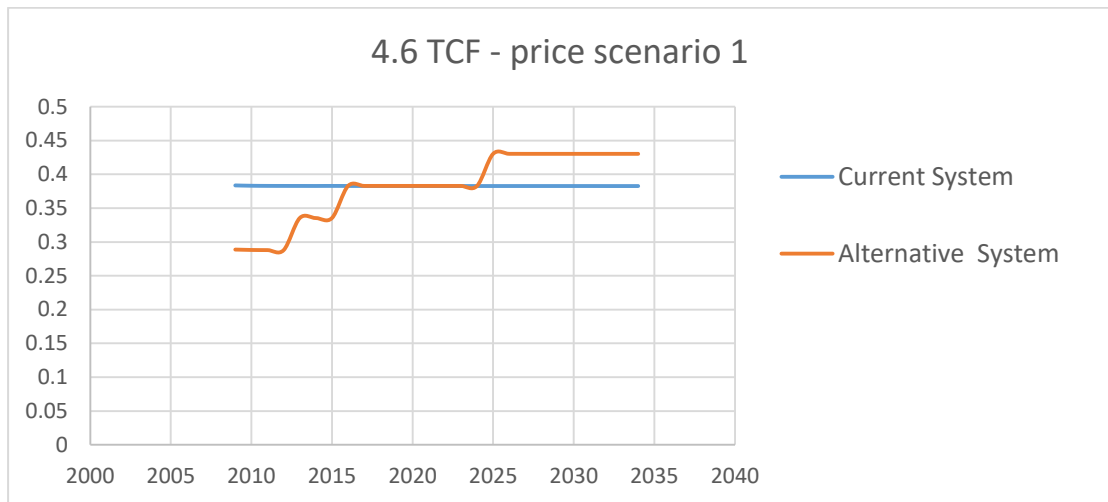
Figure 6-10: comparison between current and alternative systems under price scenario 1

CHAPTER VII

DISCUSSION OF THE RESULTS

7.1 Discussion of the Results

The results of the two systems are analyzed, rending a cluster of results pointing to facts that deserve attention to understand the essence of the efficient tax regime, where the contractor and the host government may have improved the results.

Alternative fiscal regime was designed to compare its economic indicator with the current fiscal regime.

As it has been mentioned before, both system was designed in such a way that the Government and contractors take for both fiscal regime gives the same results, assuming as base case the price scenario 1 (gas & condensate).

7.1.1 Progressivity and flexibility in current fiscal system

As mentioned in this thesis, the host government, in order to design and implement appropriate policies, strategies and tactics, must assess their position in the global market and assess their particular situation of boundary conditions. The current fiscal regime was just to attract investments and was not designed in such way to be flexible and efficient. As shown in figure 7.1, the government and contractor take in the current fiscal regime (4.6 TCF) using the price scenario 1, remains constant over time, even with increases in price, it yields the same results in 39% of government take.
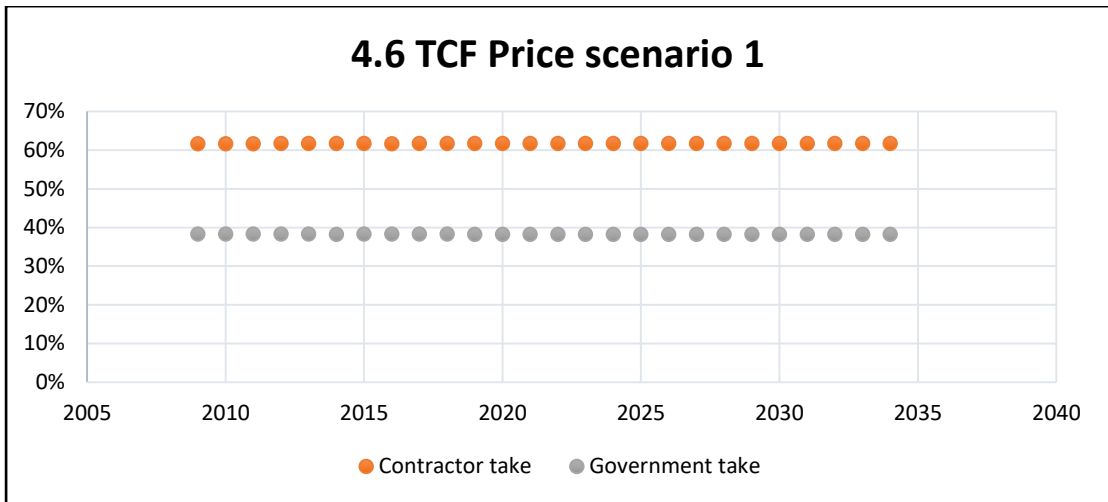
Figure 7-1: Government and Contractor take over time on current fiscal system

In the figure 7.2 under the same conditions as previous one, it can be noted that the same situation prevails, even though the annual internal rate of return is increasing, the government take remain constant.
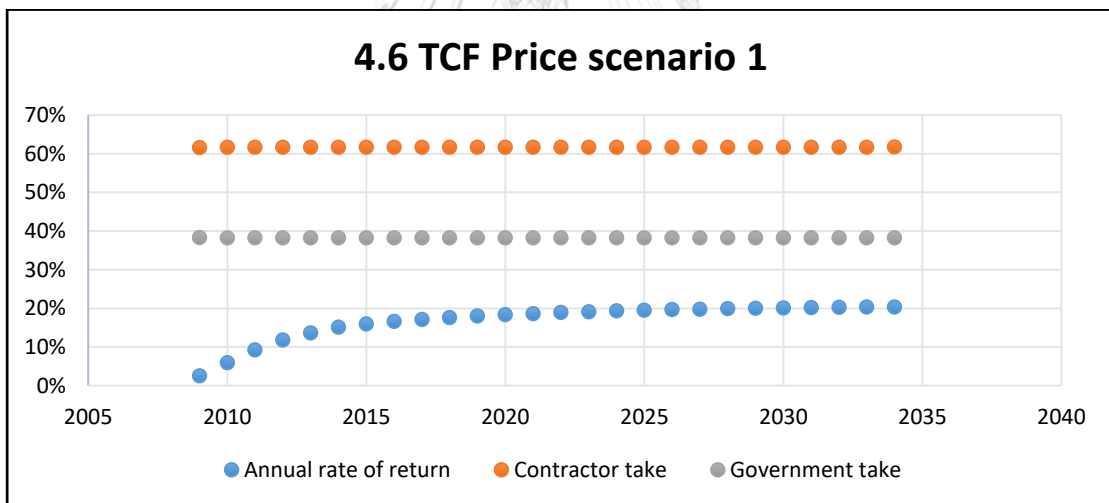
Figure 7-2: Government and contractor take under IRR on current fiscal system

For better analyse the behaviour of the current fiscal regime in terms of its progressivity and flexibility, 5 different prices scenarios were used to evaluate.

Given that the RoR is increasing as shown in figure 7.2, the situation remained the same as can be seen in figure 7.3, the government take still around 39% at all prices.
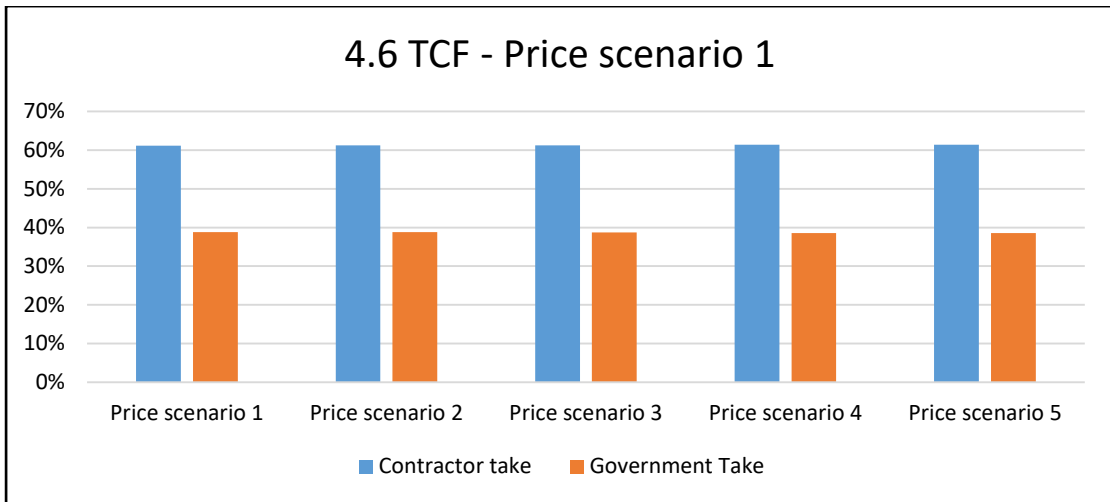
Figure 7-3: Government take for 5 different price scenario on current fiscal system

As a way to seek more evidence of analysis, it was evaluated in 5 different field sizes, using hypothetically the price scenario 5. The result is not different from the previous cases even if ROR and NPV is increasing, the government take remains neutral as can be seen in figure 7.4 and figure 7.5.
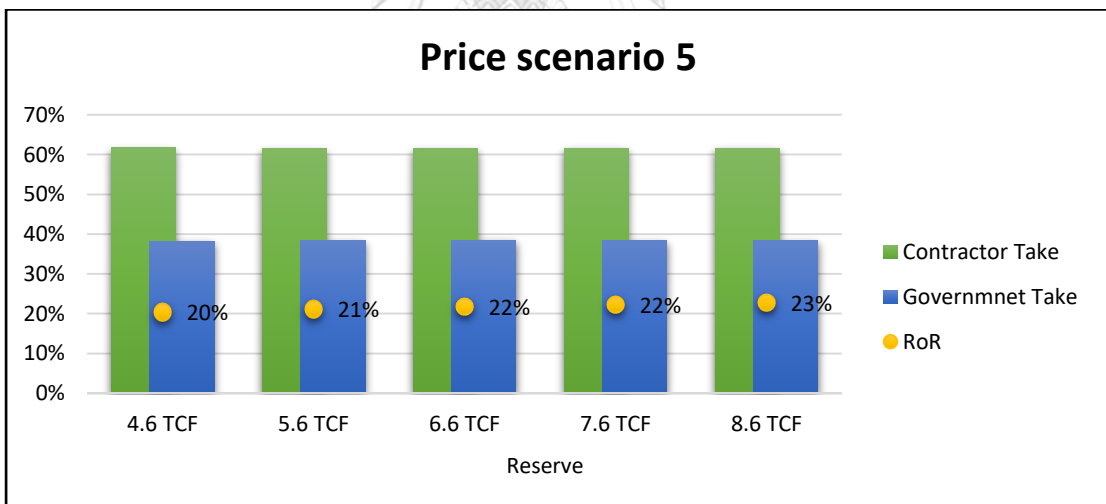
Figure 7-4: Government take for different field size on current fiscal system

NPV @ 10%- Price scenario 5
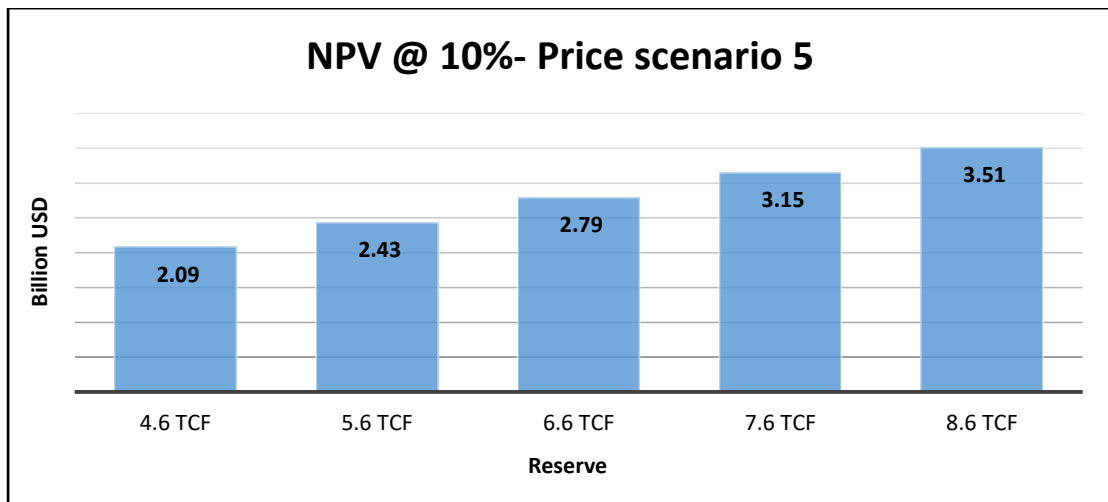
Figure 7-5: NPV@10% using price scenario 5 on current fiscal system

A logical situation would be to increase the government take, as the price of oil also increases from 1 to 5, figure 7.3. Or the Government take would also increase as the field size goes from 4.6TCF to 8.6TCF, figure 7.4. It is important to realize that each price scenario has its own increases. As mentioned before the current fiscal system is not price sensitive, it doesn't react in favorable environment. It may be noted that the government take remains constant even though the NCF of the project increases dramatically, as shown in figure 7.6.

4.6 TCF - Price scenrio 1
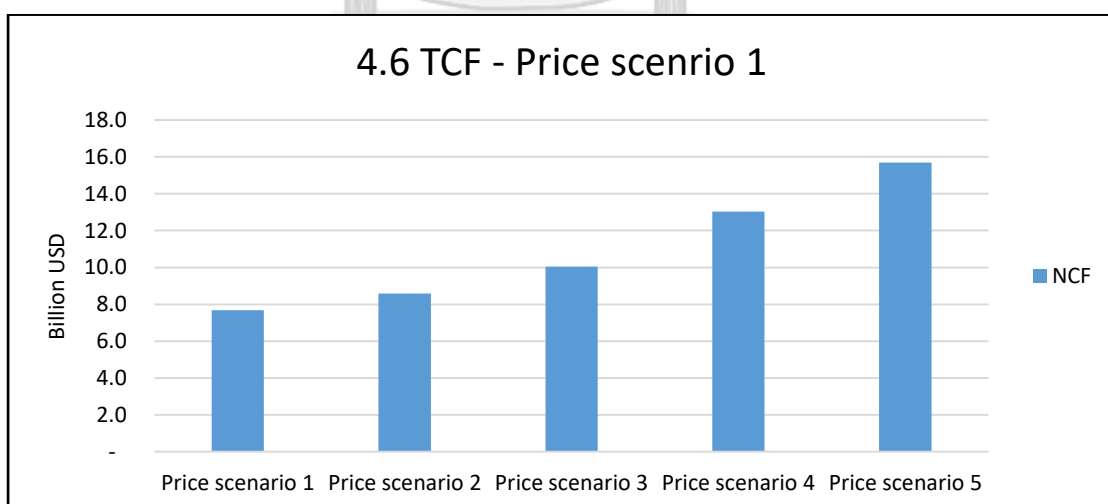
Figure 7-6: Project NCF using 5 different price scenario on current fiscal system

7.1.2 Progressivity and flexibility in alternative fiscal system

Alternative fiscal regime since it was designed to be business environment sensitive, as mentioned before in this thesis, corporate tax is linked to internal rate of return. As can be seen in figure 7.7, price scenario 5 was used to evaluate the behavior field size carrying reserves of 8.6 TCF. Here, it's clear that the response mechanism in relation to the triggering factor is remarkable over the time. This means that the alternative system reacts to the project ROR, the corporate tax increases as RoR increases.
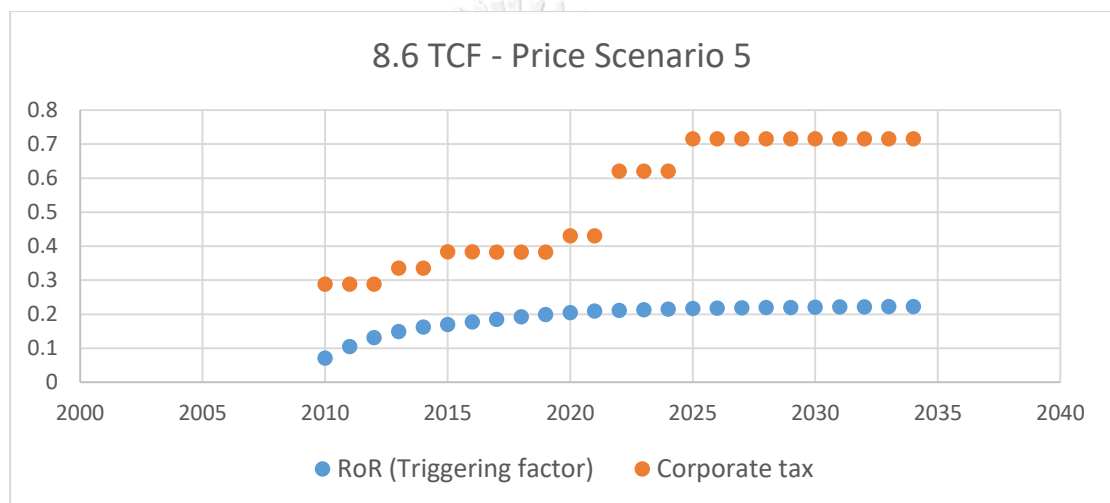
Figure 7-7: Illustration of RoR as triggering factor to change the corporate tax on alternative fiscal system

Alternative fiscal system, also shows how the triggering mechanism in alternative system works very efficiently as the field size increases, figure 7.8. Unlike the current fiscal regime, alternative tax regime is more flexible and efficient. It can be noticed that as the filed size increase the government take increases as well. The same situation happens when gas price increases as well, figure 7.9.

In the figure 7.8, it clearly shows differences between both systems in terms of wealth distribution mechanism. As it can be seen, the government take in alternative system begins with 41% and goes up to 64% as the field size increases from 4.6TCF to 8.6 TCF. This is because corporate tax is triggered by RoR. It shows that once RoR increases, it triggers the change in corporate tax to adjust wealth distribution between the HG and Investors. The triggering mechanism is according to the table 6.2.

Figure 7-8: Comparison of both system under price scenario 5

As shown in figure 7.9 and figure 7.10, 5 price scenarios were used to evaluate the behaviour of alternative fiscal regime carrying reserve of 5.6 TCF and 8.6 TCF respectively. As result, the figures shows that Government take increases as price scenarios goes from 1 to 5, it means that as the project profitability increases, government take increases as well.
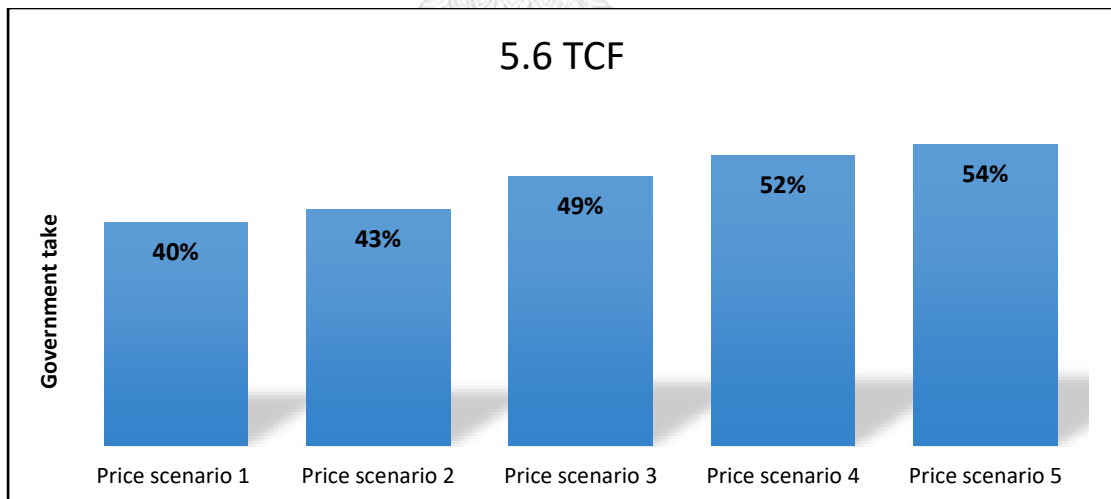
Figure 7-9: Government take for 5 different price scenario

The alternative tax system shows consistently with any reserve size its progressiveness. The similarity occurred in the lower reserve of 5.6 TCF in the figure 7.9, the same tendency is observed with large reserve of 8.6 TCF, in figure 7.10. Showing that the government take increases as the price scenario goes from 1 to 5.

