



ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES
GENERAL MBA PROGRAM

Assessment of Production Sharing Agreement (PSA) as a strategic Management Tool for Oil and Gas Companies in the Ogaden Basin.

MBA Thesis
By
Rediet Solomon

December 2016

Addis Ababa

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APPROVED BY BOARD OF EXAMINERS

Dean, Graduate Studies Signature

Advisor Signature

External Examiner Signature

Internal Examiner Signature

DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Tesfaye Wolde (PhD). All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

Name Signature

St. Mary's University, Addis Ababa

December, 2016

ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

Advisor Signature

St. Mary's University, Addis Ababa

December, 2016

Table of Contents

Acknowledgements	I
List Of Tables	II
List of Abbreviations	III
List of Figures	IV
Abstract	V
1. Chapter One : Introduction	1
1.1. Background of the Study	1
1.2. Statement of the Problem	4
1.3. Research Question	4
1.4. Objective of the Study	5
1.5. Significance of the Study	5
1.6. Scope of the Study	5
1.7. Organization of the paper	6
2. Chapter Two : Literature Review	7
2.1. Conceptual Literature	7
2.1.1. Petroleum	7
2.1.2. Production Sharing Contract	8
2.1.3. Objective of PSAs	9
2.1.4. Benefits of Production Sharing Contract	9
2.1.4.1. Benefits of PSA to the HC	9
2.1.4.2. Benefits of PSA to the IOC	10
2.1.5. Principles of Production Sharing Contract	10
2.1.6. Difference in PSAs	11
2.1.7. Cost/Expenditure	11
2.1.8. Capital Expenditure	12
2.1.9. Operating Expenditure	12
2.1.10. Cost Recovery	12
2.1.11. Price	13
2.1.12. Crude Price	14
2.1.13. Profitability	14
2.1.14. Correlation Research	15
2.1.15. Exploration History in the Ogaden Basin	15

2.2. Empirical Literature Review	18
2.3. Conceptual Framework	20
3. Chapter Three : Research Methodology	21
3.1. Introduction	21
3.2. Research Approach	21
3.3. Sample Design	22
3.3.1. Population	22
3.3.2. Sampling Technique	23
3.3.3. Sampling Size	23
3.4. Data Source and Data Type	23
3.4.1. Primary Data Sources	23
3.4.2. Secondary Data Sources	24
3.5. Data Collection Methods	24
3.6. Ethical Consideration	24
4. Chapter Four : Data Analysis and Research Findings	25
4.1. Introduction	25
4.2. Methods of Data Analysis and Presentation of Data	25
4.3. Discussion of Findings	26
4.3.1. Analysis of the three contracts and the contractual parties in the sample	26
4.3.2. Number of years of operation of the IOC in the sample	27
4.3.3. Assessment of the contracts	29
4.3.4. Reporting of IOC to the SOE	32
4.4. Merits and Demerits of the terms of the contract for the contractor	33
4.5. Other Laws	35
4.6. Economic Analysis	35
5. Chapter Five : Summary, Conclusion and Recommendation	39
5.1. Summary of major Findings	39
5.2. Conclusions	40
5.3. Recommendations	41

References

Annex

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Author

Rediet Solomon

List of Tables

Table 3.1. IOCs in the Ogaden basin

Table 4.1. Association between work experience and position

Table 4.2. Reporting Process

Table 4.3. Investment and Cost

List of Figures

Figure 1.1. The Ogaden basin and the 21 exploration and/or development blocks

Figure 1.2. Profit and income distribution according to product sharing agreements

Figure 2.1. Conceptual Framework

List of Abbreviations

AGIP	Agip Petroli S.p.A
FOC	Foreign Oil Company
HC	Host Country
HG	Host Government
IOC	International Oil Company
MME	Ministry of Mines and Energy
MOM	Ministry of Mines
NOC	National Oil Company
PPSA	Petroleum Production Sharing Agreement
PSA	Production Sharing Agreement
PSC	Production Sharing Contract
SOC	State Owned Company
SOE	State Owned Enterprise
SPEE	Soviet Petroleum Exploration Expenditure
USA	United States of America

Abstract

The aim of this thesis is to test the use of product sharing agreements in making strategic decisions while working in petroleum exploration and development in Ethiopia (especially in the Ogaden basin). Ethiopia's Oil and Gas Industry is growing and is attracting lots of interest from exploration companies. For this reason the author decided to research the past of this industry and its present status, with the aim of describing how it can change and improve. Descriptive research based on non probabilistic approach was carried out using primary and secondary data collected through semi structured interviews and observation..

This thesis first examines and assesses the PSA contract and the contractual parties. In a second stage, the several levels of reporting process of the IOCs in Ethiopia to the Ministry of Mines is observed. Thirdly other laws relating to the oil and gas industry in Ethiopia are discussed. Finally the research comes up with the advantages and disadvantages and the risks and rewards of the terms of the PSA.

The results of the research shows that the contract can be a good way to regulate the project (if negotiate to benefit both parties) in spite of the demerits for the contractor. The author recommends further research on the industry, further familiarization with other laws governing and affecting companies that work in that industry and unique tailoring of the PSA to suit every situation.

KEYWORDS: PSA, IOC, Petroleum exploration, Cost Recovery

Chapter One

Introduction

1.1 Background of the study

Ethiopia is currently not a producer of oil or natural gas, but as with many of its regional neighbors, it is seeing a growing level of interest from exploration companies. According to different studies, it is believed that there are reasonable reserves of hydrocarbons to be exploited. The Ministry of Mines is responsible for regulating the sector.

The **Ogaden Basin** is an area of Ogadenia that may hold significant reserves of crude oil and natural gas. The basin covers an area of some 350,000 square kilometres (135,000 square miles) and is formed from sedimentary rocks up to 10,000 meters (6 miles) thick. It has geological similarities to other hydrocarbon-rich basins in the Middle East.

The basin has been divided into 21 blocks, and exploration rights have been awarded for many of them. Companies with concessions in the basin include Netherlands registered Pexco Exploration, Petronas (Malaysia), Lundin East Africa (Sweden), SouthWest Energy Ltd. (Hong Kong), Afar Explorer (USA) and POLY-GCL (China).

The oil and gas industry in Ethiopia is fairly interesting compared to other industries in the country. Even though the industry is not very new, it is surrounded with a lot of half-truths and misinformation. Because of all the curiosity surrounding this sector, most information that is gathered about it turns out to be very appealing.

Another reason why this topic is appealing to me as an individual is because I am working in this sector. I work as an accountant at POLY-GCL Petroleum Investments Limited Ethiopian Branch. POLY-GCL is a Chinese petroleum company that is currently occupying 5 blocks in the Ogaden basin. It has signed a PSA with the Ministry of Mines to Explore and Develop oil and/or gas in the Ogaden basin in Ethiopia.

The diagram below shows the area where the Ogaden basin lays with in Ethiopia and the division of the twenty one blocks in the Ogaden basin.