It is also observed, comparing figure 7.9 and figure 7.10, in the alternative system, the government take is much higher in large reserves than smaller one. This demonstrates how the triggering factor makes the alternative system more efficient and fitting to the boundary conditions.
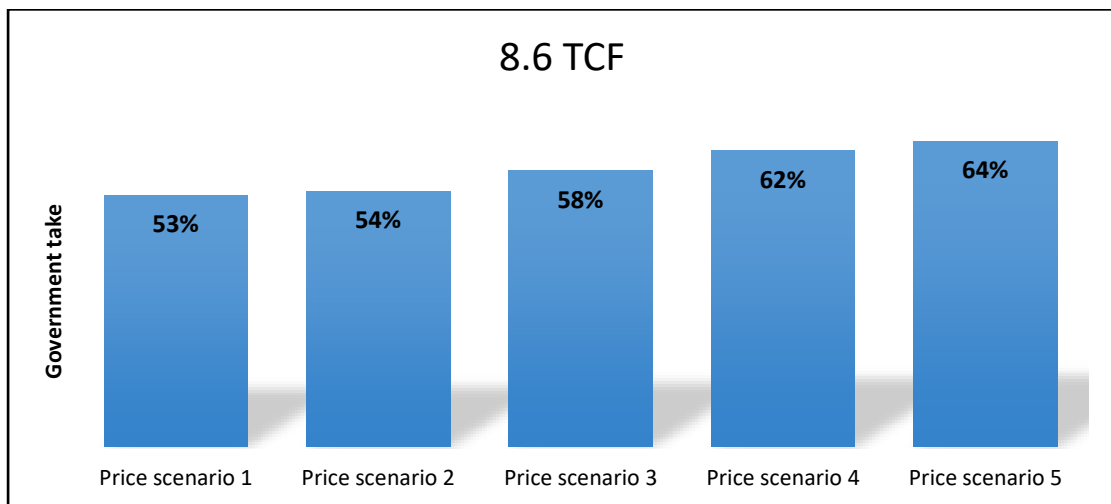
Figure 7-10: Government take under 5 price scenario

In the alternative tax regime, both, contractor and government benefits with increases in price. In figure 7.11 shows that, not only the Government take is increasing as shown in figure 7.10, carrying reserve of 8.6 TCF, but also the contractor NPV@10% increases as well.
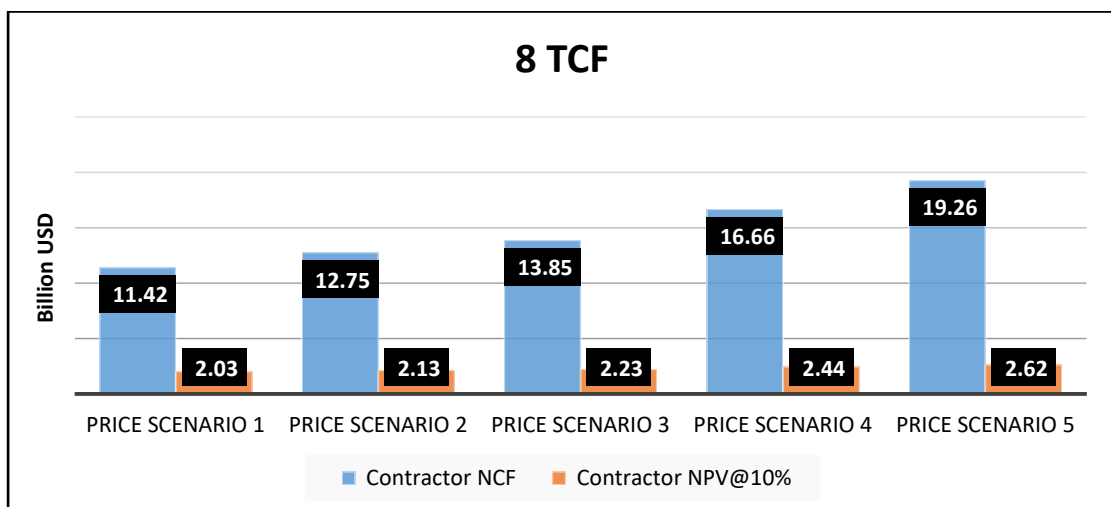
Figure 7-11: Contractor @10% NPV

7.1.3 Progressivity and flexibility in both system for different field size and different price scenario

If fiscal system doesn't fit to the boundary conditions, this can lead to a situation where the government will lose money in times of boom, or the contractor will lose money in times of economic downturn. This situation will lead to the renegotiation of the agreement for both, the government and the investor depending on the situation.

In the current tax system government take does not change with the increase in field size and gas price. The government will suffer in the up side in the revenue with this system. As it can be noticed, the government take remain around 39% for different field size, even the RoR is increases as seen in figure 7.12. Note that this happens even NPV increases, figure 7.13. This is the kind of the situations that leads to renegotiation of the contracts.
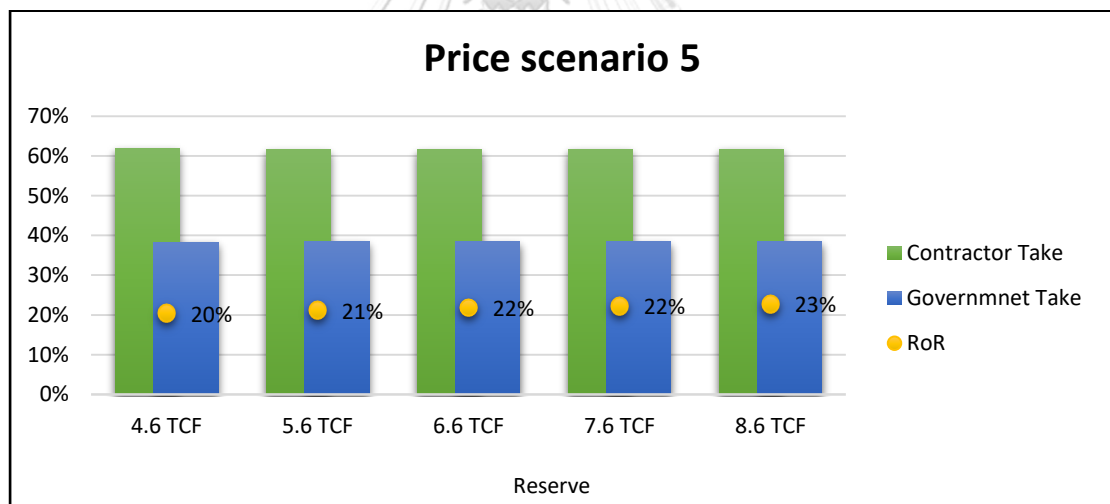
Figure 7-12: Government and Contractor take under different field size
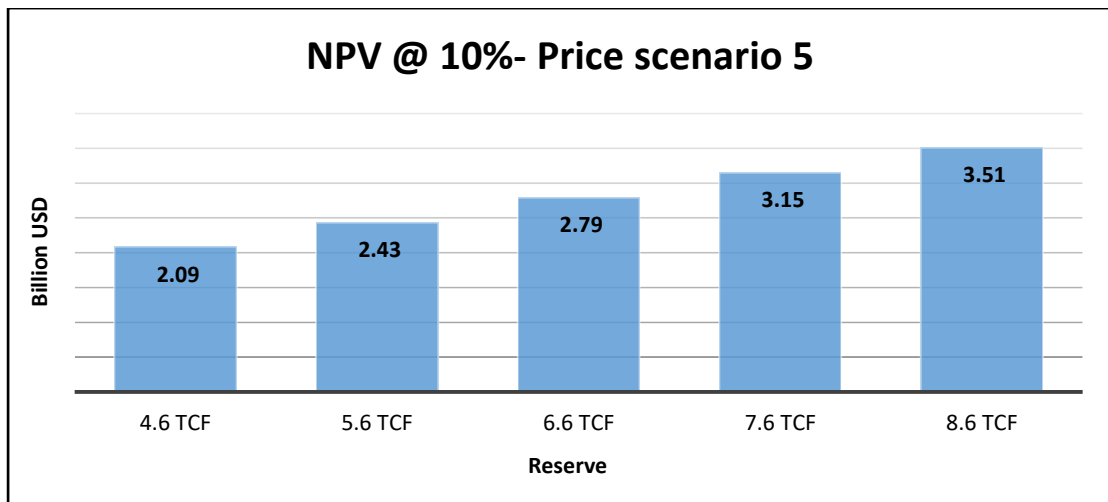
Figure 7-13: Project NPV@10% under different field size on current fiscal system

In figure 7.14, the difference between the current and alternative tax system in terms of wealth distribution is clear. Testing both system using the price scenario 5, and 5 different field sizes, as shown in figure 7.14, it can be noted that the alternative tax regime is more flexible and efficient if compared to the existing tax system. In the alternative tax system, the GT increases as the field size increases, while the existing system the GT remains constant even with increase in field size.

On the other hand, the alternative fiscal system is probably more efficient up to reserve of 7.6 TCF. From this point the government take increases too little, from 63% to 64%. May be the alternative system is not suitable for the reserve greater than 7.6 TCF. This happened because steepness of sliding scale to change the Project RoR may not be suitable to reserve of 8.6 TCF using price scenario 5.
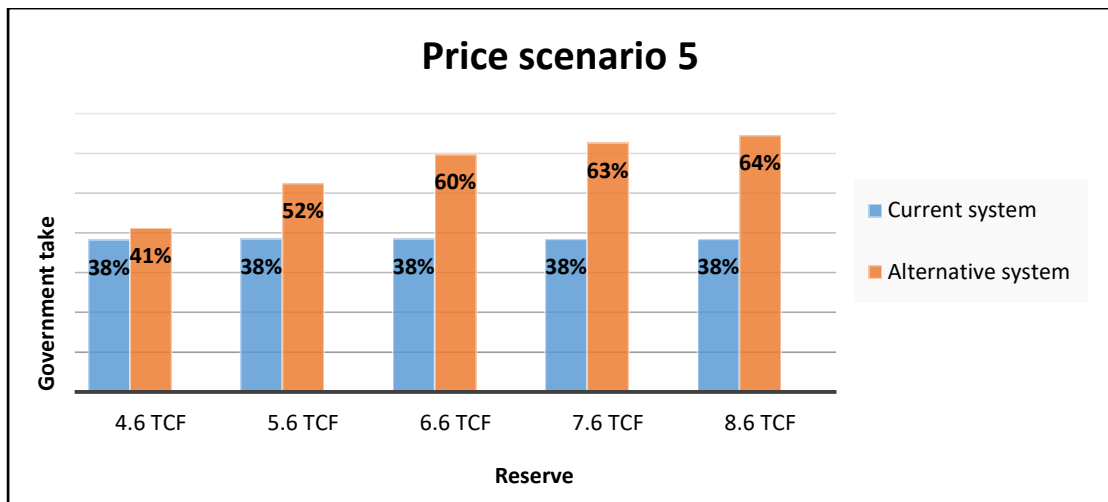
Figure 7-14: Government take for different reserves

This situation, take to the point that to maximizing the government take, is important to set policy that flexibly helps the government take to adjust to different conditions. Choosing the triggering rate and thresholds, floors and ceiling are key issues for the tax regime. To set thresholds and triggers, the HG needs to have a reasonable assumption about field size, price forecasting, and production profile. It is very important to establish a threshold and timing to change RoR parameters.

On the other hand, it can be seen from figure 7.7 that from RoR = 21%, the trend of the corporate tax becomes constant, which means that the system calls for a change of the corparate tax to be more than 70%, in order to adjust the Government take under the condition (8.6 TCF- Price scenario 5). Note that the system worked perfectly until 2025. from there it was no longer efficient. So when a system deals with a smaller or large reserves, with lower or high prices, the demand of "triggering factor" has to be according to the boundary conditions.

CHAPTER VIII

CONCLUSION AND RECOMMENDATION

The conclusions in this thesis were based on the following assumptions:

a) Recorded gas and condensate production profile from 2004 to 2015, and projected gas and condensate production profile from 2016 to 2034, according to the figure 6.6 and figure 6.7.

b) Historical price of gas and condensate from 2004 to 2034, and projected price scenario from 2016 to 2034, according to the figure 6.8 and figure 6.9.

c) Hypothetical reserves and their costs according to table 6.1.

d) Two different fiscal systems: Current and alternative system according to the figure 6.4 and figure 6.5.

8.1 Conclusion

The current fiscal regime does not benefit the country since it was not designed to capture the effects of all variables that affect profitability (flat level). It has been observed that, even using different pricing scenarios and different field sizes, the government take remains the same around 39% while the contractor NPV increases. This clearly shows that the system doesn't share wealth fairly. The system has a tendency to maintain the government take as the oil price and size of the field increases, so this is regressive system.

In alternative system, the fiscal system was designed with sliding scale corporate tax which is triggered by annual RoR in order to be progressive. But also, the absence of royalty in its structure made the system more efficient and progressive, since royalty is regressive component. Annual RoR, which is profit-based tax component, demonstrated to be a good parameter for designing progressive system, since it has consistently shown that it reacts with boundary conditions such as different price scenarios and different field sizes.

Alternative fiscal system is flexible and efficient. Unlike the current fiscal regime, it was designed in order to capture the effects of variables that affect profitability. It has been observed that the government and contractor are equally exposed to the profitability fluctuation. This means that the government take increases as the oil price or field size increases, or the government take decreases as the oil price or the size of the field decreases. Even though the government take increases over time, or increases as the price scenario and field size increases, the contractor's NPV also increases over time, and increases as the price scenario and field size increases as well. Then can be concluded that in the alternative system, it resulted in a "win-win situation".

8.2 Recommendation

Mozambique have to use its potential boundary conditions and compete with other countries in the region to attract foreign investment to develop their natural resources. Using the country good data of the historical exploration, great reserve and stability of the country to develop good fiscal regime. This is a suitable time to set up strict fiscal regime to the country, of course providing the contractor with a fair rate of return on investment commensurate with the project risks. For this, it is important to be an efficient fiscal regime, flexible and simple to apply.

When design a new fiscal regime, is important to avoid regressive system, avoiding front-loading, turning it to be progressive system, using RoR, or others profit-based components.

It's important to realize that not all set of triggers or thresholds can optimize government in all possible scenarios. So choosing a better triggering factors and thresholds is very important in setting up a good fiscal regime according the country boundary conditions. For better choice of this elements, the government need the reasonable assumptions of field size, price forecast, production profile, flow rate, Project life (duration) and other key parameters in the Project. This information will help the government setting thresholds and triggers and its appropriate floors and ceilings with suitable timing. The triggering factor parameters such as RoR or R-factor have to be triggered on right time according to its features. There is no an ideal fiscal system for all projects that can fit to all possible scenario.

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APPENDIX

Apendece A: Deterministic calculation table: Current and altenative fiscal Regime

A1: Current system (4.6 TCF) - Price scenario 1

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	USD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	190.30	621.02	$ 443.10	$ 270.37	$ 61.71	$ 167.74	62%	38%	17%
2017	190.30	621.02	$ 449.97	$ 274.61	$ 56.98	$ 170.36	62%	38%	17%
2018	190.30	621.02	$ 456.95	$ 278.92	$ 52.61	$ 173.03	62%	38%	18%
2019	190.30	621.02	$ 464.05	$ 283.30	$ 48.58	$ 175.75	62%	38%	18%
2020	190.30	621.02	$ 471.25	$ 287.75	$ 44.86	$ 178.50	62%	38%	18%
2021	190.30	621.02	$ 478.57	$ 292.27	$ 41.42	$ 181.30	62%	38%	18%
2022	190.30	621.02	$ 486.01	$ 296.86	$ 38.25	$ 184.15	62%	38%	19%
2023	190.30	621.02	$ 493.57	$ 301.53	$ 35.32	$ 187.04	62%	38%	19%
2024	190.30	621.02	$ 501.25	$ 306.27	$ 32.61	$ 189.98	62%	38%	19%
2025	190.30	621.02	$ 509.05	$ 311.09	$ 30.11	$ 192.96	62%	38%	19%
2026	190.30	621.02	$ 516.98	$ 315.98	$ 27.81	$ 195.99	62%	38%	19%
2027	190.30	621.02	$ 525.03	$ 320.96	$ 25.68	$ 199.07	62%	38%	19%
2028	190.30	621.02	$ 533.22	$ 326.01	$ 23.71	$ 202.21	62%	38%	19%
2029	190.30	621.02	$ 541.53	$ 331.15	$ 21.89	$ 205.39	62%	38%	19%
2030	190.30	621.02	$ 549.99	$ 336.37	$ 20.22	$ 208.62	62%	38%	19%
2031	190.30	621.02	$ 558.57	$ 341.67	$ 18.67	$ 211.90	62%	38%	19%
2032	190.30	621.02	$ 567.30	$ 347.06	$ 17.24	$ 215.24	62%	38%	19%
2033	190.30	621.02	$ 576.17	$ 352.53	$ 15.92	$ 218.63	62%	38%	19%
2034	190.30	621.02	$ 585.18	$ 358.10	$ 14.70	$ 222.08	62%	38%	19%
	5,122.30	18,661.04	13,316.13	7,682.04	1,534.76	4,878.32	61%	39%	

A1: Current system (4.6 TCF) - Price scenario 2

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	USD	MMUSD	MMUSD	MMUSD	%	%	
2001			$ -	$ -600.00	$ -572.08				
2002			$ -	$ -0.18	$ -0.15				
2003			$ -	$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	190.30	621.02	$ 443.10	$ 270.37	$ 61.71	$ 167.74	62%	38%	17%
2017	190.30	621.02	$ 456.17	$ 278.44	$ 57.78	$ 172.74	62%	38%	17%
2018	190.30	621.02	$ 470.01	$ 286.98	$ 54.14	$ 178.03	62%	38%	18%
2019	190.30	621.02	$ 484.27	$ 295.78	$ 50.72	$ 183.48	62%	38%	18%
2020	190.30	621.02	$ 498.96	$ 304.86	$ 47.53	$ 189.10	62%	38%	18%
2021	190.30	621.02	$ 514.10	$ 314.21	$ 44.53	$ 194.89	62%	38%	18%
2022	190.30	621.02	$ 529.70	$ 323.84	$ 41.72	$ 200.86	62%	38%	19%
2023	190.30	621.02	$ 545.77	$ 333.76	$ 39.09	$ 207.01	62%	38%	19%
2024	190.30	621.02	$ 562.34	$ 343.99	$ 36.63	$ 213.34	62%	38%	19%
2025	190.30	621.02	$ 579.41	$ 354.53	$ 34.32	$ 219.87	62%	38%	19%
2026	190.30	621.02	$ 597.00	$ 365.40	$ 32.16	$ 226.60	62%	38%	19%
2027	190.30	621.02	$ 615.12	$ 376.59	$ 30.13	$ 233.53	62%	38%	19%
2028	190.30	621.02	$ 633.80	$ 388.12	$ 28.23	$ 240.68	62%	38%	19%
2029	190.30	621.02	$ 653.05	$ 400.01	$ 26.45	$ 248.04	62%	38%	19%
2030	190.30	621.02	$ 672.88	$ 412.25	$ 24.78	$ 255.63	62%	38%	19%
2031	190.30	621.02	$ 693.32	$ 424.87	$ 23.22	$ 263.44	62%	38%	19%
2032	190.30	621.02	$ 714.38	$ 437.88	$ 21.75	$ 271.50	62%	38%	19%
2033	190.30	621.02	$ 736.09	$ 451.28	$ 20.38	$ 279.80	62%	38%	19%
2034	190.30	621.02	$ 758.45	$ 465.09	$ 19.09	$ 288.36	62%	38%	19%
	5,122.30	18,661.04	14,766.31	8,577.53	1,600.81	5,433.01	61%	39%	

A1: Current system (4.6 TCF) - Price scenario 3

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	USD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	190.30	621.02	$ 443.10	$ 270.37	$ 61.71	$ 167.74	62%	38%	17%
2017	190.30	621.02	$ 465.26	$ 284.05	$ 58.94	$ 176.21	62%	38%	17%
2018	190.30	621.02	$ 488.52	$ 298.41	$ 56.29	$ 185.11	62%	38%	18%
2019	190.30	621.02	$ 512.95	$ 313.50	$ 53.76	$ 194.45	62%	38%	18%
2020	190.30	621.02	$ 538.59	$ 329.33	$ 51.34	$ 204.26	62%	38%	18%
2021	190.30	621.02	$ 565.52	$ 345.96	$ 49.03	$ 214.56	62%	38%	18%
2022	190.30	621.02	$ 593.80	$ 363.42	$ 46.82	$ 225.38	62%	38%	19%
2023	190.30	621.02	$ 623.49	$ 381.76	$ 44.71	$ 236.74	62%	38%	19%
2024	190.30	621.02	$ 654.67	$ 401.01	$ 42.70	$ 248.66	62%	38%	19%
2025	190.30	621.02	$ 687.40	$ 421.22	$ 40.77	$ 261.18	62%	38%	19%
2026	190.30	621.02	$ 721.77	$ 442.44	$ 38.94	$ 274.33	62%	38%	19%
2027	190.30	621.02	$ 757.86	$ 464.73	$ 37.18	$ 288.13	62%	38%	19%
2028	190.30	621.02	$ 795.75	$ 488.13	$ 35.50	$ 302.62	62%	38%	19%
2029	190.30	621.02	$ 835.54	$ 512.69	$ 33.90	$ 317.84	62%	38%	19%
2030	190.30	621.02	$ 877.31	$ 538.49	$ 32.37	$ 333.82	62%	38%	20%
2031	190.30	621.02	$ 921.18	$ 565.58	$ 30.90	$ 350.60	62%	38%	20%
2032	190.30	621.02	$ 967.24	$ 594.02	$ 29.51	$ 368.22	62%	38%	20%
2033	190.30	621.02	$ 1,015.60	$ 623.88	$ 28.17	$ 386.72	62%	38%	20%
2034	190.30	621.02	$ 1,066.38	$ 655.24	$ 26.90	$ 406.14	62%	38%	20%
	5,122.30	18,661.04	17,140.33	10,043.49	1,705.92	6,341.07	61%	39%	

A1: Current system (4.6 TCF) - Price scenario 4

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	USD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 298.32	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 536.10	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 707.30	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 702.94	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 815.33	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 496.17	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 439.64	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 566.58	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 580.39	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 598.36	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 598.60	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 636.02	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	190.30	621.02	$ 637.02	$ 270.37	$ 61.71	$ 167.74	62%	38%	17%
2017	190.30	621.02	$ 638.02	$ 292.26	$ 60.64	$ 181.30	62%	38%	17%
2018	190.30	621.02	$ 639.02	$ 315.90	$ 59.59	$ 195.94	62%	38%	18%
2019	190.30	621.02	$ 640.02	$ 341.43	$ 58.55	$ 211.75	62%	38%	18%
2020	190.30	621.02	$ 641.02	$ 369.00	$ 57.53	$ 228.84	62%	38%	18%
2021	190.30	621.02	$ 642.02	$ 398.78	$ 56.52	$ 247.28	62%	38%	19%
2022	190.30	621.02	$ 643.02	$ 430.94	$ 55.52	$ 267.20	62%	38%	19%
2023	190.30	621.02	$ 644.02	$ 465.68	$ 54.54	$ 288.72	62%	38%	19%
2024	190.30	621.02	$ 645.02	$ 503.19	$ 53.58	$ 311.96	62%	38%	19%
2025	190.30	621.02	$ 646.02	$ 543.71	$ 52.63	$ 337.06	62%	38%	19%
2026	190.30	621.02	$ 647.02	$ 587.47	$ 51.70	$ 364.16	62%	38%	19%
2027	190.30	621.02	$ 648.02	$ 634.72	$ 50.78	$ 393.43	62%	38%	20%
2028	190.30	621.02	$ 649.02	$ 685.76	$ 49.87	$ 425.05	62%	38%	20%
2029	190.30	621.02	$ 650.02	$ 740.88	$ 48.98	$ 459.19	62%	38%	20%
2030	190.30	621.02	$ 651.02	$ 800.41	$ 48.11	$ 496.07	62%	38%	20%
2031	190.30	621.02	$ 652.02	$ 864.71	$ 47.25	$ 535.89	62%	38%	20%
2032	190.30	621.02	$ 653.02	$ 934.14	$ 46.40	$ 578.90	62%	38%	20%
2033	190.30	621.02	$ 654.02	$ 1,009.14	$ 45.57	$ 625.35	62%	38%	20%
2034	190.30	621.02	$ 655.02	$ 1,090.13	$ 44.75	$ 675.52	62%	38%	20%
	-	-	$ -	-	-	-			
	5,122.30	18,661.04	19,250.04	13,027.89	1,910.71	8,189.71	61%	39%	

A1: Current system (4.6 TCF) - Price scenario 5

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	USD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	190.30	621.02	$ 443.10	$ 270.37	$ 61.71	$ 167.74	62%	38%	17%
2017	190.30	621.02	$ 487.41	$ 297.73	$ 61.78	$ 184.69	62%	38%	17%
2018	190.30	621.02	$ 536.15	$ 327.83	$ 61.84	$ 203.33	62%	38%	18%
2019	190.30	621.02	$ 589.77	$ 360.93	$ 61.90	$ 223.84	62%	38%	18%
2020	190.30	621.02	$ 648.75	$ 397.35	$ 61.95	$ 246.40	62%	38%	18%
2021	190.30	621.02	$ 713.62	$ 437.41	$ 61.99	$ 271.21	62%	38%	19%
2022	190.30	621.02	$ 784.98	$ 481.48	$ 62.03	$ 298.51	62%	38%	19%
2023	190.30	621.02	$ 863.48	$ 529.95	$ 62.07	$ 328.53	62%	38%	19%
2024	190.30	621.02	$ 949.83	$ 583.27	$ 62.11	$ 361.56	62%	38%	19%
2025	190.30	621.02	$ 1,044.81	$ 641.92	$ 62.14	$ 397.89	62%	38%	20%
2026	190.30	621.02	$ 1,149.30	$ 706.44	$ 62.17	$ 437.86	62%	38%	20%
2027	190.30	621.02	$ 1,264.23	$ 777.41	$ 62.19	$ 481.82	62%	38%	20%
2028	190.30	621.02	$ 1,390.65	$ 855.48	$ 62.22	$ 530.17	62%	38%	20%
2029	190.30	621.02	$ 1,529.71	$ 941.35	$ 62.24	$ 583.37	62%	38%	20%
2030	190.30	621.02	$ 1,682.68	$ 1,035.81	$ 62.26	$ 641.88	62%	38%	20%
2031	190.30	621.02	$ 1,850.95	$ 1,139.71	$ 62.28	$ 706.24	62%	38%	20%
2032	190.30	621.02	$ 2,036.05	$ 1,254.01	$ 62.29	$ 777.04	62%	38%	20%
2033	190.30	621.02	$ 2,239.65	$ 1,379.74	$ 62.31	$ 854.92	62%	38%	20%
2034	190.30	621.02	$ 2,463.62	$ 1,518.03	$ 62.32	$ 940.58	62%	38%	20%
	5,122.30	18,661.04	26,277.16	15,685.48	2,086.25	9,835.91	61%	39%	

A1: Current system (5.6 TCF) - Price scenario 1

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)		NCF		PV(NCF)@10%		Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	USD		MMUSD		MMUSD		MMUSD		%	
2001				$	-600.00	$	-572.08					
2002				$	-0.18	$	-0.15					
2003				$	-0.28	$	-0.22					
2004	52.63	294.32	$ 64.80	$	56.36	$	40.37	$	3.24			
2005	88.89	531.10	$ 124.35	$	113.01	$	73.60	$	6.22			
2006	102.09	701.30	$ 157.96	$	111.63	$	66.09	$	41.32			
2007	104.77	695.94	$ 167.85	$	142.45	$	76.67	$	20.40			
2008	116.31	807.33	$ 226.22	$	178.50	$	87.33	$	42.73			
2009	107.78	487.17	$ 154.32	$	92.05	$	40.94	$	57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$	173.00	$	69.96	$	107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$	249.40	$	91.68	$	154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$	296.11	$	98.95	$	183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$	321.72	$	97.74	$	199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$	342.47	$	94.59	$	212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$	273.02	$	68.55	$	169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$	350.24	$	79.94	$	217.21	62%	38%	17%
2017	246.10	779.57	$ 581.32	$	355.71	$	73.81	$	220.60	62%	38%	17%
2018	246.10	779.57	$ 590.33	$	361.28	$	68.15	$	224.05	62%	38%	18%
2019	246.10	779.57	$ 599.48	$	366.93	$	62.92	$	227.55	62%	38%	18%
2020	246.10	779.57	$ 608.78	$	372.67	$	58.10	$	231.11	62%	38%	19%
2021	246.10	779.57	$ 618.23	$	378.51	$	53.64	$	234.72	62%	38%	19%
2022	246.10	779.57	$ 627.83	$	384.43	$	49.53	$	238.39	62%	38%	19%
2023	246.10	779.57	$ 637.58	$	390.46	$	45.73	$	242.12	62%	38%	19%
2024	246.10	779.57	$ 647.49	$	396.57	$	42.23	$	245.91	62%	38%	19%
2025	246.10	779.57	$ 657.56	$	402.79	$	38.99	$	249.77	62%	38%	19%
2026	246.10	779.57	$ 667.79	$	409.11	$	36.00	$	253.68	62%	38%	20%
2027	246.10	779.57	$ 678.18	$	415.53	$	33.24	$	257.65	62%	38%	20%
2028	246.10	779.57	$ 688.74	$	422.05	$	30.69	$	261.69	62%	38%	20%
2029	246.10	779.57	$ 699.47	$	428.68	$	28.34	$	265.80	62%	38%	20%
2030	246.10	779.57	$ 710.38	$	435.41	$	26.17	$	269.97	62%	38%	20%
2031	246.10	779.57	$ 721.46	$	442.25	$	24.17	$	274.21	62%	38%	20%
2032	246.10	779.57	$ 732.72	$	449.20	$	22.31	$	278.51	62%	38%	20%
2033	246.10	779.57	$ 744.16	$	456.27	$	20.60	$	282.89	62%	38%	20%
2034	246.10	779.57	$ 755.79	$	463.45	$	19.03	$	287.34	62%	38%	20%
	6,182.40	21,673.47	16,148.12		9,430.79		1,720.08		5,961.55	61%	39%	

B1: Current system (5.6 TCF) - Price scenario 2

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	USD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	246.10	779.57	$ 589.34	$ 360.67	$ 74.84	$ 223.67	62%	38%	17%
2018	246.10	779.57	$ 607.21	$ 371.70	$ 70.12	$ 230.51	62%	38%	18%
2019	246.10	779.57	$ 625.63	$ 383.07	$ 65.69	$ 237.55	62%	38%	18%
2020	246.10	779.57	$ 644.60	$ 394.79	$ 61.55	$ 244.81	62%	38%	19%
2021	246.10	779.57	$ 664.15	$ 406.86	$ 57.66	$ 252.29	62%	38%	19%
2022	246.10	779.57	$ 684.30	$ 419.31	$ 54.02	$ 259.99	62%	38%	19%
2023	246.10	779.57	$ 705.06	$ 432.13	$ 50.61	$ 267.94	62%	38%	19%
2024	246.10	779.57	$ 726.45	$ 445.33	$ 47.42	$ 276.12	62%	38%	19%
2025	246.10	779.57	$ 748.50	$ 458.95	$ 44.43	$ 284.55	62%	38%	20%
2026	246.10	779.57	$ 771.21	$ 472.97	$ 41.62	$ 293.24	62%	38%	20%
2027	246.10	779.57	$ 794.62	$ 487.43	$ 38.99	$ 302.19	62%	38%	20%
2028	246.10	779.57	$ 818.74	$ 502.32	$ 36.53	$ 311.42	62%	38%	20%
2029	246.10	779.57	$ 843.59	$ 517.67	$ 34.23	$ 320.92	62%	38%	20%
2030	246.10	779.57	$ 869.21	$ 533.48	$ 32.07	$ 330.72	62%	38%	20%
2031	246.10	779.57	$ 895.60	$ 549.78	$ 30.04	$ 340.82	62%	38%	20%
2032	246.10	779.57	$ 922.80	$ 566.58	$ 28.14	$ 351.22	62%	38%	20%
2033	246.10	779.57	$ 950.82	$ 583.88	$ 26.37	$ 361.94	62%	38%	20%
2034	246.10	779.57	$ 979.70	$ 601.72	$ 24.70	$ 372.99	62%	38%	20%
	6,182.40	21,673.47	18,022.39	10,588.16	1,805.45	6,678.46	61%	39%	

B1: Deterministic calculation table, Current system (5.6 TCF) - Price scenario 3

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	USD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	246.10	779.57	$ 601.07	$ 367.91	$ 76.34	$ 228.16	62%	38%	17%
2018	246.10	779.57	$ 631.13	$ 386.47	$ 72.90	$ 239.66	62%	38%	18%
2019	246.10	779.57	$ 662.68	$ 405.96	$ 69.62	$ 251.73	62%	38%	18%
2020	246.10	779.57	$ 695.82	$ 426.42	$ 66.48	$ 264.40	62%	38%	19%
2021	246.10	779.57	$ 730.61	$ 447.90	$ 63.48	$ 277.71	62%	38%	19%
2022	246.10	779.57	$ 767.14	$ 470.46	$ 60.61	$ 291.68	62%	38%	19%
2023	246.10	779.57	$ 805.49	$ 494.14	$ 57.88	$ 306.35	62%	38%	19%
2024	246.10	779.57	$ 845.77	$ 519.01	$ 55.26	$ 321.76	62%	38%	20%
2025	246.10	779.57	$ 888.06	$ 545.13	$ 52.77	$ 337.93	62%	38%	20%
2026	246.10	779.57	$ 932.46	$ 572.54	$ 50.38	$ 354.92	62%	38%	20%
2027	246.10	779.57	$ 979.08	$ 601.33	$ 48.11	$ 372.75	62%	38%	20%
2028	246.10	779.57	$ 1,028.04	$ 631.56	$ 45.93	$ 391.47	62%	38%	20%
2029	246.10	779.57	$ 1,079.44	$ 663.30	$ 43.86	$ 411.14	62%	38%	20%
2030	246.10	779.57	$ 1,133.41	$ 696.63	$ 41.87	$ 431.78	62%	38%	20%
2031	246.10	779.57	$ 1,190.08	$ 731.63	$ 39.98	$ 453.46	62%	38%	20%
2032	246.10	779.57	$ 1,249.59	$ 768.37	$ 38.17	$ 476.22	62%	38%	20%
2033	246.10	779.57	$ 1,312.07	$ 806.95	$ 36.44	$ 500.12	62%	38%	20%
2034	246.10	779.57	$ 1,377.67	$ 847.46	$ 34.79	$ 525.21	62%	38%	20%
	6,182.40	21,673.47	21,090.46	12,482.69	1,941.28	7,852.00	61%	39%	

B1: Deterministic calculation table, Current system (5.6 TCF) - Price scenario 4

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	USD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	246.10	779.57	$ 618.25	$ 378.52	$ 78.54	$ 234.73	62%	38%	17%
2018	246.10	779.57	$ 667.71	$ 409.06	$ 77.16	$ 253.65	62%	38%	18%
2019	246.10	779.57	$ 721.12	$ 442.04	$ 75.81	$ 274.08	62%	38%	18%
2020	246.10	779.57	$ 778.81	$ 477.67	$ 74.47	$ 296.15	62%	38%	19%
2021	246.10	779.57	$ 841.12	$ 516.14	$ 73.15	$ 319.98	62%	38%	19%
2022	246.10	779.57	$ 908.41	$ 557.69	$ 71.85	$ 345.72	62%	38%	19%
2023	246.10	779.57	$ 981.08	$ 602.57	$ 70.58	$ 373.51	62%	38%	20%
2024	246.10	779.57	$ 1,059.57	$ 651.03	$ 69.32	$ 403.53	62%	38%	20%
2025	246.10	779.57	$ 1,144.33	$ 703.37	$ 68.09	$ 435.96	62%	38%	20%
2026	246.10	779.57	$ 1,235.88	$ 759.90	$ 66.87	$ 470.97	62%	38%	20%
2027	246.10	779.57	$ 1,334.75	$ 820.96	$ 65.68	$ 508.79	62%	38%	20%
2028	246.10	779.57	$ 1,441.53	$ 886.89	$ 64.50	$ 549.63	62%	38%	20%
2029	246.10	779.57	$ 1,556.85	$ 958.10	$ 63.35	$ 593.74	62%	38%	21%
2030	246.10	779.57	$ 1,681.40	$ 1,035.01	$ 62.21	$ 641.38	62%	38%	21%
2031	246.10	779.57	$ 1,815.91	$ 1,118.07	$ 61.09	$ 692.84	62%	38%	21%
2032	246.10	779.57	$ 1,961.18	$ 1,207.78	$ 60.00	$ 748.40	62%	38%	21%
2033	246.10	779.57	$ 2,118.08	$ 1,304.66	$ 58.92	$ 808.41	62%	38%	21%
2034	246.10	779.57	$ 2,287.52	$ 1,409.30	$ 57.86	$ 873.23	62%	38%	21%
	6,182.40	21,673.47	27,334.32	16,338.28	2,205.85	10,240.27	61%	39%	

B1: Deterministic calculation table, Current system (5.6 TCF) - Price scenario 5

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	246.10	779.57	$ 629.70	$ 385.59	$ 80.01	$ 239.11	62%	38%	17%
2018	246.10	779.57	$ 692.66	$ 424.47	$ 80.07	$ 263.19	62%	38%	18%
2019	246.10	779.57	$ 761.93	$ 467.24	$ 80.13	$ 289.69	62%	38%	19%
2020	246.10	779.57	$ 838.12	$ 514.29	$ 80.18	$ 318.83	62%	38%	19%
2021	246.10	779.57	$ 921.94	$ 566.05	$ 80.22	$ 350.89	62%	38%	19%
2022	246.10	779.57	$ 1,014.13	$ 622.98	$ 80.27	$ 386.15	62%	38%	20%
2023	246.10	779.57	$ 1,115.54	$ 685.60	$ 80.30	$ 424.95	62%	38%	20%
2024	246.10	779.57	$ 1,227.10	$ 754.48	$ 80.34	$ 467.61	62%	38%	20%
2025	246.10	779.57	$ 1,349.81	$ 830.26	$ 80.37	$ 514.55	62%	38%	20%
2026	246.10	779.57	$ 1,484.79	$ 913.61	$ 80.40	$ 566.18	62%	38%	20%
2027	246.10	779.57	$ 1,633.27	$ 1,005.29	$ 80.42	$ 622.97	62%	38%	21%
2028	246.10	779.57	$ 1,796.59	$ 1,106.15	$ 80.45	$ 685.45	62%	38%	21%
2029	246.10	779.57	$ 1,976.25	$ 1,217.09	$ 80.47	$ 754.17	62%	38%	21%
2030	246.10	779.57	$ 2,173.88	$ 1,339.12	$ 80.49	$ 829.76	62%	38%	21%
2031	246.10	779.57	$ 2,391.27	$ 1,473.36	$ 80.51	$ 912.91	62%	38%	21%
2032	246.10	779.57	$ 2,630.39	$ 1,621.02	$ 80.52	$ 1,004.38	62%	38%	21%
2033	246.10	779.57	$ 2,893.43	$ 1,783.44	$ 80.54	$ 1,104.99	62%	38%	21%
2034	246.10	779.57	$ 3,182.78	$ 1,962.11	$ 80.55	$ 1,215.66	62%	38%	21%
	6,182.40	21,673.47	32,894.43	19,771.64	2,432.64	12,367.02	62%	38%	