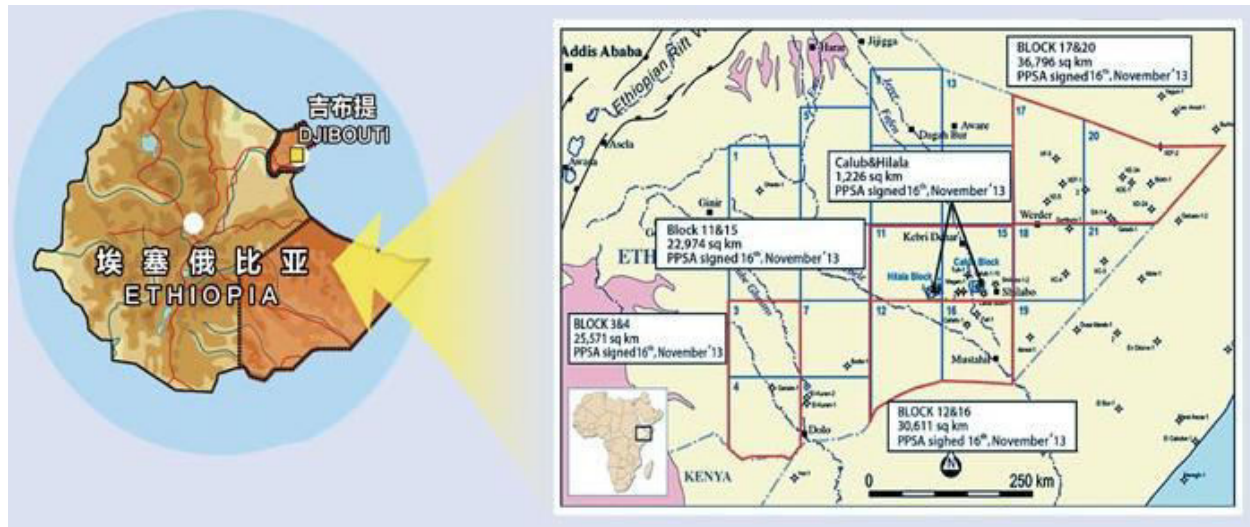


Figure: 1.1 :The Ogaden basin & 21 blocks

Source: POLY-GCL,2016

Production sharing agreements (PSAs) are a common type of contract signed between a government and a resource extraction company (or group of companies) concerning how much of the resource extracted from the country each will receive. The oil company bears the mineral and financial risk of the initiative and explores, develops and ultimately produces the field as required. When successful, the company is permitted to use the money from produced oil to recover capital and operational expenditures, known as "cost oil". The remaining money is known as "profit oil", and is split between the government and the company. Production sharing agreements can be beneficial to governments of countries that lack the expertise and/or capital to develop their resources and wish to attract foreign companies to do so. They can be very profitable agreements for the oil companies involved, but often involve considerable risk.

The diagram below shows how the host government (represented by a SOE or NOC) and IOC will share the cost and profit of the exploration.

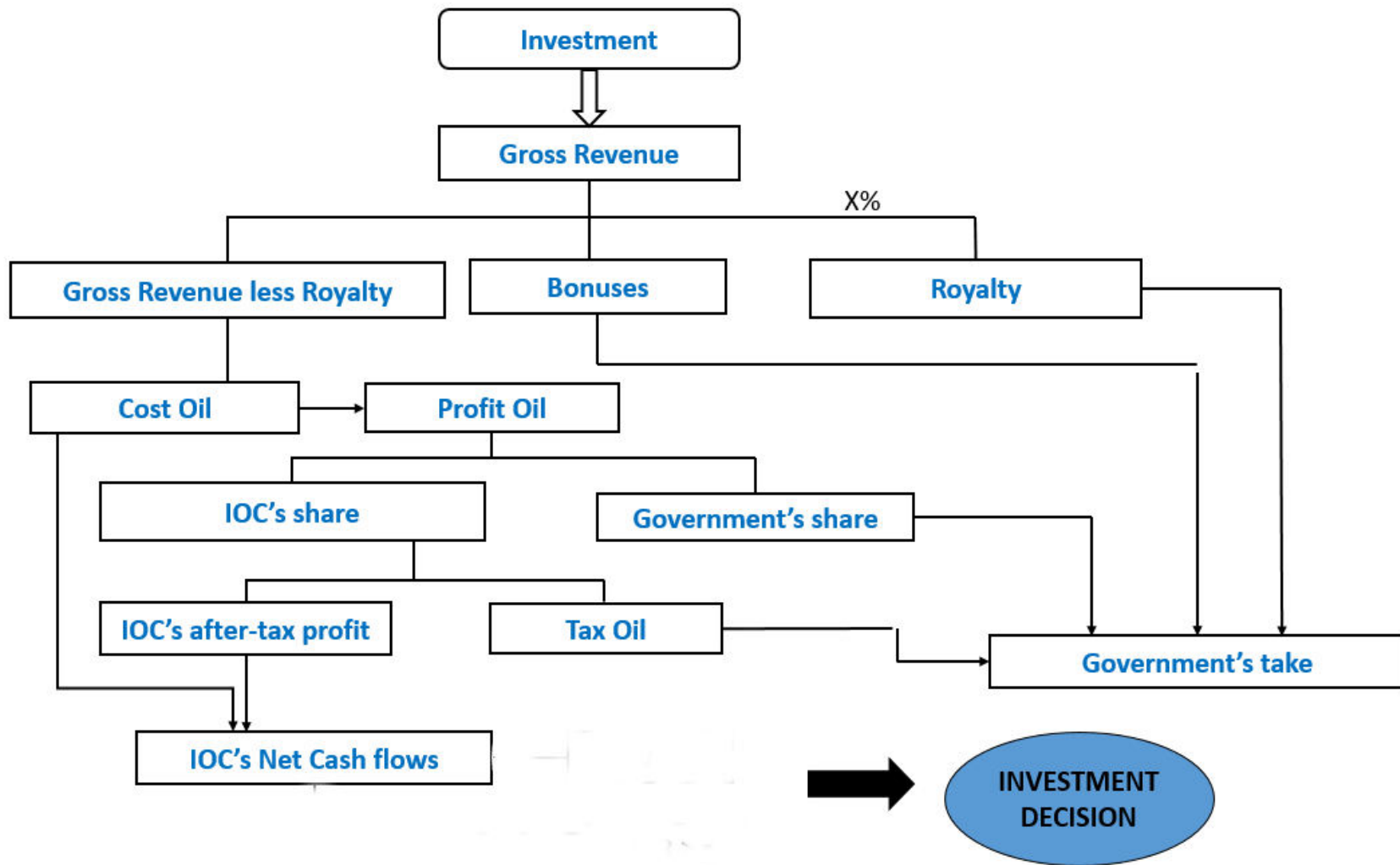


Figure: 1.2: Profit and income distribution according to product sharing agreements

Source: Researcher

1.2. Statement of the Problem

The legal relationship between the government and extracting companies is established through investment contracts for the development, extraction, and transportation of resources. These signed contracts (PSA) stipulate the terms of profit making and distribution between the government and companies over several decades.

So, Product Sharing Agreement (PSA) as performance-based agreement, it is developed to successfully benefit both the host government and the oil and gas company. Both the host country and the oil & gas companies use this agreement to make strategic decisions while under contract.

Oil contracts are a serious test for both those who sign them on behalf of the government, and for representatives of IOC, whose role is to ensure independent control of resource revenue management.

Ethiopia's Oil and Gas industry is sensitive because the success of the IOC in the host country depends highly on the relationship the IOC has with the SOE. Without effective and efficient reporting to the SOE the IOC cannot have a good performance in its project.

If one knows the impact level of effective and efficient reporting on the project performance he/she can give greater attention on preparation and presentation of this reports. When they are aware of the impact level of the reports to the relationship the IOC has with the SOE and the sustainability of the PPSA, then they are going to be more aware of their strategic decisions and search for the best management mechanisms to handle the project.

Different studies have been made in both developing and developed countries about the oil and gas industry and the use of product sharing agreements. But to my knowledge no extensive studies have been made on the Ethiopian oil and gas industry . And none on the use of PSA as a strategic management tool by IOC. So that is the gap that this study will try to fill. It will asses PSAs and their use as a strategic management tool for oil and gas companies in Ethiopia but especially in the Ogaden basin.

1.3. Research Questions

The research question this research will try to answer are:

- How do Oil and Gas Companies use PSAs in managing their business?
- How does the Ethiopian Government use PSAs to manage IOC?
- What are the differences in PSAs in different countries?
- What are the pros and cons of PSAs?

1.4. Objective of the Study

General Objective

The general objective of this research paper is to investigate the importance of Product Sharing Agreements as a strategic management tool for oil and gas companies.

Specific Objectives

- To assess how Oil and Gas Companies use PSAs in managing their business?
- To find out how the Ethiopian Government use PSAs to manage IOC?
- To find the differences in PSAs in different countries?
- To identify the pros and cons of PSAs?

1.5. Significance of the Study

This Study has significance for both host governments and Oil and Gas Companies.

For Governments, the study of PSAs and their use as a strategic management tool for oil and gas companies can help in negotiations. When governments are in initial negotiations with IOC, it help to know how that contract will later be used by the IOC in conducting its business.

For the Oil and Gas Companies, the study of PSAs and their use as a strategic management tool can help IOCs to negotiate with the host government in way that they can use the terms of the contract to their advantage.