B1: Deterministic calculation table, Current system (6.6 TCF) - Price scenario 1

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	307.43	938.13	$ 725.31	$ 444.63	$ 92.26	$ 275.68	62%	38%	18%
2018	307.43	938.13	$ 736.54	$ 451.56	$ 85.18	$ 279.98	62%	38%	18%
2019	307.43	938.13	$ 747.95	$ 458.61	$ 78.65	$ 284.34	62%	38%	19%
2020	307.43	938.13	$ 759.54	$ 465.76	$ 72.61	$ 288.77	62%	38%	19%
2021	307.43	938.13	$ 771.31	$ 473.03	$ 67.04	$ 293.28	62%	38%	19%
2022	307.43	938.13	$ 783.27	$ 480.42	$ 61.90	$ 297.85	62%	38%	19%
2023	307.43	938.13	$ 795.42	$ 487.92	$ 57.15	$ 302.50	62%	38%	20%
2024	307.43	938.13	$ 807.77	$ 495.55	$ 52.77	$ 307.22	62%	38%	20%
2025	307.43	938.13	$ 820.31	$ 503.29	$ 48.72	$ 312.02	62%	38%	20%
2026	307.43	938.13	$ 833.06	$ 511.17	$ 44.98	$ 316.90	62%	38%	20%
2027	307.43	938.13	$ 846.01	$ 519.16	$ 41.53	$ 321.85	62%	38%	20%
2028	307.43	938.13	$ 859.17	$ 527.29	$ 38.35	$ 326.88	62%	38%	20%
2029	307.43	938.13	$ 872.54	$ 535.54	$ 35.41	$ 332.00	62%	38%	20%
2030	307.43	938.13	$ 886.12	$ 543.93	$ 32.69	$ 337.19	62%	38%	20%
2031	307.43	938.13	$ 899.93	$ 552.45	$ 30.19	$ 342.47	62%	38%	20%
2032	307.43	938.13	$ 913.95	$ 561.12	$ 27.87	$ 347.84	62%	38%	20%
2033	307.43	938.13	$ 928.20	$ 569.92	$ 25.74	$ 353.29	62%	38%	20%
2034	307.43	938.13	$ 942.69	$ 578.86	$ 23.76	$ 358.83	62%	38%	20%
	7,286.40	24,527.65	19,109.94	11,259.72	1,903.21	7,094.45	61%	39%	

B1: Deterministic calculation table, Current system (6.6 TCF) - Price scenario 2

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	307.43	938.13	$ 735.35	$ 450.83	$ 93.55	$ 279.52	62%	38%	18%
2018	307.43	938.13	$ 757.64	$ 464.59	$ 87.64	$ 288.05	62%	38%	18%
2019	307.43	938.13	$ 780.61	$ 478.77	$ 82.10	$ 296.83	62%	38%	19%
2020	307.43	938.13	$ 804.27	$ 493.39	$ 76.92	$ 305.88	62%	38%	19%
2021	307.43	938.13	$ 828.66	$ 508.45	$ 72.06	$ 315.21	62%	38%	19%
2022	307.43	938.13	$ 853.78	$ 523.96	$ 67.51	$ 324.82	62%	38%	20%
2023	307.43	938.13	$ 879.68	$ 539.95	$ 63.24	$ 334.73	62%	38%	20%
2024	307.43	938.13	$ 906.36	$ 556.42	$ 59.25	$ 344.93	62%	38%	20%
2025	307.43	938.13	$ 933.85	$ 573.40	$ 55.51	$ 355.45	62%	38%	20%
2026	307.43	938.13	$ 962.18	$ 590.89	$ 52.00	$ 366.28	62%	38%	20%
2027	307.43	938.13	$ 991.37	$ 608.92	$ 48.71	$ 377.45	62%	38%	20%
2028	307.43	938.13	$ 1,021.45	$ 627.49	$ 45.64	$ 388.95	62%	38%	20%
2029	307.43	938.13	$ 1,052.44	$ 646.63	$ 42.75	$ 400.81	62%	38%	20%
2030	307.43	938.13	$ 1,084.38	$ 666.36	$ 40.05	$ 413.03	62%	38%	21%
2031	307.43	938.13	$ 1,117.29	$ 686.68	$ 37.52	$ 425.62	62%	38%	21%
2032	307.43	938.13	$ 1,151.21	$ 707.62	$ 35.15	$ 438.59	62%	38%	21%
2033	307.43	938.13	$ 1,186.16	$ 729.20	$ 32.93	$ 451.96	62%	38%	21%
2034	307.43	938.13	$ 1,222.17	$ 751.44	$ 30.85	$ 465.73	62%	38%	21%
	7,286.40	24,527.65	21,449.68	12,704.51	2,009.79	7,989.40	61%	39%	

B1: Deterministic calculation table, Current system (6.6 TCF) - Price scenario 3

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	307.43	938.13	$ 749.97	$ 459.86	$ 95.42	$ 285.11	62%	38%	18%
2018	307.43	938.13	$ 787.47	$ 483.01	$ 91.11	$ 299.46	62%	38%	18%
2019	307.43	938.13	$ 826.85	$ 507.33	$ 87.00	$ 314.52	62%	38%	19%
2020	307.43	938.13	$ 868.19	$ 532.86	$ 83.07	$ 330.33	62%	38%	19%
2021	307.43	938.13	$ 911.60	$ 559.66	$ 79.32	$ 346.94	62%	38%	19%
2022	307.43	938.13	$ 957.18	$ 587.81	$ 75.73	$ 364.37	62%	38%	20%
2023	307.43	938.13	$ 1,005.04	$ 617.36	$ 72.31	$ 382.68	62%	38%	20%
2024	307.43	938.13	$ 1,055.29	$ 648.39	$ 69.04	$ 401.90	62%	38%	20%
2025	307.43	938.13	$ 1,108.05	$ 680.97	$ 65.92	$ 422.08	62%	38%	20%
2026	307.43	938.13	$ 1,163.45	$ 715.18	$ 62.94	$ 443.27	62%	38%	20%
2027	307.43	938.13	$ 1,221.63	$ 751.10	$ 60.09	$ 465.52	62%	38%	21%
2028	307.43	938.13	$ 1,282.71	$ 788.82	$ 57.37	$ 488.89	62%	38%	21%
2029	307.43	938.13	$ 1,346.84	$ 828.43	$ 54.77	$ 513.42	62%	38%	21%
2030	307.43	938.13	$ 1,414.19	$ 870.01	$ 52.29	$ 539.18	62%	38%	21%
2031	307.43	938.13	$ 1,484.89	$ 913.67	$ 49.92	$ 566.22	62%	38%	21%
2032	307.43	938.13	$ 1,559.14	$ 959.52	$ 47.66	$ 594.62	62%	38%	21%
2033	307.43	938.13	$ 1,637.10	$ 1,007.66	$ 45.50	$ 624.44	62%	38%	21%
2034	307.43	938.13	$ 1,718.95	$ 1,058.20	$ 43.44	$ 655.75	62%	38%	21%
	7,286.40	24,527.65	25,279.37	15,069.34	2,179.33	9,454.26	61%	39%	

A1: Current system (6.6 TCF) - Price scenario 4

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	307.43	938.13	$ 771.40	$ 473.09	$ 98.17	$ 293.31	62%	38%	18%
2018	307.43	938.13	$ 833.11	$ 511.20	$ 96.43	$ 316.92	62%	38%	18%
2019	307.43	938.13	$ 899.76	$ 552.35	$ 94.72	$ 342.41	62%	38%	19%
2020	307.43	938.13	$ 971.74	$ 596.80	$ 93.04	$ 369.94	62%	38%	19%
2021	307.43	938.13	$ 1,049.48	$ 644.81	$ 91.39	$ 399.68	62%	38%	20%
2022	307.43	938.13	$ 1,133.44	$ 696.65	$ 89.76	$ 431.79	62%	38%	20%
2023	307.43	938.13	$ 1,224.12	$ 752.64	$ 88.16	$ 466.47	62%	38%	20%
2024	307.43	938.13	$ 1,322.05	$ 813.11	$ 86.58	$ 503.93	62%	38%	20%
2025	307.43	938.13	$ 1,427.81	$ 878.42	$ 85.03	$ 544.39	62%	38%	21%
2026	307.43	938.13	$ 1,542.03	$ 948.96	$ 83.51	$ 588.08	62%	38%	21%
2027	307.43	938.13	$ 1,665.40	$ 1,025.13	$ 82.01	$ 635.26	62%	38%	21%
2028	307.43	938.13	$ 1,798.63	$ 1,107.40	$ 80.54	$ 686.23	62%	38%	21%
2029	307.43	938.13	$ 1,942.52	$ 1,196.25	$ 79.09	$ 741.26	62%	38%	21%
2030	307.43	938.13	$ 2,097.92	$ 1,292.22	$ 77.67	$ 800.70	62%	38%	21%
2031	307.43	938.13	$ 2,265.75	$ 1,395.85	$ 76.27	$ 864.90	62%	38%	21%
2032	307.43	938.13	$ 2,447.01	$ 1,507.78	$ 74.90	$ 934.23	62%	38%	21%
2033	307.43	938.13	$ 2,642.77	$ 1,628.66	$ 73.55	$ 1,009.11	62%	38%	21%
2034	307.43	938.13	$ 2,854.20	$ 1,759.22	$ 72.22	$ 1,089.98	62%	38%	21%
	7,286.40	24,527.65	33,069.99	19,880.05	2,509.44	12,434.17	62%	38%	

A1: Current system (6.6 TCF) - Price scenario 5

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	307.43	938.13	$ 785.69	$ 481.91	$ 100.00	$ 298.77	62%	38%	18%
2018	307.43	938.13	$ 864.25	$ 530.43	$ 100.06	$ 328.83	62%	38%	18%
2019	307.43	938.13	$ 950.68	$ 583.79	$ 100.11	$ 361.89	62%	38%	19%
2020	307.43	938.13	$ 1,045.75	$ 642.50	$ 100.16	$ 398.25	62%	38%	19%
2021	307.43	938.13	$ 1,150.32	$ 707.07	$ 100.21	$ 438.25	62%	38%	20%
2022	307.43	938.13	$ 1,265.35	$ 778.11	$ 100.25	$ 482.25	62%	38%	20%
2023	307.43	938.13	$ 1,391.89	$ 856.24	$ 100.29	$ 530.65	62%	38%	20%
2024	307.43	938.13	$ 1,531.08	$ 942.19	$ 100.33	$ 583.89	62%	38%	21%
2025	307.43	938.13	$ 1,684.19	$ 1,036.74	$ 100.36	$ 642.45	62%	38%	21%
2026	307.43	938.13	$ 1,852.61	$ 1,140.73	$ 100.39	$ 706.87	62%	38%	21%
2027	307.43	938.13	$ 2,037.87	$ 1,255.13	$ 100.41	$ 777.73	62%	38%	21%
2028	307.43	938.13	$ 2,241.65	$ 1,380.97	$ 100.44	$ 855.68	62%	38%	21%
2029	307.43	938.13	$ 2,465.82	$ 1,519.39	$ 100.46	$ 941.43	62%	38%	21%
2030	307.43	938.13	$ 2,712.40	$ 1,671.66	$ 100.48	$ 1,035.74	62%	38%	21%
2031	307.43	938.13	$ 2,983.64	$ 1,839.15	$ 100.49	$ 1,139.49	62%	38%	22%
2032	307.43	938.13	$ 3,282.00	$ 2,023.39	$ 100.51	$ 1,253.62	62%	38%	22%
2033	307.43	938.13	$ 3,610.21	$ 2,226.05	$ 100.52	$ 1,379.15	62%	38%	22%
2034	307.43	938.13	$ 3,971.23	$ 2,448.98	$ 100.54	$ 1,517.24	62%	38%	22%
	7,286.40	24,527.65	40,007.47	24,163.95	2,792.41	15,087.75	62%	38%	

A1: Current system (7.6 TCF) - Price scenario 1

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	307.43	938.13	$ 725.31	$ 444.63	$ 92.26	$ 275.68	62%	38%	18%
2018	372.37	1,096.70	$ 891.12	$ 547.01	$ 103.19	$ 339.10	62%	38%	18%
2019	372.37	1,096.70	$ 904.90	$ 555.53	$ 95.27	$ 344.37	62%	38%	19%
2020	372.37	1,096.70	$ 918.91	$ 564.17	$ 87.95	$ 349.73	62%	38%	19%
2021	372.37	1,096.70	$ 933.14	$ 572.96	$ 81.20	$ 355.17	62%	38%	20%
2022	372.37	1,096.70	$ 947.59	$ 581.89	$ 74.97	$ 360.70	62%	38%	20%
2023	372.37	1,096.70	$ 962.28	$ 590.96	$ 69.22	$ 366.32	62%	38%	20%
2024	372.37	1,096.70	$ 977.20	$ 600.17	$ 63.91	$ 372.03	62%	38%	20%
2025	372.37	1,096.70	$ 992.36	$ 609.53	$ 59.00	$ 377.83	62%	38%	20%
2026	372.37	1,096.70	$ 1,007.76	$ 619.04	$ 54.48	$ 383.72	62%	38%	20%
2027	372.37	1,096.70	$ 1,023.40	$ 628.70	$ 50.30	$ 389.70	62%	38%	21%
2028	372.37	1,096.70	$ 1,039.30	$ 638.52	$ 46.44	$ 395.78	62%	38%	21%
2029	372.37	1,096.70	$ 1,055.45	$ 648.49	$ 42.88	$ 401.96	62%	38%	21%
2030	372.37	1,096.70	$ 1,071.87	$ 658.63	$ 39.59	$ 408.24	62%	38%	21%
2031	372.37	1,096.70	$ 1,088.54	$ 668.93	$ 36.55	$ 414.62	62%	38%	21%
2032	372.37	1,096.70	$ 1,105.49	$ 679.39	$ 33.75	$ 421.10	62%	38%	21%
2033	372.37	1,096.70	$ 1,122.70	$ 690.02	$ 31.16	$ 427.68	62%	38%	21%
2034	372.37	1,096.70	$ 1,140.20	$ 700.82	$ 28.77	$ 434.38	62%	38%	21%
	8,390.40	27,223.26	22,088.35	13,098.89	2,077.28	8,233.69	61%	39%	

A1: Current system (7.6 TCF) - Price scenario 2

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	307.43	938.13	$ 735.35	$ 450.83	$ 93.55	$ 279.52	62%	38%	18%
2018	372.37	1,096.70	$ 916.68	$ 562.80	$ 106.16	$ 348.88	62%	38%	18%
2019	372.37	1,096.70	$ 944.45	$ 579.95	$ 99.45	$ 359.50	62%	38%	19%
2020	372.37	1,096.70	$ 973.08	$ 597.63	$ 93.17	$ 370.45	62%	38%	19%
2021	372.37	1,096.70	$ 1,002.57	$ 615.84	$ 87.28	$ 381.73	62%	38%	20%
2022	372.37	1,096.70	$ 1,032.96	$ 634.60	$ 81.76	$ 393.36	62%	38%	20%
2023	372.37	1,096.70	$ 1,064.28	$ 653.94	$ 76.60	$ 405.34	62%	38%	20%
2024	372.37	1,096.70	$ 1,096.54	$ 673.86	$ 71.75	$ 417.68	62%	38%	20%
2025	372.37	1,096.70	$ 1,129.79	$ 694.40	$ 67.22	$ 430.39	62%	38%	20%
2026	372.37	1,096.70	$ 1,164.05	$ 715.55	$ 62.97	$ 443.50	62%	38%	21%
2027	372.37	1,096.70	$ 1,199.35	$ 737.35	$ 58.99	$ 457.00	62%	38%	21%
2028	372.37	1,096.70	$ 1,235.73	$ 759.81	$ 55.26	$ 470.92	62%	38%	21%
2029	372.37	1,096.70	$ 1,273.21	$ 782.96	$ 51.77	$ 485.25	62%	38%	21%
2030	372.37	1,096.70	$ 1,311.84	$ 806.81	$ 48.49	$ 500.03	62%	38%	21%
2031	372.37	1,096.70	$ 1,351.64	$ 831.39	$ 45.43	$ 515.25	62%	38%	21%
2032	372.37	1,096.70	$ 1,392.65	$ 856.71	$ 42.56	$ 530.94	62%	38%	21%
2033	372.37	1,096.70	$ 1,434.91	$ 882.81	$ 39.87	$ 547.10	62%	38%	21%
2034	372.37	1,096.70	$ 1,478.46	$ 909.70	$ 37.35	$ 563.76	62%	38%	21%
	8,390.40	27,223.26	24,918.38	14,846.43	2,206.03	9,316.17	61%	39%	

A1: Current system (7.6 TCF) - Price scenario 3

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	307.43	938.13	$ 749.97	$ 459.86	$ 95.42	$ 285.11	62%	38%	18%
2018	372.37	1,096.70	$ 952.77	$ 585.08	$ 110.37	$ 362.68	62%	38%	18%
2019	372.37	1,096.70	$ 1,000.40	$ 614.50	$ 105.38	$ 380.90	62%	38%	19%
2020	372.37	1,096.70	$ 1,050.42	$ 645.39	$ 100.62	$ 400.04	62%	38%	19%
2021	372.37	1,096.70	$ 1,102.95	$ 677.82	$ 96.06	$ 420.13	62%	38%	20%
2022	372.37	1,096.70	$ 1,158.09	$ 711.87	$ 91.72	$ 441.22	62%	38%	20%
2023	372.37	1,096.70	$ 1,216.00	$ 747.63	$ 87.57	$ 463.37	62%	38%	20%
2024	372.37	1,096.70	$ 1,276.80	$ 785.17	$ 83.61	$ 486.63	62%	38%	21%
2025	372.37	1,096.70	$ 1,340.64	$ 824.59	$ 79.82	$ 511.04	62%	38%	21%
2026	372.37	1,096.70	$ 1,407.67	$ 865.99	$ 76.21	$ 536.68	62%	38%	21%
2027	372.37	1,096.70	$ 1,478.05	$ 909.45	$ 72.76	$ 563.61	62%	38%	21%
2028	372.37	1,096.70	$ 1,551.96	$ 955.08	$ 69.46	$ 591.87	62%	38%	21%
2029	372.37	1,096.70	$ 1,629.55	$ 1,003.00	$ 66.31	$ 621.55	62%	38%	21%
2030	372.37	1,096.70	$ 1,711.03	$ 1,053.31	$ 63.31	$ 652.72	62%	38%	21%
2031	372.37	1,096.70	$ 1,796.58	$ 1,106.14	$ 60.44	$ 685.44	62%	38%	21%
2032	372.37	1,096.70	$ 1,886.41	$ 1,161.61	$ 57.70	$ 719.80	62%	38%	21%
2033	372.37	1,096.70	$ 1,980.73	$ 1,219.85	$ 55.09	$ 755.88	62%	38%	21%
2034	372.37	1,096.70	$ 2,079.77	$ 1,281.01	$ 52.59	$ 793.76	62%	38%	21%
	8,390.40	27,223.26	29,550.65	17,706.86	2,410.84	11,088.02	61%	39%	

A1: Current system (7.6 TCF) - Price scenario 4

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	307.43	938.13	$ 771.40	$ 473.09	$ 98.17	$ 293.31	62%	38%	18%
2018	372.37	1,096.70	$ 1,007.99	$ 619.18	$ 116.80	$ 383.81	62%	38%	18%
2019	372.37	1,096.70	$ 1,088.63	$ 668.98	$ 114.72	$ 414.65	62%	38%	19%
2020	372.37	1,096.70	$ 1,175.72	$ 722.76	$ 112.68	$ 447.96	62%	38%	20%
2021	372.37	1,096.70	$ 1,269.77	$ 780.84	$ 110.66	$ 483.94	62%	38%	20%
2022	372.37	1,096.70	$ 1,371.36	$ 843.56	$ 108.69	$ 522.79	62%	38%	20%
2023	372.37	1,096.70	$ 1,481.06	$ 911.31	$ 106.74	$ 564.76	62%	38%	21%
2024	372.37	1,096.70	$ 1,599.55	$ 984.47	$ 104.83	$ 610.08	62%	38%	21%
2025	372.37	1,096.70	$ 1,727.51	$ 1,063.49	$ 102.95	$ 659.02	62%	38%	21%
2026	372.37	1,096.70	$ 1,865.72	$ 1,148.83	$ 101.10	$ 711.89	62%	38%	21%
2027	372.37	1,096.70	$ 2,014.97	$ 1,241.00	$ 99.28	$ 768.98	62%	38%	21%
2028	372.37	1,096.70	$ 2,176.17	$ 1,340.54	$ 97.49	$ 830.64	62%	38%	21%
2029	372.37	1,096.70	$ 2,350.26	$ 1,448.04	$ 95.74	$ 897.23	62%	38%	22%
2030	372.37	1,096.70	$ 2,538.28	$ 1,564.14	$ 94.01	$ 969.14	62%	38%	22%
2031	372.37	1,096.70	$ 2,741.35	$ 1,689.53	$ 92.32	$ 1,046.82	62%	38%	22%
2032	372.37	1,096.70	$ 2,960.66	$ 1,824.95	$ 90.65	$ 1,130.70	62%	38%	22%
2033	372.37	1,096.70	$ 3,197.51	$ 1,971.21	$ 89.02	$ 1,221.30	62%	38%	22%
2034	372.37	1,096.70	$ 3,453.31	$ 2,129.17	$ 87.41	$ 1,319.14	62%	38%	22%
	8,390.40	27,223.26	38,972.07	23,524.58	2,809.66	14,691.71	62%	38%	

A1: Current system (7.6 TCF) - Price scenario 5

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	307.43	938.13	$ 785.69	$ 481.91	$ 100.00	$ 298.77	62%	38%	18%
2018	372.37	1,096.70	$ 1,045.67	$ 642.45	$ 121.19	$ 398.22	62%	38%	18%
2019	372.37	1,096.70	$ 1,150.23	$ 707.02	$ 121.25	$ 438.21	62%	38%	19%
2020	372.37	1,096.70	$ 1,265.26	$ 778.05	$ 121.30	$ 482.21	62%	38%	20%
2021	372.37	1,096.70	$ 1,391.78	$ 856.18	$ 121.34	$ 530.61	62%	38%	20%
2022	372.37	1,096.70	$ 1,530.96	$ 942.12	$ 121.38	$ 583.84	62%	38%	20%
2023	372.37	1,096.70	$ 1,684.06	$ 1,036.65	$ 121.42	$ 642.40	62%	38%	21%
2024	372.37	1,096.70	$ 1,852.46	$ 1,140.65	$ 121.46	$ 706.82	62%	38%	21%
2025	372.37	1,096.70	$ 2,037.71	$ 1,255.03	$ 121.49	$ 777.67	62%	38%	21%
2026	372.37	1,096.70	$ 2,241.48	$ 1,380.86	$ 121.52	$ 855.62	62%	38%	21%
2027	372.37	1,096.70	$ 2,465.63	$ 1,519.27	$ 121.54	$ 941.35	62%	38%	22%
2028	372.37	1,096.70	$ 2,712.19	$ 1,671.53	$ 121.57	$ 1,035.66	62%	38%	22%
2029	372.37	1,096.70	$ 2,983.41	$ 1,839.00	$ 121.59	$ 1,139.40	62%	38%	22%
2030	372.37	1,096.70	$ 3,281.75	$ 2,023.23	$ 121.61	$ 1,253.52	62%	38%	22%
2031	372.37	1,096.70	$ 3,609.92	$ 2,225.88	$ 121.63	$ 1,379.05	62%	38%	22%
2032	372.37	1,096.70	$ 3,970.92	$ 2,448.79	$ 121.64	$ 1,517.13	62%	38%	22%
2033	372.37	1,096.70	$ 4,368.01	$ 2,693.99	$ 121.66	$ 1,669.01	62%	38%	22%
2034	372.37	1,096.70	$ 4,804.81	$ 2,963.72	$ 121.67	$ 1,836.09	62%	38%	22%
	8,390.40	27,223.26	47,362.77	28,705.84	3,151.65	17,901.15	62%	38%	

A1: Current system (8.6 TCF) - Price scenario 1

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	307.43	938.13	$ 725.31	$ 444.63	$ 92.26	$ 275.68	62%	38%	18%
2018	372.37	1,096.70	$ 891.12	$ 547.01	$ 103.19	$ 339.10	62%	38%	18%
2019	441.37	1,255.26	$ 1,071.41	$ 658.34	$ 112.90	$ 408.06	62%	38%	19%
2020	441.37	1,255.26	$ 1,087.97	$ 668.57	$ 104.23	$ 414.40	62%	38%	19%
2021	441.37	1,255.26	$ 1,104.80	$ 678.96	$ 96.23	$ 420.84	62%	38%	20%
2022	441.37	1,255.26	$ 1,121.90	$ 689.52	$ 88.84	$ 427.38	62%	38%	20%
2023	441.37	1,255.26	$ 1,139.27	$ 700.25	$ 82.02	$ 434.02	62%	38%	20%
2024	441.37	1,255.26	$ 1,156.91	$ 711.14	$ 75.72	$ 440.77	62%	38%	20%
2025	441.37	1,255.26	$ 1,174.84	$ 722.21	$ 69.91	$ 447.63	62%	38%	21%
2026	441.37	1,255.26	$ 1,193.05	$ 733.46	$ 64.54	$ 454.59	62%	38%	21%
2027	441.37	1,255.26	$ 1,211.55	$ 744.88	$ 59.59	$ 461.67	62%	38%	21%
2028	441.37	1,255.26	$ 1,230.35	$ 756.49	$ 55.02	$ 468.86	62%	38%	21%
2029	441.37	1,255.26	$ 1,249.45	$ 768.29	$ 50.80	$ 476.17	62%	38%	21%
2030	441.37	1,255.26	$ 1,268.86	$ 780.27	$ 46.90	$ 483.59	62%	38%	21%
2031	441.37	1,255.26	$ 1,288.58	$ 792.45	$ 43.30	$ 491.13	62%	38%	21%
2032	441.37	1,255.26	$ 1,308.61	$ 804.82	$ 39.98	$ 498.79	62%	38%	21%
2033	441.37	1,255.26	$ 1,328.97	$ 817.39	$ 36.91	$ 506.58	62%	38%	21%
2034	441.37	1,255.26	$ 1,349.65	$ 830.16	$ 34.08	$ 514.49	62%	38%	21%
	9,494.40	29,760.31	25,083.43	14,948.35	2,242.82	9,379.31	61%	39%	

A1: Current system (8.6 TCF) - Price scenario 2

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	307.43	938.13	$ 735.35	$ 450.83	$ 93.55	$ 279.52	62%	38%	18%
2018	372.37	1,096.70	$ 916.68	$ 562.80	$ 106.16	$ 348.88	62%	38%	18%
2019	441.37	1,255.26	$ 1,118.28	$ 687.29	$ 117.86	$ 425.99	62%	38%	19%
2020	441.37	1,255.26	$ 1,152.16	$ 708.21	$ 110.41	$ 438.95	62%	38%	19%
2021	441.37	1,255.26	$ 1,187.07	$ 729.77	$ 103.43	$ 452.30	62%	38%	20%
2022	441.37	1,255.26	$ 1,223.04	$ 751.98	$ 96.89	$ 466.06	62%	38%	20%
2023	441.37	1,255.26	$ 1,260.11	$ 774.87	$ 90.76	$ 480.24	62%	38%	20%
2024	441.37	1,255.26	$ 1,298.30	$ 798.45	$ 85.02	$ 494.85	62%	38%	21%
2025	441.37	1,255.26	$ 1,337.65	$ 822.75	$ 79.64	$ 509.90	62%	38%	21%
2026	441.37	1,255.26	$ 1,378.20	$ 847.79	$ 74.61	$ 525.41	62%	38%	21%
2027	441.37	1,255.26	$ 1,419.98	$ 873.59	$ 69.89	$ 541.39	62%	38%	21%
2028	441.37	1,255.26	$ 1,463.03	$ 900.17	$ 65.47	$ 557.86	62%	38%	21%
2029	441.37	1,255.26	$ 1,507.39	$ 927.56	$ 61.33	$ 574.83	62%	38%	21%
2030	441.37	1,255.26	$ 1,553.10	$ 955.79	$ 57.45	$ 592.31	62%	38%	21%
2031	441.37	1,255.26	$ 1,600.21	$ 984.88	$ 53.82	$ 610.33	62%	38%	21%
2032	441.37	1,255.26	$ 1,648.74	$ 1,014.85	$ 50.41	$ 628.89	62%	38%	21%
2033	441.37	1,255.26	$ 1,698.76	$ 1,045.73	$ 47.22	$ 648.02	62%	38%	21%
2034	441.37	1,255.26	$ 1,750.29	$ 1,077.56	$ 44.24	$ 667.74	62%	38%	21%
	-	-	$ -	$ -	-	-			
	9,494.40	29,760.31	28,429.19	17,014.35	2,394.55	10,659.06	0.61	0.39	

A1: Current system (8.6 TCF) - Price scenario 3

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	307.43	938.13	$ 749.97	$ 459.86	$ 95.42	$ 285.11	62%	38%	18%
2018	372.37	1,096.70	$ 952.77	$ 585.08	$ 110.37	$ 362.68	62%	38%	18%
2019	441.37	1,255.26	$ 1,184.54	$ 728.20	$ 124.88	$ 451.34	62%	38%	19%
2020	441.37	1,255.26	$ 1,243.76	$ 764.77	$ 119.23	$ 473.99	62%	38%	20%
2021	441.37	1,255.26	$ 1,305.95	$ 803.17	$ 113.83	$ 497.78	62%	38%	20%
2022	441.37	1,255.26	$ 1,371.25	$ 843.50	$ 108.68	$ 522.75	62%	38%	20%
2023	441.37	1,255.26	$ 1,439.81	$ 885.83	$ 103.76	$ 548.98	62%	38%	21%
2024	441.37	1,255.26	$ 1,511.80	$ 930.29	$ 99.06	$ 576.51	62%	38%	21%
2025	441.37	1,255.26	$ 1,587.39	$ 976.96	$ 94.57	$ 605.43	62%	38%	21%
2026	441.37	1,255.26	$ 1,666.76	$ 1,025.97	$ 90.29	$ 635.79	62%	38%	21%
2027	441.37	1,255.26	$ 1,750.10	$ 1,077.44	$ 86.20	$ 667.66	62%	38%	21%
2028	441.37	1,255.26	$ 1,837.60	$ 1,131.47	$ 82.29	$ 701.13	62%	38%	21%
2029	441.37	1,255.26	$ 1,929.48	$ 1,188.21	$ 78.56	$ 736.28	62%	38%	22%
2030	441.37	1,255.26	$ 2,025.96	$ 1,247.78	$ 75.00	$ 773.18	62%	38%	22%
2031	441.37	1,255.26	$ 2,127.26	$ 1,310.33	$ 71.60	$ 811.93	62%	38%	22%
2032	441.37	1,255.26	$ 2,233.62	$ 1,376.01	$ 68.35	$ 852.61	62%	38%	22%
2033	441.37	1,255.26	$ 2,345.30	$ 1,444.97	$ 65.25	$ 895.33	62%	38%	22%
2034	441.37	1,255.26	$ 2,462.57	$ 1,517.38	$ 62.29	$ 940.18	62%	38%	22%
	9,494.40	29,760.31	33,906.74	20,396.74	2,636.02	12,754.22	62%	38%	

A1: Current system (8.6 TCF) - Price scenario 4

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 111.63	$ 66.09	$ 41.32			
2007	104.77	695.94	$ 167.85	$ 142.45	$ 76.67	$ 20.40			
2008	116.31	807.33	$ 226.22	$ 178.50	$ 87.33	$ 42.73			
2009	107.78	487.17	$ 154.32	$ 92.05	$ 40.94	$ 57.27	62%	38%	3%
2010	124.78	429.64	$ 285.43	$ 173.00	$ 69.96	$ 107.43	62%	38%	6%
2011	131.56	555.58	$ 409.14	$ 249.40	$ 91.68	$ 154.75	62%	38%	9%
2012	147.10	568.39	$ 484.79	$ 296.11	$ 98.95	$ 183.68	62%	38%	12%
2013	163.74	585.36	$ 526.27	$ 321.72	$ 97.74	$ 199.55	62%	38%	14%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	15%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	16%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	17%
2017	307.43	938.13	$ 771.40	$ 473.09	$ 98.17	$ 293.31	62%	38%	18%
2018	372.37	1,096.70	$ 1,007.99	$ 619.18	$ 116.80	$ 383.81	62%	38%	18%
2019	441.37	1,255.26	$ 1,289.00	$ 792.71	$ 135.94	$ 491.29	62%	38%	19%
2020	441.37	1,255.26	$ 1,392.12	$ 856.38	$ 133.51	$ 530.73	62%	38%	20%
2021	441.37	1,255.26	$ 1,503.49	$ 925.15	$ 131.12	$ 573.33	62%	38%	20%
2022	441.37	1,255.26	$ 1,623.76	$ 999.42	$ 128.77	$ 619.34	62%	38%	21%
2023	441.37	1,255.26	$ 1,753.67	$ 1,079.64	$ 126.46	$ 669.03	62%	38%	21%
2024	441.37	1,255.26	$ 1,893.96	$ 1,166.27	$ 124.19	$ 722.69	62%	38%	21%
2025	441.37	1,255.26	$ 2,045.47	$ 1,259.83	$ 121.95	$ 780.64	62%	38%	21%
2026	441.37	1,255.26	$ 2,209.11	$ 1,360.88	$ 119.76	$ 843.24	62%	38%	22%
2027	441.37	1,255.26	$ 2,385.84	$ 1,470.01	$ 117.60	$ 910.83	62%	38%	22%
2028	441.37	1,255.26	$ 2,576.71	$ 1,587.87	$ 115.48	$ 983.84	62%	38%	22%
2029	441.37	1,255.26	$ 2,782.85	$ 1,715.16	$ 113.40	$ 1,062.69	62%	38%	22%
2030	441.37	1,255.26	$ 3,005.47	$ 1,852.63	$ 111.35	$ 1,147.84	62%	38%	22%
2031	441.37	1,255.26	$ 3,245.91	$ 2,001.10	$ 109.34	$ 1,239.81	62%	38%	22%
2032	441.37	1,255.26	$ 3,505.58	$ 2,161.45	$ 107.37	$ 1,339.14	62%	38%	22%
2033	441.37	1,255.26	$ 3,786.03	$ 2,334.62	$ 105.43	$ 1,446.41	62%	38%	22%
2034	441.37	1,255.26	$ 4,088.91	$ 2,521.65	$ 103.52	$ 1,562.26	62%	38%	22%
	9,494.40	29,760.31	45,048.12	27,276.55	3,106.56	17,015.80	62%	38%	

A1: Current system (8.6 TCF) - Price scenario 5

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)		NCF		PV(NCF)@10%		Gov Share		Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD		MMUSD		MMUSD		MMUSD			%	
2001				$	-600.00	$	-572.08						
2002				$	-0.18	$	-0.15						
2003				$	-0.28	$	-0.22						
2004	52.63	294.32	$ 64.80	$	56.36	$	40.37	$	3.24				
2005	88.89	531.10	$ 124.35	$	113.01	$	73.60	$	6.22				
2006	102.09	701.30	$ 157.96	$	111.63	$	66.09	$	41.32				
2007	104.77	695.94	$ 167.85	$	142.45	$	76.67	$	20.40				
2008	116.31	807.33	$ 226.22	$	178.50	$	87.33	$	42.73				
2009	107.78	487.17	$ 154.32	$	92.05	$	40.94	$	57.27		62%	38%	3%
2010	124.78	429.64	$ 285.43	$	173.00	$	69.96	$	107.43		62%	38%	6%
2011	131.56	555.58	$ 409.14	$	249.40	$	91.68	$	154.75		62%	38%	9%
2012	147.10	568.39	$ 484.79	$	296.11	$	98.95	$	183.68		62%	38%	12%
2013	163.74	585.36	$ 526.27	$	321.72	$	97.74	$	199.55		62%	38%	14%
2014	176.59	584.60	$ 559.88	$	342.47	$	94.59	$	212.40		62%	38%	15%
2015	190.30	621.02	$ 447.39	$	273.02	$	68.55	$	169.38		62%	38%	16%
2016	246.10	779.57	$ 572.45	$	350.24	$	79.94	$	217.21		62%	38%	17%
2017	307.43	938.13	$ 785.69	$	481.91	$	100.00	$	298.77		62%	38%	18%
2018	372.37	1,096.70	$ 1,045.67	$	642.45	$	121.19	$	398.22		62%	38%	18%
2019	441.37	1,255.26	$ 1,361.94	$	837.75	$	143.66	$	519.19		62%	38%	19%
2020	441.37	1,255.26	$ 1,498.14	$	921.85	$	143.72	$	571.29		62%	38%	20%
2021	441.37	1,255.26	$ 1,647.95	$	1,014.36	$	143.76	$	628.59		62%	38%	20%
2022	441.37	1,255.26	$ 1,812.74	$	1,116.12	$	143.80	$	691.62		62%	38%	21%
2023	441.37	1,255.26	$ 1,994.02	$	1,228.06	$	143.84	$	760.96		62%	38%	21%
2024	441.37	1,255.26	$ 2,193.42	$	1,351.19	$	143.88	$	837.23		62%	38%	21%
2025	441.37	1,255.26	$ 2,412.76	$	1,486.63	$	143.91	$	921.13		62%	38%	22%
2026	441.37	1,255.26	$ 2,654.04	$	1,635.62	$	143.94	$	1,013.42		62%	38%	22%
2027	441.37	1,255.26	$ 2,919.44	$	1,799.51	$	143.96	$	1,114.94		62%	38%	22%
2028	441.37	1,255.26	$ 3,211.39	$	1,979.78	$	143.99	$	1,226.61		62%	38%	22%
2029	441.37	1,255.26	$ 3,532.53	$	2,178.08	$	144.01	$	1,349.44		62%	38%	22%
2030	441.37	1,255.26	$ 3,885.78	$	2,396.22	$	144.03	$	1,484.56		62%	38%	22%
2031	441.37	1,255.26	$ 4,274.36	$	2,636.16	$	144.04	$	1,633.19		62%	38%	23%
2032	441.37	1,255.26	$ 4,701.79	$	2,900.11	$	144.06	$	1,796.69		62%	38%	23%
2033	441.37	1,255.26	$ 5,171.97	$	3,190.44	$	144.07	$	1,976.53		62%	38%	23%
2034	441.37	1,255.26	$ 5,689.17	$	3,509.81	$	144.09	$	2,174.36		62%	38%	23%
	9,494.40	29,760.31	54,973.63		33,405.55		3,510.35		20,812.31		62%	38%	

A1: Alternative system (4.6 TCF) - Price scenario 1

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 294.02	$ 73.82	$ 148.38	66%	34%	17%
2016	190.30	621.02	$ 443.10	$ 270.37	$ 61.71	$ 167.74	62%	38%	18%
2017	190.30	621.02	$ 449.97	$ 274.61	$ 56.98	$ 170.36	62%	38%	18%
2018	190.30	621.02	$ 456.95	$ 278.92	$ 52.61	$ 173.03	62%	38%	18%
2019	190.30	621.02	$ 464.05	$ 283.30	$ 48.58	$ 175.75	62%	38%	19%
2020	190.30	621.02	$ 471.25	$ 287.75	$ 44.86	$ 178.50	62%	38%	19%
2021	190.30	621.02	$ 478.57	$ 292.27	$ 41.42	$ 181.30	62%	38%	19%
2022	190.30	621.02	$ 486.01	$ 296.86	$ 38.25	$ 184.15	62%	38%	19%
2023	190.30	621.02	$ 493.57	$ 301.53	$ 35.32	$ 187.04	62%	38%	19%
2024	190.30	621.02	$ 501.25	$ 306.27	$ 32.61	$ 189.98	62%	38%	20%
2025	190.30	621.02	$ 509.05	$ 287.16	$ 27.80	$ 216.89	57%	43%	20%
2026	190.30	621.02	$ 516.98	$ 291.68	$ 25.67	$ 220.30	57%	43%	20%
2027	190.30	621.02	$ 525.03	$ 296.27	$ 23.70	$ 223.76	57%	43%	20%
2028	190.30	621.02	$ 533.22	$ 300.93	$ 21.89	$ 227.28	57%	43%	20%
2029	190.30	621.02	$ 541.53	$ 305.67	$ 20.21	$ 230.86	57%	43%	20%
2030	190.30	621.02	$ 549.99	$ 310.49	$ 18.66	$ 234.49	57%	43%	20%
2031	190.30	621.02	$ 558.57	$ 315.39	$ 17.23	$ 238.19	57%	43%	20%
2032	190.30	621.02	$ 567.30	$ 320.36	$ 15.91	$ 241.94	57%	43%	20%
2033	190.30	621.02	$ 576.17	$ 325.42	$ 14.70	$ 245.75	57%	43%	20%
2034	190.30	621.02	$ 585.18	$ 330.55	$ 13.57	$ 249.63	57%	43%	20%
	-	-	$ -	$ -	-	-			
	5,122.30	18,661.04	13,316.13	7,643.80	1,596.50	4,916.56	61%	39%	