This research also opens doors for other researchers to study, explore and find out more about the relatively new but growing oil and gas industry in Ethiopia.

1.6. Scope of the study

This research only focuses on the petroleum operations in the Ogaden basin of Ethiopia. There are six other basins in Ethiopia (The Abay (Blue Nile) Basin, the Gambela basin, the Mekele basin, the Afar rift, the main Ethiopian rift and the southern rift basin) the same topic as this can be applicable to. This research also only focuses on the effect of PSA signed on the strategic decisions of IOC. Similar researches can be done on the impact of PSA on the SOE and the control process of SOE on the IOCs.

The findings of this study would have had paramount if a wider scope was used in the research. However, it was practically unattainable due to lack of time and financial resources.

1.7. Organization of the paper

This research is organized into five chapters. Chapter one contains background of the study, statement of the problem, research objectives, significance of the study and scope of the study. Chapter two provides a literature review informing the reader of what is already known in this area of study. Chapter three discusses the methodology employed in the study, including, research design, sample size and sampling technique, data source and collection method, procedure of data collection and method of data analysis. Chapter four is about data analysis and discussion of results. Finally, chapter five contains conclusions and recommendations.

Chapter Two

Related Literature Review

This review of the existing literature covers studies relevant to the research topic. It presents a brief review of existing theoretical and empirical literature of product sharing agreements and their application in the Ethiopian context. At the end of the review, an attempt is made to summarize the major drawbacks of the existing studies and to identify the knowledge gap to be filled in by further investigation.

2.1. Conceptual Literature

2.1.1 Petroleum

The most well known hypothesis of the origin of oil and gas is the organic theory. This theory holds that petroleum (hydrocarbons) is formed from organic material including marine plants and animals that lived millions of years ago. These plant and animal remains were deposited throughout the years, along with layer after layer of eroded particles of igneous rock. The weight and pressure of the overlying layers caused the eroded rock particles to form sedimentary rock. The weight and pressure of overlying layers, with other factors such as chemical and bacterial processes was changed, and still change, the organic material into oil and gas (Wright, 2008).

After formation, oil and gas move upward through the layers of sedimentary rock due to pressure and the natural tendency of oil and gas to rise through water. The petroleum migrates upward through porous and permeable rock formations until it become trapped by an impervious layer of rock that prevents further movement of oil and gas (Wright, 2008). That is basic theory of the origin of petroleum.

Based on the basic theory of the origin of petroleum, that means petroleum and gas deposits can occur naturally throughout the world. According to Lyons and Plisga (2005) exploration for oil and gas reservoirs consist mainly of geological testing and drilling of exploratory “wildcat wells”.

To find crude oil or gas reserves underground, geologist search for sedimentary basin in which shales, rich in organic material have been buried for a sufficiently long time span of ten to a hundred million years.

2.1.2 Production Sharing Contract

Production-Sharing Contract is the most common types of contractual arrangements for petroleum exploration and development. Production Sharing Contract (PSC) also called as Production Sharing Agreement (PSA).

Under a PSC the state as the owner of mineral resources engages a foreign oil company (FOC) or an international oil company (IOC) as a contractor to provide technical and financial services for exploration and development operations. The state is representing by the government or its agencies such as the national oil company (NOC) or a state owned company (SOC). The IOC acquires an entitlement to a stipulated share of the oil produced as a reward for the risk taken and services rendered (Bindemann, October 1999).

Production sharing agreements (Paliashvili,1998) were first used in Bolivia in the early 1950s, although their first implementation similar to today's was in Indonesia in the 1960s. Today they are often used in the Middle East and Central Asia. In production sharing agreements the country's government awards the execution of exploration and production activities to an oil company.

Bindemann (1999) point out that in 1966, Indonesia is the first country to introduce this kind of agreement. In order to overcome the subsequent stagnation in oil development, which was a disadvantage to both the country and the foreign firms, new petroleum legislation was brought in. PSAs were regarded as acceptable because the government still upholds national ownership of resources. That was the basic features of a PSA. The oil is owned by the government which bring in a foreign company to explore (commercial discovery, develop the resource) and the share of production allocated to the FOC can be regarded as payment or compensation for the risk taken and services rendered. The first PSAs were therefore signed by independent FOCs who showed a greater willingness to compromise and accept terms that had been turned down by the majors. Furthermore, it has been argued that the independents saw this as an opportunity to break the dominance of the big oil companies and gain access to high quality crude oil (Barnes, 1995) .

For the purposes of PSAs, the state is usually represented by a SOE that assumes two responsibilities: first, that of contractor with a relevant share in the contract; and second, representing the state's interests and receiving its share of profit oil on behalf of the state. The share of the SOE differs from country to country, depending upon the manner in which the PSA was negotiated and how much of a stake the SOE holds in the particular project. Many PSA laws require that the SOE hold a controlling stake in the project (50 % + 1 share). However, owning a 50% stake in a project usually requires significant investment on the part of the SOE, a consideration that can reduce the amount of profit initially seen by the state as the SOE recoups its capital investment costs. To deal with this inconvenience, PSAs are often structured so that

the SOE contribution is ‘carried’ (i.e., paid for) by other consortium members and the government repays this contribution from its share of profit oil.

2.1.3 Objective of PSAs

Today, the PSA continues to be used in relationships between IOCs and some resource-rich states (or their SOEs) for the exploration, development and production of hydrocarbons. The fundamental principle of these types of contracts is the notion of shared production. Given the time-scale of oil field developments, PSAs are often signed for a period of 25 to 30 years, although they can cover longer periods.

At the heart of a PSA is the mechanism to share profit between the host state and the oil company. This is an extremely important aspect of this type of contract, and it is impossible to assess the distribution of costs and benefits between the parties without understanding this mechanism. In PSAs, taxes and royalties are usually less important than in concessions. In concessions, taxes and royalties are a host government’s primary source of revenues from its hydrocarbon resources. PSAs are different in this respect, as they create a type of partnership between company and host state whereby oil is shared. So in PSAs, the terms for sharing the oil produced is a crucial mechanism to influence what revenues the host government will receive. In its most simple formulation, the calculation of ‘profit oil’ to be shared between the parties is quite simple:

$$\textit{Profit Oil} = \textit{Total Oil Produced} - (\textit{Cost Oil} + \textit{Royalties})$$

2.1.4. Benefits Of Production Sharing Contracts

2.1.4.1. Benefits Of PSA To The HC

With PSCs, the HC were able to kill two birds with one stone. The HC could get IOCs to produce their petroleum resources and at the same time maintain ownership and control over the resources. This reinforces the sovereignty of the state. A state that is sovereign should control its natural resources.

The profit percentage split can be increased if production increases so the HC can get more economic rent in times of windfall profits. The amount of production and its corresponding level of profitability are calculated in a pre-determined formula using the Rate of Return (ROR) or R-factor.

If after exploration, there is no commercial discovery worth producing in the contract area, the IOC would not be reimbursed the costs it incurred. In this way, the HG does not lose.

In a PSC, the HG's NOC controls the petroleum operations, while the IOC is in charge of the daily operations. The NOC is able to learn from the IOC from its greater involvement in what goes on in the field.

The taxation method, which is progressive based on the amount of oil produced using sliding scale terms, ensures that maximum economic rent is captured.³³ So when more oil is produced, the HC gets more rent.

2.1.4.2. Benefits Of PSA To The IOC

Oil companies aim at getting as much profit as possible by producing resources at the lowest possible cost and highest returns possible. When PSCs were first introduced, IOCs were already comfortable to the concession system so at first they resisted it, but later agreed to it when they discovered that many HG in resource-abundant countries were no longer willing to continue with concessions. In spite of this, there are some benefits of the PSC to IOCs.

The PSCs offered a relatively simpler fiscal regime for IOCs because concessions involved complex tax systems (royalties, income taxes, surface rental fees, other taxes). In concessions, since the HC have transferred the right of ownership to the IOC, they feel the need to tax as much as possible to ensure that they are getting maximum economic rent.

The IOC's share of cost oil makes it possible to recover its costs incurred in the petroleum operations and also capital expenditure. This assurance can encourage them to bring in the best technology to exploit the resources.

Moreover, if all the costs cannot be recovered during the period of production sharing, for example, if the petroleum produced is not enough to cover the costs, what is owed to the IOC is carried forward.

2.1.5 Principle of Production Sharing

- Management control held in the government. Government keep participate and supervise the operations of the contractor and for the contractor's Work Program & Budget (WP&B) have to approved by government.
- Capital and risk is covered by contractor and state will recover operating costs incurred in accordance with work program and budget that has been approved by the Head of Executive Body, after contract area is in commercial production.

- Contractors are required to pay taxes incurred in relation with the activities.

2.1.6 Difference in PSAs

While PSAs differ widely in their terms and condition, a number of common principles have emerged. A few of these principles are summarized below:

- On the host state side, an NOC or other SOE can be a party to the contract.
- The state retains legal title to the unproduced natural resources and only transfers title to the IOC's share of the oil once it has been produced.
- The IOC usually bears the risk at the exploration stage (i.e., if no oil is discovered).
- PSAs, once negotiated and signed, often become part of national legislation.
- The state or the NOC grants the IOC the right to explore, develop and extract oil.
- The IOC invests capital (along with the NOC in some cases) and initial capital expenditures and on-going maintenance costs are deducted from production in the form of cost oil.
- The IOC receives a share of the produced oil in accordance with the PSA. This is normally called the profit oil.
- Cost oil and profit oil (and any other bonuses, royalties, duties, or taxes) are calculated on the basis of the amount of oil actually produced.
- The parties share profit oil throughout the duration of the contract, with taxes on profit oil only paid to the government once the oil has been received.

2.1.7. Cost / Expenditure

A cost in oil and gas can refer to the amount of spending of contractors will have to produce in the duration course of the production. Cost affects the overall production as the client and contractors will have a different aim in cost management. The client's aim is to have the product at the end of the project, fully functional and within the scope of work. The client's role in cost is to comply with the needs of the company and to meet up with expectation of the stakeholders. While, the contractors aims to make profit from the project by carefully managing the purchase of materials, workmanship wage and company's income (Jurgensen, 2000). According to Phillippe Jorion, there are 3 purposes of using value at risk. The first is to measure risk, since risk could come anytime. The second purpose is to control the risk, So if the risk are already identified, company still can control the risk and give the best effort to manage it. And the last purpose is to manage risk. So, in the future, the decision making process would be better if the company know what risks they face and how significant the risks are (Jorion, 2007).

This cost management is important if the company aims to be in the business and competitive with other engineering contractors in the market (Atkinson, 1999). In order to optimize resources, budget is one of the tools to make it. Budgets are the plans by which resources required to generate revenues are allocated (Jones, 2007). There are two types of budgets most commonly used, there are as Capital Expenditure and Operating Expenditure. For more details would be explained below:

2.1.8. Capital Expenditure

According to (Jones, 2007), Capital Expenditure is the use of capital assets that have a life span considerably in excess of a year. They are considered to add to the capital investment of the company and are therefore subject to some form of depreciation.

Capital expenditure made for an asset with a useful life more than a year that can be increases the value or it can be extends the useful life of an assets. Generally, capital expenditure may not be deducted in the year they paid, they are capitalized and generally may be depreciated or amortized.

2.1.9. Operating Expenditure

According to (Holtsnider, 2007) , Operating expenditure is something whose value is gone in a shorter period of time. Operating expenses are the cost of resources used to support the ongoing operations of a business. Operating expenses are for the items that last for a short time, and have no residual value after that period.

In Oil and Gas, Operating Expenditure is all the expense in order to finance oil and gas upstream operations include the exploration, field development, production and administrative cost. There is investment cost (exploration and field development) and operating costs and administrative expenses (including finance support).

According to (Glaeser, 1996) on his published journal about *Model Improves Oil Field Operating Cost Estimates*, developing a good understanding of future operating cost trends is important. Incorrectly forecasting the trend can result in bad decision making regarding investment and reservoir operating strategies. Predicting future operating cost trends is especially important for operators who are currently producing a field and must forecast the economic limit of the property.

2.1.10. Cost Recovery

Contractor that has production sharing contract can claim the operating expenditure to the government. Cost Recovery is consequence of the principle that government should not issue a financial investment and risk. Contractor is entitled to recover the operating cost, all the cost that

incurred to conduct petroleum operations. Petroleum operations is all exploration, development, extraction, production, transportation, marketing, abandonment and site restoration operations authorized or contemplated under this contract. Petroleum operations is all activity that include the exploration, exploitation, transport, plug and abandonment wells and site restoration of oil and gas. Cost recovery is about the most attractive element of a Petroleum Sharing Contract to the International Oil Companies (Contractors) as it provides an avenue to recouping sunk cost which is not consideration in a concessionary system (Akinwumi, 2009).

Terms of cost recovery that will be refund by government are: After the PSC gets their commercial production, After government take the percentage of (First Tranche Petroleum), Before the result of production split between government and contractors.

It is stated that Contractors Operating Cost that can be recovered are:

- a. Current Year Non-capital Cost, expense that can be recovered from the production in the current year.
- b. Current Year's depreciation for Capital Cost, depreciation of capital cost that can be recovered from the production in the current year.
- c. Current Year allowed recovery of prior Year's Unrecovered Operating Costs, all the operating cost on the prior year that unrecovered as Cost Recovery (if there's any).

2.1.11. Price

Price is one element of the marketing mix that produces revenue; the other element produce cost. Throughout most of history, prices were set by negotiation between buyers and sellers. Traditionally, price has operated as the major determinant of buyer choice. Consumers and purchasing agents have more access to price information and price discounters. Consumers put pressure on retailer to lower price.. Retailers put pressure on manufacturers to lower .

Kalingga (2011) on her research wrote that price has important roles for the sustainability of company. Here are the following of price roles:

- 1 Price becomes the factor of demand in the market. There are two types of demand considered to the price. First type is elastic. This type of demand shows that demand changes when the price increasing or decreasing.

While the second type, inelastic, shows that demand remains the same even though the price has changed.

- 2 Price determines the number of sales and profit. The quantity of product that has been sold equals with per unit sold times to price. On the other hand, profit is obtained from revenues subtract with cost of goods sold.

3. Price can influence the market when the company intends to do expansion by entering the lower market segment. It is believed that it can boost the company's profit.
4. Price can help the company's product distribution by setting up price strategy. Price per unit, price cutting, and requirements of payment have important role toward stock of product where the price must be competitive. It means that the difference of price is not too big with competitor's price.

2.1.12. Crude Price

(Alquist, 2010) found on his journal that the current oil price is a better predictor of future oil prices than various complex forecasting models. Baumeister and Peersman (2011) also found that an oil price increase of a given size seems to have a decreasing effect over time, but noted that the declining price-elasticity of demand meant that a given physical disruption had a bigger effect on price and turned out to have a similar effect on output as in the earlier data. (Willett, 2000) , who investigated the relationship between oil prices and economic growth for various panels of Organisation for Economic Co-operation and Development (OECD) countries, observed a negative relationship between oil price and economic growth.

Arouri, Lahiani, and Bellalah (2010) examined the relationship between shocks that had occurred in oil prices and stock returns by using linear and non-linear models within the period of 2005-2008 among countries exporting oil. According to the results of the research, it was revealed that stock returns in Qatar, Oman, Saudi Arabia and United Arab Emirates had responded to changes in oil prices, though change that had occurred in oil prices in Bahrain.

2.1.13. Profitability

According to Webster's dictionary, profitability is "a valuable return, and the excess of returns over expenditure in a transaction or series of transaction" (Woolf H. , 1980). Almost for business decisions are directly or indirectly depend on profit or profitability. Profit happen, if the sales revenue is higher than the cost. According to Muthusamy, A (2012) for analysis of sales trend, 'Sales' is the value of the output supplied to the customers. It is the life blood of a business enterprise. Without that the business cannot survive.

'Sales' is the indicator of the operational efficiency of management in how efficiently the management has used the assets of the business. The higher volume of sales means more efficient in the management. Sales also related to profitability of an enterprise, if other things remain constant. The higher amount of sales, the more profitable the business is and vice versa.