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A1: Alternative system (4.6 TCF) - Price scenario 2

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	190.30	621.02	$ 443.10	$ 270.37	$ 61.71	$ 167.74	62%	38%	18%
2017	190.30	621.02	$ 456.17	$ 278.44	$ 57.78	$ 172.74	62%	38%	18%
2018	190.30	621.02	$ 470.01	$ 286.98	$ 54.14	$ 178.03	62%	38%	18%
2019	190.30	621.02	$ 484.27	$ 295.78	$ 50.72	$ 183.48	62%	38%	19%
2020	190.30	621.02	$ 498.96	$ 304.86	$ 47.53	$ 189.10	62%	38%	19%
2021	190.30	621.02	$ 514.10	$ 314.21	$ 44.53	$ 194.89	62%	38%	19%
2022	190.30	621.02	$ 529.70	$ 323.84	$ 41.72	$ 200.86	62%	38%	19%
2023	190.30	621.02	$ 545.77	$ 333.76	$ 39.09	$ 207.01	62%	38%	19%
2024	190.30	621.02	$ 562.34	$ 343.99	$ 36.63	$ 213.34	62%	38%	20%
2025	190.30	621.02	$ 579.41	$ 327.26	$ 31.68	$ 247.15	57%	43%	20%
2026	190.30	621.02	$ 597.00	$ 337.29	$ 29.68	$ 254.71	57%	43%	20%
2027	190.30	621.02	$ 615.12	$ 347.62	$ 27.81	$ 262.50	57%	43%	20%
2028	190.30	621.02	$ 633.80	$ 358.27	$ 26.06	$ 270.53	57%	43%	20%
2029	190.30	621.02	$ 653.05	$ 369.24	$ 24.41	$ 278.81	57%	43%	20%
2030	190.30	621.02	$ 672.88	$ 380.54	$ 22.87	$ 287.34	57%	43%	20%
2031	190.30	621.02	$ 693.32	$ 392.19	$ 21.43	$ 296.13	57%	43%	20%
2032	190.30	621.02	$ 714.38	$ 404.20	$ 20.08	$ 305.18	57%	43%	20%
2033	190.30	621.02	$ 736.09	$ 416.57	$ 18.81	$ 314.52	57%	43%	20%
2034	190.30	621.02	$ 758.45	$ 429.32	$ 17.62	$ 324.13	57%	43%	20%
	5,122.30	18,661.04	14,766.31	8,461.73	1,653.85	5,548.81	60%	40%	

B1: Deterministic calculation table, Alternative system (4.6 TCF) - Price scenario 3

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	190.30	621.02	$ 443.10	$ 270.37	$ 61.71	$ 167.74	62%	38%	18%
2017	190.30	621.02	$ 465.26	$ 284.05	$ 58.94	$ 176.21	62%	38%	18%
2018	190.30	621.02	$ 488.52	$ 298.41	$ 56.29	$ 185.11	62%	38%	18%
2019	190.30	621.02	$ 512.95	$ 313.50	$ 53.76	$ 194.45	62%	38%	19%
2020	190.30	621.02	$ 538.59	$ 329.33	$ 51.34	$ 204.26	62%	38%	19%
2021	190.30	621.02	$ 565.52	$ 345.96	$ 49.03	$ 214.56	62%	38%	19%
2022	190.30	621.02	$ 593.80	$ 363.42	$ 46.82	$ 225.38	62%	38%	19%
2023	190.30	621.02	$ 623.49	$ 381.76	$ 44.71	$ 236.74	62%	38%	20%
2024	190.30	621.02	$ 654.67	$ 370.16	$ 39.41	$ 279.51	57%	43%	20%
2025	190.30	621.02	$ 687.40	$ 388.82	$ 37.64	$ 293.58	57%	43%	20%
2026	190.30	621.02	$ 721.77	$ 408.41	$ 35.94	$ 308.36	57%	43%	20%
2027	190.30	621.02	$ 757.86	$ 428.98	$ 34.32	$ 323.88	57%	43%	20%
2028	190.30	621.02	$ 795.75	$ 450.58	$ 32.77	$ 340.17	57%	43%	20%
2029	190.30	621.02	$ 835.54	$ 473.26	$ 31.29	$ 357.28	57%	43%	20%
2030	190.30	621.02	$ 877.31	$ 497.07	$ 29.88	$ 375.25	57%	43%	20%
2031	190.30	621.02	$ 921.18	$ 522.07	$ 28.53	$ 394.11	57%	43%	20%
2032	190.30	621.02	$ 967.24	$ 548.33	$ 27.24	$ 413.91	57%	43%	20%
2033	190.30	621.02	$ 1,015.60	$ 575.89	$ 26.01	$ 434.71	57%	43%	20%
2034	190.30	621.02	$ 1,066.38	$ 604.84	$ 24.83	$ 456.54	57%	43%	20%
	-	-	$ -	$ -	-	-			
	5,122.30	18,661.04	17,140.33	9,802.20	1,750.00	6,582.36	60%	40%	

B1: Deterministic calculation table, Alternative system (4.6 TCF) - Price scenario 4

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	190.30	621.02	$ 443.10	$ 270.37	$ 61.71	$ 167.74	62%	38%	18%
2017	190.30	621.02	$ 478.55	$ 292.26	$ 60.64	$ 181.30	62%	38%	18%
2018	190.30	621.02	$ 516.84	$ 315.90	$ 59.59	$ 195.94	62%	38%	18%
2019	190.30	621.02	$ 558.18	$ 341.43	$ 58.55	$ 211.75	62%	38%	19%
2020	190.30	621.02	$ 602.84	$ 369.00	$ 57.53	$ 228.84	62%	38%	19%
2021	190.30	621.02	$ 651.06	$ 398.78	$ 56.52	$ 247.28	62%	38%	19%
2022	190.30	621.02	$ 703.15	$ 430.94	$ 55.52	$ 267.20	62%	38%	20%
2023	190.30	621.02	$ 759.40	$ 429.86	$ 50.35	$ 324.54	57%	43%	20%
2024	190.30	621.02	$ 820.15	$ 464.49	$ 49.46	$ 350.67	57%	43%	20%
2025	190.30	621.02	$ 885.77	$ 501.89	$ 48.58	$ 378.88	57%	43%	20%
2026	190.30	621.02	$ 956.63	$ 542.28	$ 47.72	$ 409.35	57%	43%	20%
2027	190.30	621.02	$ 1,033.16	$ 585.90	$ 46.87	$ 442.26	57%	43%	20%
2028	190.30	621.02	$ 1,115.81	$ 633.01	$ 46.04	$ 477.80	57%	43%	20%
2029	190.30	621.02	$ 1,205.07	$ 683.89	$ 45.22	$ 516.18	57%	43%	20%
2030	190.30	621.02	$ 1,301.48	$ 738.84	$ 44.41	$ 557.64	57%	43%	20%
2031	190.30	621.02	$ 1,405.60	$ 798.19	$ 43.61	$ 602.41	57%	43%	20%
2032	190.30	621.02	$ 1,518.05	$ 862.29	$ 42.83	$ 650.76	57%	43%	21%
2033	190.30	621.02	$ 1,639.49	$ 931.51	$ 42.07	$ 702.98	57%	43%	21%
2034	190.30	621.02	$ 1,770.65	$ 1,006.27	$ 41.31	$ 759.38	57%	43%	21%
	5,122.30	18,661.04	21,973.38	12,544.10	1,938.07	8,673.50	59%	41%	

B1: Deterministic calculation table, Alternative system (4.6 TCF) - Price scenario 5

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	190.30	621.02	$ 443.10	$ 270.37	$ 61.71	$ 167.74	62%	38%	18%
2017	190.30	621.02	$ 487.41	$ 297.73	$ 61.78	$ 184.69	62%	38%	18%
2018	190.30	621.02	$ 536.15	$ 327.83	$ 61.84	$ 203.33	62%	38%	18%
2019	190.30	621.02	$ 589.77	$ 360.93	$ 61.90	$ 223.84	62%	38%	19%
2020	190.30	621.02	$ 648.75	$ 397.35	$ 61.95	$ 246.40	62%	38%	19%
2021	190.30	621.02	$ 713.62	$ 437.41	$ 61.99	$ 271.21	62%	38%	19%
2022	190.30	621.02	$ 784.98	$ 481.48	$ 62.03	$ 298.51	62%	38%	20%
2023	190.30	621.02	$ 863.48	$ 489.19	$ 57.30	$ 369.30	57%	43%	20%
2024	190.30	621.02	$ 949.83	$ 538.40	$ 57.33	$ 406.43	57%	43%	20%
2025	190.30	621.02	$ 1,044.81	$ 592.54	$ 57.36	$ 447.27	57%	43%	20%
2026	190.30	621.02	$ 1,149.30	$ 652.10	$ 57.39	$ 492.20	57%	43%	20%
2027	190.30	621.02	$ 1,264.23	$ 717.61	$ 57.41	$ 541.62	57%	43%	20%
2028	190.30	621.02	$ 1,390.65	$ 789.67	$ 57.43	$ 595.98	57%	43%	20%
2029	190.30	621.02	$ 1,529.71	$ 868.94	$ 57.45	$ 655.78	57%	43%	21%
2030	190.30	621.02	$ 1,682.68	$ 956.13	$ 57.47	$ 721.55	57%	43%	21%
2031	190.30	621.02	$ 1,850.95	$ 1,052.04	$ 57.49	$ 793.91	57%	43%	21%
2032	190.30	621.02	$ 2,036.05	$ 1,157.55	$ 57.50	$ 873.50	57%	43%	21%
2033	190.30	621.02	$ 2,239.65	$ 1,273.60	$ 57.51	$ 961.05	57%	43%	21%
2034	190.30	621.02	$ 2,463.62	$ 1,401.26	$ 57.53	$ 1,057.36	57%	43%	21%
	5,122.30	18,661.04	26,277.16	15,009.14	2,101.90	10,512.25	59%	41%	

B1: Deterministic calculation table, Alternative system (5.6 TCF) - Price scenario 1

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	246.10	779.57	$ 581.32	$ 355.71	$ 73.81	$ 220.60	62%	38%	18%
2018	246.10	779.57	$ 590.33	$ 361.28	$ 68.15	$ 224.05	62%	38%	19%
2019	246.10	779.57	$ 599.48	$ 366.93	$ 62.92	$ 227.55	62%	38%	19%
2020	246.10	779.57	$ 608.78	$ 372.67	$ 58.10	$ 231.11	62%	38%	19%
2021	246.10	779.57	$ 618.23	$ 378.51	$ 53.64	$ 234.72	62%	38%	20%
2022	246.10	779.57	$ 627.83	$ 354.86	$ 45.72	$ 267.97	57%	43%	20%
2023	246.10	779.57	$ 637.58	$ 360.42	$ 42.22	$ 272.16	57%	43%	20%
2024	246.10	779.57	$ 647.49	$ 366.07	$ 38.98	$ 276.42	57%	43%	20%
2025	246.10	779.57	$ 657.56	$ 371.81	$ 35.99	$ 280.75	57%	43%	20%
2026	246.10	779.57	$ 667.79	$ 377.64	$ 33.23	$ 285.15	57%	43%	20%
2027	246.10	779.57	$ 678.18	$ 383.56	$ 30.69	$ 289.62	57%	43%	20%
2028	246.10	779.57	$ 688.74	$ 389.58	$ 28.33	$ 294.16	57%	43%	20%
2029	246.10	779.57	$ 699.47	$ 395.70	$ 26.16	$ 298.77	57%	43%	20%
2030	246.10	779.57	$ 710.38	$ 401.92	$ 24.16	$ 303.46	57%	43%	20%
2031	246.10	779.57	$ 721.46	$ 408.23	$ 22.31	$ 308.23	57%	43%	20%
2032	246.10	779.57	$ 732.72	$ 414.65	$ 20.60	$ 313.07	57%	43%	20%
2033	246.10	779.57	$ 744.16	$ 421.17	$ 19.02	$ 317.99	57%	43%	20%
2034	246.10	779.57	$ 755.79	$ 427.80	$ 17.56	$ 322.99	57%	43%	20%
	6,182.40	21,673.47	16,148.12	9,205.76	1,761.07	6,186.59	60%	40%	

B1: Deterministic calculation table, Alternative system (5.6 TCF) - Price scenario 2

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	%		
2001				$ -572.08				
2002				$ -0.15				
2003				$ -0.22				
2004	52.63	294.32	$ 64.80	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 106.57	$ 160.90	66%	34%	13%
2013	163.74	585.36	$ 526.27	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 79.94	$ 217.21	62%	38%	18%
2017	246.10	779.57	$ 589.34	$ 74.84	$ 223.67	62%	38%	18%
2018	246.10	779.57	$ 607.21	$ 70.12	$ 230.51	62%	38%	19%
2019	246.10	779.57	$ 625.63	$ 65.69	$ 237.55	62%	38%	19%
2020	246.10	779.57	$ 644.60	$ 61.55	$ 244.81	62%	38%	19%
2021	246.10	779.57	$ 664.15	$ 57.66	$ 252.29	62%	38%	20%
2022	246.10	779.57	$ 684.30	$ 49.87	$ 292.25	57%	43%	20%
2023	246.10	779.57	$ 705.06	$ 46.72	$ 301.18	57%	43%	20%
2024	246.10	779.57	$ 726.45	$ 43.77	$ 310.37	57%	43%	20%
2025	246.10	779.57	$ 748.50	$ 41.01	$ 319.85	57%	43%	20%
2026	246.10	779.57	$ 771.21	$ 38.42	$ 329.62	57%	43%	20%
2027	246.10	779.57	$ 794.62	$ 35.99	$ 339.69	57%	43%	20%
2028	246.10	779.57	$ 818.74	$ 33.72	$ 350.06	57%	43%	20%
2029	246.10	779.57	$ 843.59	$ 31.59	$ 360.75	57%	43%	20%
2030	246.10	779.57	$ 869.21	$ 29.60	$ 371.76	57%	43%	20%
2031	246.10	779.57	$ 895.60	$ 27.73	$ 383.11	57%	43%	20%
2032	246.10	779.57	$ 922.80	$ 25.98	$ 394.80	57%	43%	21%
2033	246.10	779.57	$ 950.82	$ 16.23	$ 586.51	38%	62%	21%
2034	246.10	779.57	$ 979.70	$ 15.20	$ 604.42	38%	62%	21%
	6,182.40	21,673.47	18,022.39	1,817.57	7,373.79	57%	43%	

B1: Deterministic calculation table, Alternative system (5.6 TCF) - Price scenario 3

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	246.10	779.57	$ 601.07	$ 367.91	$ 76.34	$ 228.16	62%	38%	18%
2018	246.10	779.57	$ 631.13	$ 386.47	$ 72.90	$ 239.66	62%	38%	19%
2019	246.10	779.57	$ 662.68	$ 405.96	$ 69.62	$ 251.73	62%	38%	19%
2020	246.10	779.57	$ 695.82	$ 426.42	$ 66.48	$ 264.40	62%	38%	19%
2021	246.10	779.57	$ 730.61	$ 447.90	$ 63.48	$ 277.71	62%	38%	20%
2022	246.10	779.57	$ 767.14	$ 434.27	$ 55.95	$ 327.87	57%	43%	20%
2023	246.10	779.57	$ 805.49	$ 456.13	$ 53.43	$ 344.36	57%	43%	20%
2024	246.10	779.57	$ 845.77	$ 479.09	$ 51.01	$ 361.68	57%	43%	20%
2025	246.10	779.57	$ 888.06	$ 503.19	$ 48.71	$ 379.87	57%	43%	20%
2026	246.10	779.57	$ 932.46	$ 528.50	$ 46.51	$ 398.96	57%	43%	20%
2027	246.10	779.57	$ 979.08	$ 555.08	$ 44.41	$ 419.01	57%	43%	21%
2028	246.10	779.57	$ 1,028.04	$ 388.65	$ 28.27	$ 634.38	38%	62%	21%
2029	246.10	779.57	$ 1,079.44	$ 408.19	$ 26.99	$ 666.25	38%	62%	21%
2030	246.10	779.57	$ 1,133.41	$ 428.70	$ 25.77	$ 699.72	38%	62%	21%
2031	246.10	779.57	$ 1,190.08	$ 450.23	$ 24.60	$ 734.85	38%	62%	21%
2032	246.10	779.57	$ 1,249.59	$ 472.84	$ 23.49	$ 771.74	38%	62%	21%
2033	246.10	779.57	$ 1,312.07	$ 496.59	$ 22.42	$ 810.48	38%	62%	21%
2034	246.10	779.57	$ 1,377.67	$ 521.51	$ 21.41	$ 851.16	38%	62%	21%
	6,182.40	21,673.47	21,090.46	10,454.88	1,881.26	9,879.80	51%	49%	

B1: Deterministic calculation table, Alternative system (5.6 TCF) - Price scenario 4

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	246.10	779.57	$ 618.25	$ 378.52	$ 78.54	$ 234.73	62%	38%	18%
2018	246.10	779.57	$ 667.71	$ 409.06	$ 77.16	$ 253.65	62%	38%	19%
2019	246.10	779.57	$ 721.12	$ 442.04	$ 75.81	$ 274.08	62%	38%	19%
2020	246.10	779.57	$ 778.81	$ 477.67	$ 74.47	$ 296.15	62%	38%	20%
2021	246.10	779.57	$ 841.12	$ 476.44	$ 67.52	$ 359.68	57%	43%	20%
2022	246.10	779.57	$ 908.41	$ 514.79	$ 66.33	$ 388.61	57%	43%	20%
2023	246.10	779.57	$ 981.08	$ 556.22	$ 65.15	$ 419.86	57%	43%	20%
2024	246.10	779.57	$ 1,059.57	$ 600.95	$ 63.99	$ 453.61	57%	43%	20%
2025	246.10	779.57	$ 1,144.33	$ 649.27	$ 62.85	$ 490.06	57%	43%	21%
2026	246.10	779.57	$ 1,235.88	$ 467.63	$ 41.15	$ 763.24	38%	62%	21%
2027	246.10	779.57	$ 1,334.75	$ 505.20	$ 40.42	$ 824.54	38%	62%	21%
2028	246.10	779.57	$ 1,441.53	$ 545.78	$ 39.69	$ 890.75	38%	62%	21%
2029	246.10	779.57	$ 1,556.85	$ 589.60	$ 38.98	$ 962.25	38%	62%	21%
2030	246.10	779.57	$ 1,681.40	$ 636.93	$ 38.28	$ 1,039.47	38%	62%	21%
2031	246.10	779.57	$ 1,815.91	$ 688.05	$ 37.60	$ 1,122.86	38%	62%	21%
2032	246.10	779.57	$ 1,961.18	$ 743.25	$ 36.92	$ 1,212.93	38%	62%	21%
2033	246.10	779.57	$ 2,118.08	$ 802.87	$ 36.26	$ 1,310.21	38%	62%	21%
2034	246.10	779.57	$ 2,287.52	$ 867.26	$ 35.60	$ 1,415.26	38%	62%	21%
	6,182.40	21,673.47	27,334.32	12,648.77	2,036.20	13,929.77	48%	52%	

B1: Deterministic calculation table, Alternative system (5.6 TCF) - Price scenario 5