The trend analysis of sales helps to understand the growth of a business enterprise. It is a form comparative analysis to identify current and future movement based on historical data or financial ratio.

2.1.14. Correlational Research

According to (Creswell, 2008) , a correlational research design is useful to researchers who are interested in determining to what degree two variables are related, however , correlational research does not prove a relationship; rather, it indicates an association between two or more variables.

J.Creswell on his books wrote that there are two type of correlational design. First is explanatory design,that is conducted when researchers want to explore the extents to which two or more variables co-vary, where changes in one variable are reflected in changes in the other. And the second is prediction design, that is used by researchers when the purpose of the study is to predict certain outcomes in one variable from another variable that serve as the predictor. Prediction designs involve two types of variables, predictor variable and criterion variable. The predictor variable is utilized to make a forecast or prediction. The criterion variable is the anticipated outcome that is being predicted (Creswell, 2008). Prediction studies also include a forecast of anticipated future performance, as well as advanced statistical procedures including multiple regression.

2.1.15. Exploration history in the Ogaden Basin

According to Cakaara News, Ethiopia has hydro-carbon potential. The country has five sedimentary basins - Ogaden, Gambella, Omo, Abay and Tigray - which are believed to be promising for oil discovery. Oil seeps are noted in different areas and signs of oil and gas were in some of the exploration wells drilled in the Ogaden basin, in south-east Ethiopia.

The history of oil exploration for petroleum in Ethiopia is long. It began in the 1920s when oil seeps were reported. According to a study paper, the first oil seep in Ethiopia was reported in 1860 and by the 1920s the prolific seeps of oil in the Red Sea coast were widely known. Early reports refer to oil seeps in the Ogaden basin: in the Gara Mulatta mountains near Harrar, in the Fafan and Gerger river valleys and near Jijiga.

The first exploration license for the then Harrarge province was granted in 1915 and subsequently transferred the Anglo American company, a London subsidiary of Standard Oil company, ultimately incorporated into Esso. In 1920 this company organized a survey party, the so-called Dudley Expedition, to conduct geologic surveys in northern Harrarge between Harrar and Jijiga and the Afar depression. Two possible drilling sites were noted but the final geological report on the concession was negative and this was cancelled.

The first exploration in the basin was undertaken by Standard Oil in 1920. More recent exploration by Tenneco resulted in the discovery of an estimated 68 million cubic metres (2.4 billion cubic feet) of gas in 1974. Development of the reserves in the basin's Calub and Hilala gas fields is being carried out by the Gazoil Ethiopia Project, a joint-venture partnership between the government of Ethiopia and Texas-based Sicor announced in December 1999.

During the next decade, exploration in Ethiopia focused on the Red Sea coastal and it was not until 1936, during the Italian occupation, that systematic geological mapping of the Ogaden Basin began. This work was performed by AGIP and their records were later used by other companies in early studies of the region.

The history of oil exploration in the Ogaden basin dates back to the 1940s. The discoveries of oil in Saudi Arabia raised hope for oil discovery in the Ogaden. It is not only the proximity of the region to the Middle East that raised hope, but also the similarity of the nature and age of the sedimentary rocks in the Ogaden and the oil productive basins in the Middle East.

Sinclair Petroleum was granted an oil exploration license covering all Ethiopia in July 1945. Preliminary work on the regional geology and detailed discussions with AGIP geologists focused interest on the Ogaden region and field survey began in that area. The influence on this work of the idea that the Horn of Africa was a similar geologic province to Saudi Arabia is revealed clearly in the company's final report. Sinclair relinquished the concession in December 1956.

Studies indicate that the source rocks in the Ogaden region had generated oil. The question is where the oil reserve is to be found. In order to find the reserve many wells have to be drilled. In the past 50 years or so only 46 wells were drilled in the region.

In March 1959 Gewerkschaft Elwerath of Germany signed a concession agreement covering the eastern Ogaden region. Geology and photography focused attention in the lower Wabishebbelle area where seismic and gravity survey commenced in 1960. Based on the results of this work the first exploration well, Abred-1, was drilled in 1963. However, the well was abandoned without significant hydrocarbon shows.

In 1969 Tenneco, an American oil company, obtained an exploration license over the Ogaden basin. After conducting various surveys, Tenneco drilled the first well, El Kuran-1, in 1972. The well had continuous oil shows. A step-up well, El-Kuran-2, perhaps seeking better result, also had oil and gas shows. The company drilled other seven wells.

The third well, Calub-1, discovered a gas field. Magan-1 and Hilala-1 wells, both west of Calub-1, yielded noncommercial free oil. Tenneco relinquished the concession in 1975 in the wake of the Ethiopian revolution. The military junta expelled all western companies.

A senior petroleum expert who used to work for the Ministry of Mines and Energy told The Reporter that the results obtained from the exploration work in the Ogaden were encouraging. The Soviet Petroleum Exploration Expedition (SPEE) conducted various surveys and drilled several exploration wells. SPEE confirmed the size of the natural gas reserves in the Calub and Hilala gas fields. The data collected by SPEE is still used by other companies engaged in oil exploration projects in the region.

Two American companies, Hunt and Maxus, conducted various geological surveys in the early 1990s. In July 2005, Petronas, the Malaysian oil and gas giant, acquired three blocks in the Ogaden basin - Genale block 24,420 sq. km. Kallafo 30,612 sq.km. and Welwel-Warder 36,796 sq.km. Previously, Petronas had an exclusive study right agreement with the Ethiopian Ministry of Mines and Energy (MME) in the Ogaden basin which lasted for two years. The company had upgraded the seismic data collected from the region in Kuala Lumpur. Experts of the company, in collaboration with the MME, analyzed the data. Based on their findings, Petronas selected three blocks it took in 2005. Petronas has also acquired block 15 and 11 in the Ogaden basin. Petronas won the tender put up by MME in 2005 to privatize the Calub and Hillala gas fields in the Ogaden. Petronas paid 80 million dollars to the gas fields. The natural gas reserve is estimated at 116 billion cu.m.

Petronas drilled the first wild cat well in the Ogaden basin in the Genale block. Petronas hired an oil exploration company, Weather Ford, a British company based in Dubai. Weather Ford was contracted by Petronas to conduct seismic survey and drill exploration wells in the Ogaden basin. The exploration well was 3000 meter deep. It took Weather Ford two and half month to finalize the drilling. The Genale block is one of the promising areas for oil discoveries in the Ogaden basin.

According to Fortune,2013, PetroTrans then signed a PPSA agreement with the Ministry in July 2011, but the deal was terminated by the Ministry exactly a year later. This was because the company reportedly did not undertake any field works as was required according to the agreement. This created a dispute with the company, which claimed that it was analysing and interpreting old data collected from the concessions.

The exit of Petronas in 2010 was followed by an international tender in March 2011, which was won by PetroTrans after it agreed to invest close to four billion dollars to develop the gas fields. It won after beating six other bidders, including South West Energy (SWE), the National Oil Company (NOC) of Ethiopia- largely owned by Mohammed Ali Al-Amoudi (Sheikh) – and Cobramar of Seychelles.

The Ministry of Mines (MoM) signed a petroleum production sharing agreement (PPSA) on November 16, 2013, with Chinese firm Poly GCL Petroleum Investment Ltd, for the Ogaden basin's Calub & Hilala gas reserves (POLY-GCL,2014).

The area, which was first identified as a potential natural gas reserve in the 1930s, has repeatedly attracted the attention of foreign investment, but nothing has been realised thus far.

About a dozen companies have obtained licences for the fields after the presence of gas was confirmed in 1972 by Tenneco – a US company. This has created an extensive collection of seismic and other data on the area, which is estimated to hold 76 million cubic metres of natural gas.

The companies that have gathered the information include Malaysia-based Petronas Carigali, Soviet Petroleum Exploration (SPEE), Hong Kong-based PetroTrans and Chinese company Zhongyan Petroleum Exploration Bureau (ZPEB). The latter drilled eight wells in two different sites in order to ready them for exploitation.

2.2. Empirical Literature

The study by Bindeman (1999) stated PSAs address the important issue of ownership of oil reserves which has made this contract form politically acceptable in most developing countries. Before the introduction of PSAs the concession agreement vested, for all intents and purposes, the ownership with the foreign company in control. Under PSAs reserves and all installations and plants built by the FOC are government property. The PSA is attractive to foreign firms, particularly those based in the USA, because they can book the reserves in their balance sheets notwithstanding the fact that they do not own them. It seems that the rationale is that the company is entitled to produce for a long period of time, in many cases for as long as the field is alive. During this time it can book the reserves because of access rather than legal title.

The study concerns itself with the balance between risks and rewards and the division of benefits among the parties to the contract which have not yet been analyzed with the tools of modern industrial economics.

Aslanly,Rzaev & Shaban (2009) further stated PSAs have emerged in the past number of decades as a popular form for structuring oil and gas contracts between resource-endowed countries and international oil companies (IOCs). While these agreements are not the only means for regulating the exploration and development of hydrocarbons, they have been used extensively in a number of producing countries.

The study discusses the provisions of a particular type of oil and gas contract, the Production Sharing Agreement (PSA). While the study is aimed at a general civil society readership, it draws particularly on experience from Kazakhstan.

Most of the developing countries are technologically and financially incapacitated (Ayoola, 2005). Hence, one of the options for the countries that produce oil and gas resources is to engage International Oil Companies (IOCs) who argued to have required financial and non-financial resources to exploit the petroleum resources contained within the territory of the countries

(Johnson, 2003). Production sharing contract (PSC) is perhaps the most common form of agreement between those developing countries and the IOCs in international petroleum operations (Johnston, 2003). In a PSC (in most cases), the IOC bears all exploration costs and risks and if commerciality is attained, the host country has the right to participate in the venture as a working interest owner at a pre-determined rate (Brock et al., 2007).

According to Theresa Nwaefuluno Egwele (2001) Different fiscal regimes are available to Host Governments who want to manage their petroleum resources and maximise economic rent. They include tax royalty and contractual systems. HG try to get as much wealth as possible from their petroleum resources by encouraging investment in the oil and gas sector especially if they do not have the finance and expertise to do this.

The paper examines the fiscal regimes for petroleum resources so as to compare them in particular to Production Sharing Contracts to show how well it benefits the Host Governments especially as regards capturing economic rents. The author concludes by explaining that there is no one best fiscal system as they have their advantages and disadvantages but that to a large extent, Production Sharing Contracts are profitable to Host Governments.

Marcia Ashong (2001) stated that a vital feature of the modern Production Sharing Contract has been the provision for the recovery of costs. PSC's offer the IOC's the opportunity to recover costs where there has been successful exploration and future production costs. Since their introduction 'Cost Recovery' (Cost Oil) has largely been accepted as the most attractive way for IOC's to mitigate their investment risks.

The Paper will examine the extent to which cost recovery mechanisms are a sufficient guarantee for the risks taken by the IOC's.

To Sum up, the empirical analysis for this paper focuses on risks and rewards and the division of benefits in PSAs, provisions of a particular type of oil and gas contract especially PSAs, PSA's benefit to the Host Governments, cost recovery mechanisms and expected return of using PSAs.

2.3. Conceptual Framework

A conceptual framework is a way of representing the thinking about a problem. It represents researcher's synthesis of literature on how to explain a phenomenon. It maps out the actions required in the course of study. The conceptual framework can be understood as an explanation of how a researcher sees the different concept and outcomes of the study and its relations with each other. The conceptual framework of this research is as seen below.

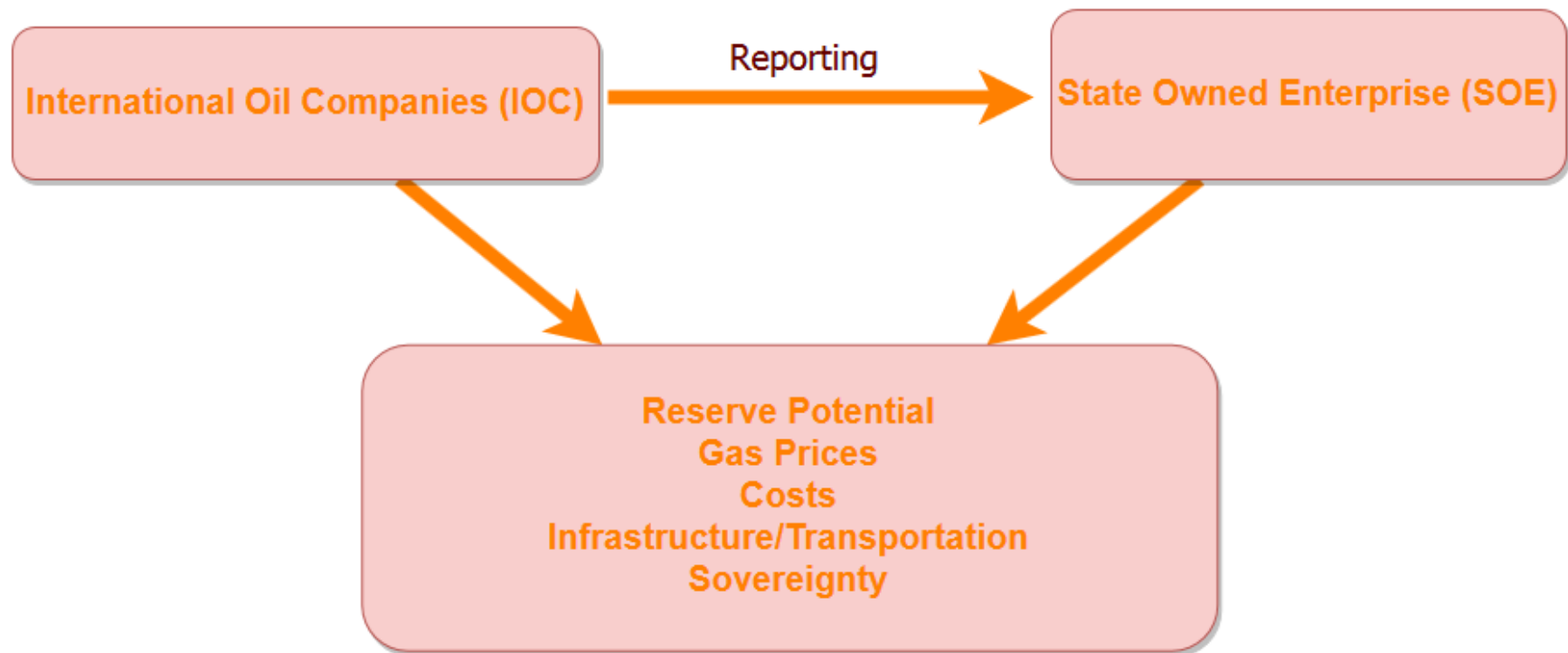


Figure: 2.1: Conceptual Framework

Source:Researcher

Chapter Three

Research Methodology

3.1. Research Design and Approach

This research employed descriptive approach to describe systematically the existing situation of Ethiopia's oil and gas industry and use of Product Sharing agreements . The study described the challenges by using primary and secondary data sources. Primary data was gathered from employees and management of the Ministry of Mines and International Oil Companies working in Ogaden basin . The study collected secondary data on Product Sharing Agreement from government departments, internet searches, libraries and progress reports

The required information was collected through interview as well as personal observations using non probability sampling techniques. They were used to get qualitative and quantitative data from the respondents.

There are two basic approaches to research, quantitative approach and the qualitative approach. Quantitative approach involves the generation of data in quantitative form which can be subjected to rigorous quantitative analysis in formal and rigid fashion and the qualitative approach to research is concerned with subjective assessment of attitudes, opinions and behavior (Kothari, 2004).

The researcher used only qualitative research approaches. This study was based on descriptive analysis and the methodology was to collect qualitative types of data through interview and overall researcher's observation.

3.2. Research Methods/ Techniques

This research study used descriptive research methods. A descriptive research method helps to describe relevant aspects of the qualitative data analysis.

In this regard the researcher was able to interact with the staff in the organizations ,which can make it possible to understand the dynamic factors of the research by having a firsthand experience.