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	246.10	779.57	$ 629.70	$ 385.59	$ 80.01	$ 239.11	62%	38%	18%
2018	246.10	779.57	$ 692.66	$ 424.47	$ 80.07	$ 263.19	62%	38%	19%
2019	246.10	779.57	$ 761.93	$ 467.24	$ 80.13	$ 289.69	62%	38%	19%
2020	246.10	779.57	$ 838.12	$ 514.29	$ 80.18	$ 318.83	62%	38%	20%
2021	246.10	779.57	$ 921.94	$ 522.50	$ 74.05	$ 394.43	57%	43%	20%
2022	246.10	779.57	$ 1,014.13	$ 575.05	$ 74.09	$ 434.08	57%	43%	20%
2023	246.10	779.57	$ 1,115.54	$ 632.86	$ 74.13	$ 477.68	57%	43%	20%
2024	246.10	779.57	$ 1,227.10	$ 696.45	$ 74.16	$ 525.65	57%	43%	21%
2025	246.10	779.57	$ 1,349.81	$ 510.93	$ 49.46	$ 833.88	38%	62%	21%
2026	246.10	779.57	$ 1,484.79	$ 562.22	$ 49.48	$ 917.57	38%	62%	21%
2027	246.10	779.57	$ 1,633.27	$ 618.64	$ 49.49	$ 1,009.63	38%	62%	21%
2028	246.10	779.57	$ 1,796.59	$ 680.71	$ 49.51	$ 1,110.89	38%	62%	21%
2029	246.10	779.57	$ 1,976.25	$ 748.98	$ 49.52	$ 1,222.28	38%	62%	21%
2030	246.10	779.57	$ 2,173.88	$ 824.07	$ 49.53	$ 1,344.80	38%	62%	21%
2031	246.10	779.57	$ 2,391.27	$ 906.68	$ 49.54	$ 1,479.59	38%	62%	21%
2032	246.10	779.57	$ 2,630.39	$ 997.55	$ 49.55	$ 1,627.84	38%	62%	21%
2033	246.10	779.57	$ 2,893.43	$ 1,097.50	$ 49.56	$ 1,790.93	38%	62%	21%
2034	246.10	779.57	$ 3,182.78	$ 1,207.45	$ 49.57	$ 1,970.32	38%	62%	21%
	6,182.40	21,673.47	32,894.43	14,670.44	2,171.50	17,468.22	46%	54%	

B1: Deterministic calculation table, Alternative system (6.6 TCF) - Price scenario 1

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	307.43	938.13	$ 725.31	$ 444.63	$ 92.26	$ 275.68	62%	38%	18%
2018	307.43	938.13	$ 736.54	$ 451.56	$ 85.18	$ 279.98	62%	38%	19%
2019	307.43	938.13	$ 747.95	$ 458.61	$ 78.65	$ 284.34	62%	38%	19%
2020	307.43	938.13	$ 759.54	$ 465.76	$ 72.61	$ 288.77	62%	38%	20%
2021	307.43	938.13	$ 771.31	$ 436.65	$ 61.88	$ 329.66	57%	43%	20%
2022	307.43	938.13	$ 783.27	$ 443.46	$ 57.14	$ 334.81	57%	43%	20%
2023	307.43	938.13	$ 795.42	$ 450.39	$ 52.75	$ 340.03	57%	43%	20%
2024	307.43	938.13	$ 807.77	$ 457.43	$ 48.71	$ 345.34	57%	43%	20%
2025	307.43	938.13	$ 820.31	$ 464.58	$ 44.97	$ 350.74	57%	43%	21%
2026	307.43	938.13	$ 833.06	$ 314.56	$ 27.68	$ 513.50	38%	62%	21%
2027	307.43	938.13	$ 846.01	$ 319.48	$ 25.56	$ 521.53	38%	62%	21%
2028	307.43	938.13	$ 859.17	$ 324.48	$ 23.60	$ 529.68	38%	62%	21%
2029	307.43	938.13	$ 872.54	$ 329.56	$ 21.79	$ 537.97	38%	62%	21%
2030	307.43	938.13	$ 886.12	$ 334.73	$ 20.12	$ 546.40	38%	62%	21%
2031	307.43	938.13	$ 899.93	$ 339.97	$ 18.58	$ 554.95	38%	62%	21%
2032	307.43	938.13	$ 913.95	$ 345.30	$ 17.15	$ 563.65	38%	62%	21%
2033	307.43	938.13	$ 928.20	$ 350.72	$ 15.84	$ 572.49	38%	62%	21%
2034	307.43	938.13	$ 942.69	$ 356.22	$ 14.62	$ 581.47	38%	62%	21%
	-	-	$ -	$ -	-	-			
	7,286.40	24,527.65	19,109.94	9,385.36	1,838.57	8,968.81	51%	49%	

B1: Deterministic calculation table, Alternative system (6.6 TCF) - Price scenario 2

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	307.43	938.13	$ 735.35	$ 450.83	$ 93.55	$ 279.52	62%	38%	18%
2018	307.43	938.13	$ 757.64	$ 464.59	$ 87.64	$ 288.05	62%	38%	19%
2019	307.43	938.13	$ 780.61	$ 478.77	$ 82.10	$ 296.83	62%	38%	19%
2020	307.43	938.13	$ 804.27	$ 493.39	$ 76.92	$ 305.88	62%	38%	20%
2021	307.43	938.13	$ 828.66	$ 469.33	$ 66.52	$ 354.32	57%	43%	20%
2022	307.43	938.13	$ 853.78	$ 483.66	$ 62.32	$ 365.13	57%	43%	20%
2023	307.43	938.13	$ 879.68	$ 498.42	$ 58.38	$ 376.26	57%	43%	20%
2024	307.43	938.13	$ 906.36	$ 513.62	$ 54.69	$ 387.73	57%	43%	21%
2025	307.43	938.13	$ 933.85	$ 352.86	$ 34.16	$ 575.99	38%	62%	21%
2026	307.43	938.13	$ 962.18	$ 363.63	$ 32.00	$ 593.55	38%	62%	21%
2027	307.43	938.13	$ 991.37	$ 374.72	$ 29.98	$ 611.65	38%	62%	21%
2028	307.43	938.13	$ 1,021.45	$ 386.15	$ 28.08	$ 630.30	38%	62%	21%
2029	307.43	938.13	$ 1,052.44	$ 397.93	$ 26.31	$ 649.51	38%	62%	21%
2030	307.43	938.13	$ 1,084.38	$ 410.07	$ 24.65	$ 669.32	38%	62%	21%
2031	307.43	938.13	$ 1,117.29	$ 422.57	$ 23.09	$ 689.72	38%	62%	21%
2032	307.43	938.13	$ 1,151.21	$ 435.46	$ 21.63	$ 710.75	38%	62%	21%
2033	307.43	938.13	$ 1,186.16	$ 448.74	$ 20.26	$ 732.42	38%	62%	21%
2034	307.43	938.13	$ 1,222.17	$ 462.42	$ 18.98	$ 754.75	38%	62%	21%
	7,286.40	24,527.65	21,449.68	10,204.41	1,900.74	10,489.50	49%	51%	

B1: Deterministic calculation table, Alternative system (6.6 TCF) - Price scenario 3

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	307.43	938.13	$ 749.97	$ 459.86	$ 95.42	$ 285.11	62%	38%	18%
2018	307.43	938.13	$ 787.47	$ 483.01	$ 91.11	$ 299.46	62%	38%	19%
2019	307.43	938.13	$ 826.85	$ 507.33	$ 87.00	$ 314.52	62%	38%	19%
2020	307.43	938.13	$ 868.19	$ 532.86	$ 83.07	$ 330.33	62%	38%	20%
2021	307.43	938.13	$ 911.60	$ 516.61	$ 73.22	$ 389.99	57%	43%	20%
2022	307.43	938.13	$ 957.18	$ 542.59	$ 69.91	$ 409.59	57%	43%	20%
2023	307.43	938.13	$ 1,005.04	$ 569.87	$ 66.75	$ 430.17	57%	43%	21%
2024	307.43	938.13	$ 1,055.29	$ 399.01	$ 42.49	$ 651.28	38%	62%	21%
2025	307.43	938.13	$ 1,108.05	$ 419.06	$ 40.57	$ 683.99	38%	62%	21%
2026	307.43	938.13	$ 1,163.45	$ 440.11	$ 38.73	$ 718.34	38%	62%	21%
2027	307.43	938.13	$ 1,221.63	$ 462.22	$ 36.98	$ 754.41	38%	62%	21%
2028	307.43	938.13	$ 1,282.71	$ 485.43	$ 35.30	$ 792.28	38%	62%	21%
2029	307.43	938.13	$ 1,346.84	$ 509.80	$ 33.71	$ 832.04	38%	62%	21%
2030	307.43	938.13	$ 1,414.19	$ 535.39	$ 32.18	$ 873.80	38%	62%	21%
2031	307.43	938.13	$ 1,484.89	$ 562.26	$ 30.72	$ 917.63	38%	62%	21%
2032	307.43	938.13	$ 1,559.14	$ 590.47	$ 29.33	$ 963.67	38%	62%	21%
2033	307.43	938.13	$ 1,637.10	$ 620.10	$ 28.00	$ 1,012.00	38%	62%	21%
2034	307.43	938.13	$ 1,718.95	$ 651.20	$ 26.73	$ 1,062.75	38%	62%	21%
	7,286.40	24,527.65	25,279.37	11,584.43	2,000.70	12,939.17	47%	53%	

B1: Deterministic calculation table, Alternative system (6.6 TCF) - Price scenario 4

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	307.43	938.13	$ 771.40	$ 473.09	$ 98.17	$ 293.31	62%	38%	18%
2018	307.43	938.13	$ 833.11	$ 511.20	$ 96.43	$ 316.92	62%	38%	19%
2019	307.43	938.13	$ 899.76	$ 552.35	$ 94.72	$ 342.41	62%	38%	20%
2020	307.43	938.13	$ 971.74	$ 550.89	$ 85.88	$ 415.85	57%	43%	20%
2021	307.43	938.13	$ 1,049.48	$ 595.20	$ 84.36	$ 449.28	57%	43%	20%
2022	307.43	938.13	$ 1,133.44	$ 643.06	$ 82.85	$ 485.38	57%	43%	21%
2023	307.43	938.13	$ 1,224.12	$ 463.16	$ 54.25	$ 755.95	38%	62%	21%
2024	307.43	938.13	$ 1,322.05	$ 500.38	$ 53.28	$ 816.67	38%	62%	21%
2025	307.43	938.13	$ 1,427.81	$ 540.57	$ 52.33	$ 882.24	38%	62%	21%
2026	307.43	938.13	$ 1,542.03	$ 583.97	$ 51.39	$ 953.06	38%	62%	21%
2027	307.43	938.13	$ 1,665.40	$ 630.85	$ 50.47	$ 1,029.55	38%	62%	21%
2028	307.43	938.13	$ 1,798.63	$ 681.48	$ 49.56	$ 1,112.15	38%	62%	21%
2029	307.43	938.13	$ 1,942.52	$ 736.16	$ 48.67	$ 1,201.36	38%	62%	21%
2030	307.43	938.13	$ 2,097.92	$ 795.21	$ 47.80	$ 1,297.71	38%	62%	21%
2031	307.43	938.13	$ 2,265.75	$ 858.99	$ 46.94	$ 1,401.77	38%	62%	21%
2032	307.43	938.13	$ 2,447.01	$ 927.87	$ 46.09	$ 1,514.15	38%	62%	21%
2033	307.43	938.13	$ 2,642.77	$ 1,002.25	$ 45.26	$ 1,635.52	38%	62%	21%
2034	307.43	938.13	$ 2,854.20	$ 1,082.59	$ 44.44	$ 1,766.60	38%	62%	21%
	7,286.40	24,527.65	33,069.99	14,426.53	2,192.37	17,887.69	45%	55%	

B1: Deterministic calculation table, Alternative system (6.6 TCF) - Price scenario 5

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	307.43	938.13	$ 785.69	$ 481.91	$ 100.00	$ 298.77	62%	38%	18%
2018	307.43	938.13	$ 864.25	$ 530.43	$ 100.06	$ 328.83	62%	38%	19%
2019	307.43	938.13	$ 950.68	$ 583.79	$ 100.11	$ 361.89	62%	38%	20%
2020	307.43	938.13	$ 1,045.75	$ 593.08	$ 92.46	$ 447.67	57%	43%	20%
2021	307.43	938.13	$ 1,150.32	$ 652.68	$ 92.50	$ 492.64	57%	43%	20%
2022	307.43	938.13	$ 1,265.35	$ 718.25	$ 92.54	$ 542.10	57%	43%	21%
2023	307.43	938.13	$ 1,391.89	$ 526.92	$ 61.72	$ 859.97	38%	62%	21%
2024	307.43	938.13	$ 1,531.08	$ 579.81	$ 61.74	$ 946.27	38%	62%	21%
2025	307.43	938.13	$ 1,684.19	$ 637.99	$ 61.76	$ 1,041.20	38%	62%	21%
2026	307.43	938.13	$ 1,852.61	$ 701.99	$ 61.78	$ 1,145.62	38%	62%	21%
2027	307.43	938.13	$ 2,037.87	$ 772.39	$ 61.79	$ 1,260.48	38%	62%	21%
2028	307.43	938.13	$ 2,241.65	$ 849.83	$ 61.81	$ 1,386.83	38%	62%	21%
2029	307.43	938.13	$ 2,465.82	$ 935.01	$ 61.82	$ 1,525.81	38%	62%	21%
2030	307.43	938.13	$ 2,712.40	$ 1,028.71	$ 61.83	$ 1,678.69	38%	62%	22%
2031	307.43	938.13	$ 2,983.64	$ 848.84	$ 46.38	$ 2,129.80	28%	72%	22%
2032	307.43	938.13	$ 3,282.00	$ 933.87	$ 46.39	$ 2,343.13	28%	72%	22%
2033	307.43	938.13	$ 3,610.21	$ 1,027.41	$ 46.40	$ 2,577.80	28%	72%	22%
2034	307.43	938.13	$ 3,971.23	$ 1,130.30	$ 46.40	$ 2,835.93	28%	72%	22%
	7,286.40	24,527.65	40,007.47	15,830.46	2,316.96	23,421.24	40%	60%	

B1: Deterministic calculation table, Alternative system (7.6 TCF) - Price scenario 1

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	307.43	938.13	$ 725.31	$ 444.63	$ 92.26	$ 275.68	62%	38%	18%
2018	372.37	1,096.70	$ 891.12	$ 547.01	$ 103.19	$ 339.10	62%	38%	19%
2019	372.37	1,096.70	$ 904.90	$ 555.53	$ 95.27	$ 344.37	62%	38%	20%
2020	372.37	1,096.70	$ 918.91	$ 520.78	$ 81.19	$ 393.13	57%	43%	20%
2021	372.37	1,096.70	$ 933.14	$ 528.89	$ 74.96	$ 399.25	57%	43%	20%
2022	372.37	1,096.70	$ 947.59	$ 537.13	$ 69.20	$ 405.46	57%	43%	20%
2023	372.37	1,096.70	$ 962.28	$ 545.50	$ 63.89	$ 411.78	57%	43%	21%
2024	372.37	1,096.70	$ 977.20	$ 369.33	$ 39.33	$ 602.86	38%	62%	21%
2025	372.37	1,096.70	$ 992.36	$ 375.09	$ 36.31	$ 612.26	38%	62%	21%
2026	372.37	1,096.70	$ 1,007.76	$ 380.95	$ 33.52	$ 621.81	38%	62%	21%
2027	372.37	1,096.70	$ 1,023.40	$ 386.89	$ 30.95	$ 631.51	38%	62%	21%
2028	372.37	1,096.70	$ 1,039.30	$ 392.93	$ 28.58	$ 641.37	38%	62%	21%
2029	372.37	1,096.70	$ 1,055.45	$ 399.07	$ 26.39	$ 651.38	38%	62%	21%
2030	372.37	1,096.70	$ 1,071.87	$ 405.31	$ 24.36	$ 661.56	38%	62%	21%
2031	372.37	1,096.70	$ 1,088.54	$ 411.65	$ 22.49	$ 671.90	38%	62%	21%
2032	372.37	1,096.70	$ 1,105.49	$ 418.08	$ 20.77	$ 682.40	38%	62%	21%
2033	372.37	1,096.70	$ 1,122.70	$ 424.63	$ 19.18	$ 693.08	38%	62%	21%
2034	372.37	1,096.70	$ 1,140.20	$ 431.27	$ 17.71	$ 703.92	38%	62%	21%
	8,390.40	27,223.26	22,088.35	10,371.93	1,939.02	10,960.65	49%	51%	

B1: Deterministic calculation table, Alternative system (7.6 TCF) - Price scenario 2

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	307.43	938.13	$ 735.35	$ 450.83	$ 93.55	$ 279.52	62%	38%	18%
2018	372.37	1,096.70	$ 916.68	$ 562.80	$ 106.16	$ 348.88	62%	38%	19%
2019	372.37	1,096.70	$ 944.45	$ 579.95	$ 99.45	$ 359.50	62%	38%	20%
2020	372.37	1,096.70	$ 973.08	$ 551.65	$ 86.00	$ 416.42	57%	43%	20%
2021	372.37	1,096.70	$ 1,002.57	$ 568.47	$ 80.57	$ 429.11	57%	43%	20%
2022	372.37	1,096.70	$ 1,032.96	$ 585.79	$ 75.47	$ 442.17	57%	43%	21%
2023	372.37	1,096.70	$ 1,064.28	$ 402.42	$ 47.14	$ 656.85	38%	62%	21%
2024	372.37	1,096.70	$ 1,096.54	$ 414.69	$ 44.16	$ 676.86	38%	62%	21%
2025	372.37	1,096.70	$ 1,129.79	$ 427.32	$ 41.36	$ 697.47	38%	62%	21%
2026	372.37	1,096.70	$ 1,164.05	$ 440.34	$ 38.75	$ 718.71	38%	62%	21%
2027	372.37	1,096.70	$ 1,199.35	$ 453.75	$ 36.30	$ 740.60	38%	62%	21%
2028	372.37	1,096.70	$ 1,235.73	$ 467.58	$ 34.01	$ 763.15	38%	62%	21%
2029	372.37	1,096.70	$ 1,273.21	$ 481.82	$ 31.86	$ 786.39	38%	62%	21%
2030	372.37	1,096.70	$ 1,311.84	$ 496.50	$ 29.84	$ 810.34	38%	62%	21%
2031	372.37	1,096.70	$ 1,351.64	$ 511.62	$ 27.96	$ 835.01	38%	62%	21%
2032	372.37	1,096.70	$ 1,392.65	$ 527.21	$ 26.19	$ 860.44	38%	62%	21%
2033	372.37	1,096.70	$ 1,434.91	$ 543.27	$ 24.53	$ 886.64	38%	62%	21%
2034	372.37	1,096.70	$ 1,478.46	$ 559.81	$ 22.98	$ 913.64	38%	62%	21%
	8,390.40	27,223.26	24,918.38	11,323.06	2,005.76	12,839.54	47%	53%	

B1: Deterministic calculation table, Alternative system (7.6 TCF) - Price scenario 3

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	307.43	938.13	$ 749.97	$ 459.86	$ 95.42	$ 285.11	62%	38%	18%
2018	372.37	1,096.70	$ 952.77	$ 585.08	$ 110.37	$ 362.68	62%	38%	19%
2019	372.37	1,096.70	$ 1,000.40	$ 614.50	$ 105.38	$ 380.90	62%	38%	20%
2020	372.37	1,096.70	$ 1,050.42	$ 595.74	$ 92.88	$ 449.68	57%	43%	20%
2021	372.37	1,096.70	$ 1,102.95	$ 625.68	$ 88.68	$ 472.27	57%	43%	20%
2022	372.37	1,096.70	$ 1,158.09	$ 657.11	$ 84.66	$ 495.98	57%	43%	21%
2023	372.37	1,096.70	$ 1,216.00	$ 460.08	$ 53.89	$ 750.92	38%	62%	21%
2024	372.37	1,096.70	$ 1,276.80	$ 483.18	$ 51.45	$ 788.61	38%	62%	21%
2025	372.37	1,096.70	$ 1,340.64	$ 507.44	$ 49.12	$ 828.20	38%	62%	21%
2026	372.37	1,096.70	$ 1,407.67	$ 532.91	$ 46.90	$ 869.76	38%	62%	21%
2027	372.37	1,096.70	$ 1,478.05	$ 559.66	$ 44.77	$ 913.39	38%	62%	21%
2028	372.37	1,096.70	$ 1,551.96	$ 587.74	$ 42.75	$ 959.21	38%	62%	21%
2029	372.37	1,096.70	$ 1,629.55	$ 617.23	$ 40.81	$ 1,007.32	38%	62%	21%
2030	372.37	1,096.70	$ 1,711.03	$ 648.19	$ 38.96	$ 1,057.84	38%	62%	21%
2031	372.37	1,096.70	$ 1,796.58	$ 680.70	$ 37.19	$ 1,110.88	38%	62%	21%
2032	372.37	1,096.70	$ 1,886.41	$ 714.84	$ 35.51	$ 1,166.58	38%	62%	21%
2033	372.37	1,096.70	$ 1,980.73	$ 750.68	$ 33.90	$ 1,225.05	38%	62%	21%
2034	372.37	1,096.70	$ 2,079.77	$ 788.31	$ 32.36	$ 1,286.46	38%	62%	21%
	8,390.40	27,223.26	29,550.65	13,166.20	2,144.47	15,628.68	46%	54%	