Different research methods have their own techniques that should be clearly stated. This study focuses to examine the assessment of product sharing agreement as a strategic management tool for oil and gas companies in the Ogaden basin through interviews for both the state owned enterprise (in Ethiopia's case, Ministry of Mines) and International oil companies that have an operation in the Ogaden basin.

3.3. Sample Design

The major purpose of this study is to assess product sharing agreements as a strategic management tool for oil and gas companies in the Ogaden basin. To undertake this research, the study followed appropriate design to improve relevance and accuracy of research findings by using relevant sample size.

3.3.1. Population

The target population of this research are all oil and gas companies that have signed Product Sharing Agreements with the Ethiopian government to explore and/or develop natural gas and/or oil in the Ogaden basin. The population under study constitutes a total of **8 (eight) contracts (PSAs)**. A sample of these members was taken for the study to get the required information.

#	International Oil Companies	Year the PSA was Signed with MOM in Ogaden
1	Anglo American Co.	1915
2	Standard Oil	1920
3	Tenneco	1969
4	Soviet Petroleum Exploration Expedition (SPEE)	1986
5	Petronas	2005
6	South West Energy (SWE),	2012
7	PetroTrans	2013
8	Poly GCL Petroleum Investment Ltd	2013

Table 3.1. IOCs in the Ogaden Basin

Source: Researcher

3.3.2. Sampling Technique

Due to constraints such as time and budget, it was not possible to collect data from the entire population. Non probabilistic sampling technique was used for this study. A combination of

Maximum variation sampling and convenience sampling was executed . Maximum variation sampling, also known as heterogeneous sampling, is a purposive sampling technique used to capture a wide range of perspectives relating to the thing that you are interested in studying. Convenience sampling A statistical method of drawing representative data by selecting people because of the ease of their volunteering or selecting units because of their availability or easy access. The advantages of this type of sampling are the availability and the quickness with which data can be gathered. The reason for choosing these techniques is because it made the survey faster and easier.

3.3.3. Sample Size

The sample size (the number of people involved in the test) should be large enough to enable the researcher to feel confident about the data gathered, but small enough so as not to make information gathering prohibitively expensive or close monitoring too difficult (Monica Brand, 1998). Sample size is the number of elements in the obtained sample (Kothari, 2004).The researcher selected samples of **3 (three)** PSAs from the population of 8 (eight). The three contracts are Pertonas (2005), Petro Trans (2013) & POLY-GCL (2013). The reason why the researcher purposefully selected three of those eight contracts is to show range and variety in the observations.

3.4. Data Source and Data Type

The necessary data for the study was obtained from both primary and secondary sources.

3.4.1. Primary Data Source

Being the main base for the study, primary data was collected via field work survey in order to get first hand information on the product sharing agreements and their use in Ethiopia through interview as well as observations.

3.4.2. Secondary Data Source

The secondary data was obtained from different tax related rules and regulations, manuals, literatures, websites, progress reports and different related documents to the study. While

collecting and using these data for the study, more considerations was given to their time period, reliability, and relevance to the purpose of the study.

3.5. Data Collection Methods

The collection of data is an important aspect of a research design. The method of collection of data could directly affect the credibility of a research. While collecting primary data, the researcher employed the collection techniques of interview . Considering the research problem under discussion, the researcher believes that these technique was more helpful in gathering as well as analyzing data. In addition the researcher also conducted personal observations and discussions with related bodies.

Interview

Semi-structured interview were employed in the study to get qualitative data from employees and management of the Ministry of Mines and International Oil Companies working in the Ogaden basin and personal observations were also conducted to gather additional data.

3.6. Ethical Consideration

The challenges of acting ethically in developing economies with significant hydrocarbon reserves are immense. No compliance program is going to be completely successful, and no amount of planning and preparation can anticipate and prevent all the compliance and ethical issues that may await foreign companies in these environments.

What can be done is the implementation of a sensible, yet comprehensive, program to prevent, detect, and if necessary remediate, compliance issues that do arise.

Compliance programs, compliant atmospheres and thoughtful contracting and monitoring processes, can allow businesses operating in these difficult environments to be both competitive and compliant.

Chapter 4

Data Analysis and Research Findings

4.1 Introduction

This chapter describes the analysis of data followed by a discussion of the research findings. The findings relate to the research questions that guided the study. Data were analyzed to assess the strategic use of Production sharing agreements to oil and gas companies in the Ogaden basin. Data were obtained from self administered semi-structured interviews. 11 (eleven) interviews were conducted from both the SOE and the IOC representatives. Interview questions were based on the three contracts (Pertonas (2005), Petro Trans (2013) & POLY-GCL (2013)) that were selected as samples from the population of eight. This represented 37.5% of the expected population.

The semi structured interview questions comprised of three sections and data generated will be presented as follows:

- The first section comprises of data describing the three Contracts and the parties involved in signing them.
- The second section data obtained from the analysis of the similarities and differences between the tree contracts and how the contracts influenced decision making.
- In the third section an economic analysis is made on the risks and rewards of PSAs according to the data obtained.

4.2 Methods of Data Analysis and Presentation of Data

Data analysis was used to summarize the collected data and organize them in order to draw appropriate conclusion for the findings. The type of research study is descriptive and data gathering tools was semi structured interview. The qualitative data analysis is expressed in terms of attitudes, opinion and observation.

4.3 Discussion of Findings

4.3.1 Analysis of the Three Contracts and Contractual Parties in the Sample

Petronas

The Malaysian oil and gas company, Petronas has been prospecting for oil in the Ogaden basin since 2005. Petronas acquired three blocks – Genale, Callafo and Wel Wel-Warder – in 2005 from the Ethiopian Ministry of Mines and Energy (MME). Later, the company acquired Block 11 and 15. In June 2007, the company signed an agreement with the ministry to develop the Calub and Hilala gas fields and made an up-front payment of 80 million dollars to the Ethiopian government.

The company planned to build a gas treatment plant and to construct a gas pipeline all the way from the gas fields to the port of Djibouti. The total investment is estimated at 1.9 billion dollars. However, work on the gas field development project was not commenced for various reasons, including security problems.

Petro Trans

In July 2011 the Ministry of Mines awarded the Calub, Hilala and Genale natural gas fields and eight exploration blocks found in the Ogaden basin to a Chinese oil and gas company, Petro Trans Company, which won the bid the ministry put up to privatise the gasfields.

The petroleum development agreement bestowed PetroTrans the right to develop the natural gas reserves in the Calub and Hilala localities found in the Somali Regional State.

The production sharing agreements granted the right to PetroTrans to prospect for oil and gas reserve in blocks 3 and 4, 11 and 15, 12 and 16, and 17 and 20 in the Ogaden basin. The gas fields as well as all the exploration blocks were previously held by the Malaysian oil and gas giant Petronas.

POLY GCL

China POLY Group and GCL Group have been long term partners and founded POLY-GCL Petroleum Group Holdings Limited in order to develop oil & gas in the Federal Democratic Republic of Ethiopia

On November 16, 2013, POLY-GCL Petroleum Group Holdings Limited (referred to as “POLY-GCL”) signed 5 Production Sharing Agreements (PSAs) with the Ministry of Mines of Ethiopia.

POLY-GCL specializes in the integrated business of oil & gas exploration and development, storage, pipeline transportation, refining and terminal sales.

The contract area is located in the Ogaden Basin, including 2 development blocks and 8 exploration blocks. It has a gross area of 117,151 square kilometers. The integrated project involves oil & gas exploration and development, as well as the construction of a pipeline, LNG plant and marine terminal. An oil& gas pipeline will be constructed from Ethiopia to Djibouti, while the LNG liquefaction plant and marine export terminal will be constructed in Djibouti.

The gas recovered in the Ogaden Basin will be transmitted to the Port of Djibouti via pipeline, and will be processed and liquefied at the LNG plant in Djibouti. Then, the LNG will be loaded onto special carriers with containers and shipped from POLY-GCL’s dedicated marine terminal to China.

4.3.2. Number of Years of Operation of the IOC in the sample

Petronas (2005-2010)

The Malaysian oil and gas giant, Petronas, suspended exploration work in the Ogaden basin in 2010 due to security problems.