B1: Deterministic calculation table, Alternative system (7.6 TCF) - Price scenario 4

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	307.43	938.13	$ 771.40	$ 473.09	$ 98.17	$ 293.31	62%	38%	18%
2018	372.37	1,096.70	$ 1,007.99	$ 619.18	$ 116.80	$ 383.81	62%	38%	19%
2019	372.37	1,096.70	$ 1,088.63	$ 668.98	$ 114.72	$ 414.65	62%	38%	20%
2020	372.37	1,096.70	$ 1,175.72	$ 667.16	$ 104.01	$ 503.56	57%	43%	20%
2021	372.37	1,096.70	$ 1,269.77	$ 720.77	$ 102.15	$ 544.00	57%	43%	21%
2022	372.37	1,096.70	$ 1,371.36	$ 519.12	$ 66.88	$ 847.24	38%	62%	21%
2023	372.37	1,096.70	$ 1,481.06	$ 560.80	$ 65.69	$ 915.26	38%	62%	21%
2024	372.37	1,096.70	$ 1,599.55	$ 605.83	$ 64.51	$ 988.72	38%	62%	21%
2025	372.37	1,096.70	$ 1,727.51	$ 654.46	$ 63.35	$ 1,068.06	38%	62%	21%
2026	372.37	1,096.70	$ 1,865.72	$ 706.97	$ 62.21	$ 1,153.74	38%	62%	21%
2027	372.37	1,096.70	$ 2,014.97	$ 763.69	$ 61.10	$ 1,246.28	38%	62%	21%
2028	372.37	1,096.70	$ 2,176.17	$ 824.94	$ 60.00	$ 1,346.23	38%	62%	21%
2029	372.37	1,096.70	$ 2,350.26	$ 891.10	$ 58.92	$ 1,454.16	38%	62%	22%
2030	372.37	1,096.70	$ 2,538.28	$ 721.91	$ 43.39	$ 1,811.37	28%	72%	22%
2031	372.37	1,096.70	$ 2,741.35	$ 779.78	$ 42.61	$ 1,956.56	28%	72%	22%
2032	372.37	1,096.70	$ 2,960.66	$ 842.29	$ 41.84	$ 2,113.37	28%	72%	22%
2033	372.37	1,096.70	$ 3,197.51	$ 909.79	$ 41.08	$ 2,282.72	28%	72%	22%
2034	372.37	1,096.70	$ 3,453.31	$ 982.69	$ 40.34	$ 2,465.62	28%	72%	22%
	8,390.40	27,223.26	38,972.07	15,209.81	2,307.25	23,006.49	40%	60%	

B1: Deterministic calculation table, Alternative system (7.6 TCF) - Price scenario 5

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	307.43	938.13	$ 785.69	$ 481.91	$ 100.00	$ 298.77	62%	38%	18%
2018	372.37	1,096.70	$ 1,045.67	$ 642.45	$ 121.19	$ 398.22	62%	38%	19%
2019	372.37	1,096.70	$ 1,150.23	$ 707.02	$ 121.25	$ 438.21	62%	38%	20%
2020	372.37	1,096.70	$ 1,265.26	$ 718.20	$ 111.97	$ 542.06	57%	43%	20%
2021	372.37	1,096.70	$ 1,391.78	$ 790.32	$ 112.01	$ 596.47	57%	43%	21%
2022	372.37	1,096.70	$ 1,530.96	$ 579.76	$ 74.70	$ 946.20	38%	62%	21%
2023	372.37	1,096.70	$ 1,684.06	$ 637.94	$ 74.72	$ 1,041.11	38%	62%	21%
2024	372.37	1,096.70	$ 1,852.46	$ 701.94	$ 74.74	$ 1,145.53	38%	62%	21%
2025	372.37	1,096.70	$ 2,037.71	$ 772.33	$ 74.76	$ 1,260.38	38%	62%	21%
2026	372.37	1,096.70	$ 2,241.48	$ 849.76	$ 74.78	$ 1,386.72	38%	62%	21%
2027	372.37	1,096.70	$ 2,465.63	$ 934.94	$ 74.80	$ 1,525.69	38%	62%	22%
2028	372.37	1,096.70	$ 2,712.19	$ 771.47	$ 56.11	$ 1,935.72	28%	72%	22%
2029	372.37	1,096.70	$ 2,983.41	$ 848.77	$ 56.12	$ 2,129.64	28%	72%	22%
2030	372.37	1,096.70	$ 3,281.75	$ 933.80	$ 56.13	$ 2,342.95	28%	72%	22%
2031	372.37	1,096.70	$ 3,609.92	$ 1,027.33	$ 56.13	$ 2,577.60	28%	72%	22%
2032	372.37	1,096.70	$ 3,970.92	$ 1,130.21	$ 56.14	$ 2,835.71	28%	72%	22%
2033	372.37	1,096.70	$ 4,368.01	$ 1,243.38	$ 56.15	$ 3,119.63	28%	72%	22%
2034	372.37	1,096.70	$ 4,804.81	$ 1,367.87	$ 56.16	$ 3,431.94	28%	72%	22%
	8,390.40	27,223.26	47,362.77	17,436.65	2,467.32	29,170.35	37%	63%	

B1: Deterministic calculation table, Alternative system (8.6 TCF) - Price scenario 1

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 318.88	$ 106.57	$ 160.90	66%	34%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	307.43	938.13	$ 725.31	$ 444.63	$ 92.26	$ 275.68	62%	38%	18%
2018	372.37	1,096.70	$ 891.12	$ 547.01	$ 103.19	$ 339.10	62%	38%	19%
2019	441.37	1,255.26	$ 1,071.41	$ 658.34	$ 112.90	$ 408.06	62%	38%	20%
2020	441.37	1,255.26	$ 1,087.97	$ 617.14	$ 96.21	$ 465.83	57%	43%	20%
2021	441.37	1,255.26	$ 1,104.80	$ 626.74	$ 88.82	$ 473.06	57%	43%	20%
2022	441.37	1,255.26	$ 1,121.90	$ 636.48	$ 82.01	$ 480.42	57%	43%	21%
2023	441.37	1,255.26	$ 1,139.27	$ 430.92	$ 50.47	$ 703.34	38%	62%	21%
2024	441.37	1,255.26	$ 1,156.91	$ 437.63	$ 46.60	$ 714.28	38%	62%	21%
2025	441.37	1,255.26	$ 1,174.84	$ 444.44	$ 43.02	$ 725.40	38%	62%	21%
2026	441.37	1,255.26	$ 1,193.05	$ 451.36	$ 39.72	$ 736.69	38%	62%	21%
2027	441.37	1,255.26	$ 1,211.55	$ 458.39	$ 36.67	$ 748.16	38%	62%	21%
2028	441.37	1,255.26	$ 1,230.35	$ 465.53	$ 33.86	$ 759.82	38%	62%	21%
2029	441.37	1,255.26	$ 1,249.45	$ 472.79	$ 31.26	$ 771.66	38%	62%	21%
2030	441.37	1,255.26	$ 1,268.86	$ 480.17	$ 28.86	$ 783.69	38%	62%	21%
2031	441.37	1,255.26	$ 1,288.58	$ 487.66	$ 26.65	$ 795.92	38%	62%	21%
2032	441.37	1,255.26	$ 1,308.61	$ 495.27	$ 24.60	$ 808.34	38%	62%	21%
2033	441.37	1,255.26	$ 1,328.97	$ 503.01	$ 22.71	$ 820.96	38%	62%	21%
2034	441.37	1,255.26	$ 1,349.65	$ 510.87	$ 20.97	$ 833.78	38%	62%	21%
	9,494.40	29,760.31	25,083.43	11,416.51	2,025.38	12,911.15	47%	53%	

B1: Deterministic calculation table, Alternative system (8.6 TCF) - Price scenario 2

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 318.88	$ 106.57	$ 160.90	66%	34%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 342.47	$ 94.59	$ 212.40	62%	38%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	307.43	938.13	$ 735.35	$ 450.83	$ 93.55	$ 279.52	62%	38%	18%
2018	372.37	1,096.70	$ 916.68	$ 562.80	$ 106.16	$ 348.88	62%	38%	19%
2019	441.37	1,255.26	$ 1,118.28	$ 687.29	$ 117.86	$ 425.99	62%	38%	20%
2020	441.37	1,255.26	$ 1,152.16	$ 653.73	$ 101.92	$ 493.43	57%	43%	20%
2021	441.37	1,255.26	$ 1,187.07	$ 673.63	$ 95.47	$ 508.44	57%	43%	20%
2022	441.37	1,255.26	$ 1,223.04	$ 694.13	$ 89.43	$ 523.91	57%	43%	21%
2023	441.37	1,255.26	$ 1,260.11	$ 476.84	$ 55.85	$ 778.27	38%	62%	21%
2024	441.37	1,255.26	$ 1,298.30	$ 491.35	$ 52.32	$ 801.94	38%	62%	21%
2025	441.37	1,255.26	$ 1,337.65	$ 506.31	$ 49.01	$ 826.34	38%	62%	21%
2026	441.37	1,255.26	$ 1,378.20	$ 521.71	$ 45.91	$ 851.48	38%	62%	21%
2027	441.37	1,255.26	$ 1,419.98	$ 537.59	$ 43.01	$ 877.39	38%	62%	21%
2028	441.37	1,255.26	$ 1,463.03	$ 553.95	$ 40.29	$ 904.08	38%	62%	21%
2029	441.37	1,255.26	$ 1,507.39	$ 570.81	$ 37.74	$ 931.58	38%	62%	21%
2030	441.37	1,255.26	$ 1,553.10	$ 588.18	$ 35.35	$ 959.92	38%	62%	21%
2031	441.37	1,255.26	$ 1,600.21	$ 606.08	$ 33.12	$ 989.13	38%	62%	21%
2032	441.37	1,255.26	$ 1,648.74	$ 624.52	$ 31.02	$ 1,019.22	38%	62%	21%
2033	441.37	1,255.26	$ 1,698.76	$ 643.53	$ 29.06	$ 1,050.23	38%	62%	21%
2034	441.37	1,255.26	$ 1,750.29	$ 663.11	$ 27.22	$ 1,082.18	38%	62%	21%
	9,494.40	29,760.31	28,429.19	12,754.53	2,128.89	14,918.88	0.46	0.54	

B1: Deterministic calculation table, Alternative system (8.6 TCF) - Price scenario 3

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	307.43	938.13	$ 749.97	$ 459.86	$ 95.42	$ 285.11	62%	38%	18%
2018	372.37	1,096.70	$ 952.77	$ 585.08	$ 110.37	$ 362.68	62%	38%	19%
2019	441.37	1,255.26	$ 1,184.54	$ 728.20	$ 124.88	$ 451.34	62%	38%	20%
2020	441.37	1,255.26	$ 1,243.76	$ 705.94	$ 110.06	$ 532.82	57%	43%	20%
2021	441.37	1,255.26	$ 1,305.95	$ 741.39	$ 105.07	$ 559.56	57%	43%	21%
2022	441.37	1,255.26	$ 1,371.25	$ 519.07	$ 66.88	$ 847.17	38%	62%	21%
2023	441.37	1,255.26	$ 1,439.81	$ 545.13	$ 63.85	$ 889.68	38%	62%	21%
2024	441.37	1,255.26	$ 1,511.80	$ 572.48	$ 60.96	$ 934.32	38%	62%	21%
2025	441.37	1,255.26	$ 1,587.39	$ 601.21	$ 58.20	$ 981.18	38%	62%	21%
2026	441.37	1,255.26	$ 1,666.76	$ 631.37	$ 55.56	$ 1,030.39	38%	62%	21%
2027	441.37	1,255.26	$ 1,750.10	$ 663.04	$ 53.04	$ 1,082.06	38%	62%	21%
2028	441.37	1,255.26	$ 1,837.60	$ 696.29	$ 50.64	$ 1,136.31	38%	62%	21%
2029	441.37	1,255.26	$ 1,929.48	$ 731.20	$ 48.34	$ 1,193.28	38%	62%	21%
2030	441.37	1,255.26	$ 2,025.96	$ 767.86	$ 46.15	$ 1,253.09	38%	62%	22%
2031	441.37	1,255.26	$ 2,127.26	$ 604.77	$ 33.05	$ 1,517.49	28%	72%	22%
2032	441.37	1,255.26	$ 2,233.62	$ 635.08	$ 31.55	$ 1,593.54	28%	72%	22%
2033	441.37	1,255.26	$ 2,345.30	$ 666.91	$ 30.12	$ 1,673.39	28%	72%	22%
2034	441.37	1,255.26	$ 2,462.57	$ 700.33	$ 28.75	$ 1,757.23	28%	72%	22%
	9,494.40	29,760.31	33,906.74	13,852.48	2,232.37	19,298.48	42%	58%	

B1: Deterministic calculation table, Alternative system (8.6 TCF) - Price scenario 4

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD		%	
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	307.43	938.13	$ 771.40	$ 473.09	$ 98.17	$ 293.31	62%	38%	18%
2018	372.37	1,096.70	$ 1,007.99	$ 619.18	$ 116.80	$ 383.81	62%	38%	19%
2019	441.37	1,255.26	$ 1,289.00	$ 792.71	$ 135.94	$ 491.29	62%	38%	20%
2020	441.37	1,255.26	$ 1,392.12	$ 790.51	$ 123.24	$ 596.61	57%	43%	20%
2021	441.37	1,255.26	$ 1,503.49	$ 853.99	$ 121.03	$ 644.50	57%	43%	21%
2022	441.37	1,255.26	$ 1,623.76	$ 615.03	$ 79.24	$ 1,003.73	38%	62%	21%
2023	441.37	1,255.26	$ 1,753.67	$ 664.39	$ 77.82	$ 1,084.27	38%	62%	21%
2024	441.37	1,255.26	$ 1,893.96	$ 717.70	$ 76.42	$ 1,171.25	38%	62%	21%
2025	441.37	1,255.26	$ 2,045.47	$ 775.28	$ 75.05	$ 1,265.19	38%	62%	21%
2026	441.37	1,255.26	$ 2,209.11	$ 837.46	$ 73.70	$ 1,366.65	38%	62%	22%
2027	441.37	1,255.26	$ 2,385.84	$ 678.46	$ 54.28	$ 1,702.38	28%	72%	22%
2028	441.37	1,255.26	$ 2,576.71	$ 732.86	$ 53.30	$ 1,838.85	28%	72%	22%
2029	441.37	1,255.26	$ 2,782.85	$ 791.61	$ 52.34	$ 1,986.23	28%	72%	22%
2030	441.37	1,255.26	$ 3,005.47	$ 855.06	$ 51.39	$ 2,145.41	28%	72%	22%
2031	441.37	1,255.26	$ 3,245.91	$ 923.58	$ 50.47	$ 2,317.33	28%	72%	22%
2032	441.37	1,255.26	$ 3,505.58	$ 997.59	$ 49.55	$ 2,502.99	28%	72%	22%
2033	441.37	1,255.26	$ 3,786.03	$ 1,077.52	$ 48.66	$ 2,703.51	28%	72%	22%
2034	441.37	1,255.26	$ 4,088.91	$ 1,163.84	$ 47.78	$ 2,920.07	28%	72%	22%
	9,494.40	29,760.31	45,048.12	16,657.13	2,444.66	27,635.22	38%	62%	

B1: Deterministic calculation table, Alternative system (8.6 TCF) - Price scenario 5

Year	Gas production	Condensate	Total Gross Reven (Gas & Cond.)	NCF	PV(NCF)@10%	Gov Share	Contractor Take	Gvt Take	ROR
	MMGJ	MBBL	MMUSD	MMUSD	MMUSD	MMUSD	%		
2001				$ -600.00	$ -572.08				
2002				$ -0.18	$ -0.15				
2003				$ -0.28	$ -0.22				
2004	52.63	294.32	$ 64.80	$ 56.36	$ 40.37	$ 3.24			
2005	88.89	531.10	$ 124.35	$ 113.01	$ 73.60	$ 6.22			
2006	102.09	701.30	$ 157.96	$ 121.18	$ 71.74	$ 31.77			
2007	104.77	695.94	$ 167.85	$ 145.88	$ 78.51	$ 16.97			
2008	116.31	807.33	$ 226.22	$ 187.47	$ 91.73	$ 33.75			
2009	107.78	487.17	$ 154.32	$ 106.21	$ 47.24	$ 43.11	71%	29%	3%
2010	124.78	429.64	$ 285.43	$ 199.62	$ 80.72	$ 80.81	71%	29%	7%
2011	131.56	555.58	$ 409.14	$ 287.76	$ 105.78	$ 116.38	71%	29%	10%
2012	147.10	568.39	$ 484.79	$ 341.66	$ 114.18	$ 138.13	71%	29%	13%
2013	163.74	585.36	$ 526.27	$ 346.47	$ 105.26	$ 174.80	66%	34%	15%
2014	176.59	584.60	$ 559.88	$ 368.82	$ 101.86	$ 186.06	66%	34%	16%
2015	190.30	621.02	$ 447.39	$ 273.02	$ 68.55	$ 169.38	62%	38%	17%
2016	246.10	779.57	$ 572.45	$ 350.24	$ 79.94	$ 217.21	62%	38%	18%
2017	307.43	938.13	$ 785.69	$ 481.91	$ 100.00	$ 298.77	62%	38%	18%
2018	372.37	1,096.70	$ 1,045.67	$ 642.45	$ 121.19	$ 398.22	62%	38%	19%
2019	441.37	1,255.26	$ 1,361.94	$ 837.75	$ 143.66	$ 519.19	62%	38%	20%
2020	441.37	1,255.26	$ 1,498.14	$ 850.94	$ 132.66	$ 642.20	57%	43%	20%
2021	441.37	1,255.26	$ 1,647.95	$ 936.33	$ 132.70	$ 706.62	57%	43%	21%
2022	441.37	1,255.26	$ 1,812.74	$ 686.84	$ 88.49	$ 1,120.90	38%	62%	21%
2023	441.37	1,255.26	$ 1,994.02	$ 755.73	$ 88.52	$ 1,233.29	38%	62%	21%
2024	441.37	1,255.26	$ 2,193.42	$ 831.50	$ 88.54	$ 1,356.92	38%	62%	22%
2025	441.37	1,255.26	$ 2,412.76	$ 686.14	$ 66.42	$ 1,721.62	28%	72%	22%
2026	441.37	1,255.26	$ 2,654.04	$ 754.90	$ 66.43	$ 1,894.14	28%	72%	22%
2027	441.37	1,255.26	$ 2,919.44	$ 830.54	$ 66.44	$ 2,083.90	28%	72%	22%
2028	441.37	1,255.26	$ 3,211.39	$ 913.75	$ 66.45	$ 2,292.64	28%	72%	22%
2029	441.37	1,255.26	$ 3,532.53	$ 1,005.27	$ 66.46	$ 2,522.26	28%	72%	22%
2030	441.37	1,255.26	$ 3,885.78	$ 1,105.95	$ 66.47	$ 2,774.83	28%	72%	22%
2031	441.37	1,255.26	$ 4,274.36	$ 1,216.69	$ 66.48	$ 3,052.66	28%	72%	22%
2032	441.37	1,255.26	$ 4,701.79	$ 1,338.51	$ 66.49	$ 3,358.28	28%	72%	22%
2033	441.37	1,255.26	$ 5,171.97	$ 1,472.51	$ 66.50	$ 3,694.46	28%	72%	22%
2034	441.37	1,255.26	$ 5,689.17	$ 1,619.91	$ 66.50	$ 4,064.25	28%	72%	22%
	-	-	$ -	$ -	-	-			
	9,494.40	29,760.31	54,973.63	19,264.86	2,619.90	34,952.99	36%	64%	

VITA

Nelson Victor was born in Quelimane, Mozambique, on August 11, 1978, he holds Bachelor degree in chemical engineering from Eduardo Mondlane University. He has applied and has worked in the oil and gas industry since 2010, at the National Oil Company (ENH), in Mozambique. During that time, he first worked in the engineering department and then, in 2012 he was moved to the commercial department where he was in charge of contract management. In 2015 he was accepted to the master of petroleum engineering program at department of mining and Petroleum engineering at Chulalongkorn University in Thailand,

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