According to an agreement reached on September 24, 2010, Malaysian state player Petronas Carigali Overseas has made a deal with Ethiopian player SouthWest Energy that will see it sell all of its assets in and about blocks 3, 4, 11, 15, 12, 16, 17, 20, and the Calub & Hilala contract area to the local independent.

This agreement let SouthWest acquire 100% of Petronas' interests in a bevy of PSAs – blocks 3, 4, 11, 15, 12, 16, 17, 20, and the Calub & Hilala contract area. All of the blocks are located in the Ogaden Basin, which covers 350,000 sq km and is the largest proven hydrocarbon bearing sedimentary basin in Ethiopia with proven gas reserves.

Petro Trans (2011-2013)

The Ministry of Mines revoked the petroleum development license it granted to the Chinese company, Petrotrans, that allows the latter to develop the natural gas reserves found in the Calub and Hilala localities in the Ogaden basin.

The ministry cancelled the petroleum development agreement on the grounds that Petrotrans failed to commence work on the gas fields found in the Somali Regional State according to schedule.

PetroTrans and the Ethiopian government embroiled into disagreement following the latter's decision to terminate the petroleum development agreement signed by the two parties in 2011. In July 2011 the Ethiopian Ministry of Mines awarded the Calub and Hilala gas fields found in the Ogaden basin in South East Ethiopia. The ministry also granted PetroTrans eight oil exploration blocks in the Ogaden basin.

The Hong Kong-based Chinese oil and gas company, PetroTrans, and the Ethiopian government were involved in court litigation at the International Arbitration Court of the International Chamber of Commerce over terminated natural gas development project. The company claimed for the compensation following termination of five gas exploration and development agreements that signed with the Ministry in 2011.

The court has rejected the claim by Petro Trans for a 1.4 billion US dollars compensation for the termination of five exploration agreements. On January 22nd 2016 Ethiopia claimed victory over Petro Trans at the International Court of Arbitration against a 1.4 billion dollar compensation law suit.

POLY GCL (2013-Present)

In 2015 POLY-GCL Petroleum Group Holdings Ltd had finished drilling two appraisal wells in Ethiopia's southeast and would soon know the size of gas deposits. They have finished drilling and are conducting tests on the reservoir. Poly-GCL started gas production in 2016. China's Petroleum Group Holding Ltd, Poly-GCL which signed five Production Sharing Agreements (PSAs) with the Ministry of Mines, Petroleum and Natural Gas of Ethiopia on November 2013 carried out seismic tests in Calub and Hilala fields in the southeast Ogaden Basin. The two fields have deposits of 4.7 trillion cu feet of gas and 13.6 million barrels of associated liquids. It is also still working on the integrated project which involves oil & gas exploration and development, as well as the construction of a pipeline, LNG plant and marine terminal.

When this Paper is being written POLY-GCL Petroleum Investments Limited Ethiopian Branch has continued its harmonious relationship with the Ethiopian government and the Ministry of Mines and its projects are running smoothly. POLY-GCL has gotten much further with its project than any other previous IOC that was occupying the blocks it has now.

4.3.3. Assessment of the Contracts

The production sharing agreement shall cover Petroleum Operations in the Contract Area. During the term of this Agreement all Petroleum production resulting from the conduct of Petroleum Operations shall be divided between the Parties in accordance with the provisions of the contract. This Agreement shall consist of an Exploration Period, and a Development and a Production Period, both of which may run concurrently.

According to the assessment of previous and current contracts the MOM has signed with IOCs, the Contractor shall begin Petroleum Operations within ninety (90) days after the Effective Date and shall notify the Ministry of the date on which it has commenced Petroleum Operations.

The Exploration Period agreed upon in the contract shall have a first extension and a second extension, following the initial term.

The Contractor shall have the right to surrender all or part of the area included within any Development Area upon giving the Minister one hundred eighty (180) days written notice of its

intention to do so. A surrender of all the area included in the Contract Area shall constitute a termination of this Agreement.

The Minister may also terminate this Agreement by giving the Contractor prior written notice , if any of the following termination events shall occur:

- (a) if the Contractor fails to make any payment required under this Agreement;
- (b) if the Contractor fails to comply with any other material obligation that it has, assumed under this Agreement;
- (c) if the Contractor fails to maintain that same degree of financial ability, technical competence and professional skill necessary to carry out Petroleum Operations that it possessed as of the date of the signing of this Agreement, so as to adversely affect the performance of its obligations hereunder;
- (d) if the Contractor becomes insolvent, makes a composition with creditors, or goes into liquidation other than for reconstruction or amalgamation; or
- (e) If Petroleum Operations are interrupted for more than one hundred eighty (180) days.

Local employment, training and preference

The Contractor and the Subcontractors shall give preference to the employment of Ethiopian nationals in all Petroleum Operations to the fullest extent possible, provided such nationals have the required qualifications and experience.

The Contractor shall establish a training and employment program, approved by the Minister, for Ethiopian nationals.

The Contractor and the Subcontractors shall give preference to Ethiopian materials, products and services used in Petroleum Operations where those materials, products and services are of comparable quality and are readily available at competitive prices.

The Contractor shall submit a report on a regular basis detailing the employment of Ethiopian nationals and the utilization of Ethiopian materials, products and services in a form to be specified by the Minister. In addition, the Contractor shall, within thirty (30) days of employing,

notify the Minister the name and the terms and conditions of employment of any Ethiopian national.

The contractor shall prepare a community development program to be carried out in the Contract Area for the duration of the Exploration Period.

Environmental and safety measures

The contractor shall conduct Petroleum Operations in a safe and proper manner in accordance with generally accepted international petroleum industry practice and shall not cause damage to the general environment, including, inter alia, the surface, air, lakes, rivers, marine life, animal life, plant life, crops, other natural resources and property, and shall forth with repair any damage caused to the extent reparable, and shall pay reasonable compensation for all damage which is beyond repairs.

Exploration

The Contractor shall carry out the following work obligations and make the following exploration expenditure during the initial term of the Exploration Period and the extension periods:

- (a) geological and geophysical operations, including certain kilometers of seismic surveys, such shooting to commence within specified months after the Effective Date, with minimum expenditure of certain amount of money for such seismic operations; and
- (b) Drill certain exploratory well(s) to a minimum depth of certain meters per well, the first such well to commence not later than certain months after the Effective Date, with minimum drilling expenditure of of certain amount of money for each such well.

Bank guarantee

The Contractor shall provide to the Minister at the commencement of the initial term of the Exploration Period and each extension thereof, an irrevocable and unconditional bank guarantee for the minimum work obligations set forth herein for the applicable term of the Exploration Period from an institution and in a form acceptable to the Minister, and in an amount which shall be equal to the corresponding expenditure obligations.

Annual rentals

The Contractor shall pay to the Minister during the term of the Exploration Period annual rentals for all un surrendered parts of the Contract Area that have not been designated as a Development Area.

Imports

The Contractor and each Subcontractor shall be entitled to import into Ethiopia any and all drilling, geological, geophysical, production, treating, processing, transportation and other machinery and equipment necessary for Petroleum Operations, including aircraft, vessels, vehicles and other transportation equipment and parts therefore (other than sedan cars and fuel therefore), fuels, chemicals, lubricants, films, seismic tapes, house trailers, office trailers, disassembled prefabricated structures and other materials necessary for Petroleum Operations free of import taxes, charges, duties, levies and imposts of any kind, provided, however, that this shall not preclude the Contractor and the Subcontractor from paying charges to the Government for services actually rendered by any appropriate Government agency.

4.3.4. Reporting of IOC to the SOE

The Contractor shall supply to the Minister:

- a) Daily reports on drilling operations and weekly reports on geophysical operations;
- b) within thirty (30) days after the end of each Calendar Quarter, a report on the progress of Petroleum Operations during the preceding Calendar Quarter covering:
 - (i) a detailed description of the Petroleum Operations carried out and the factual information obtained;
 - (ii) a description of the area in which the Contractor has operated;
 - (iii) an account of the expenditure on Petroleum Operations in accordance with the Accounting Procedures set forth in Appendix I; and
 - (iv) a map indicating the location of all wells and other Petroleum Operations;

(c) Within three (3) months of the end of each Calendar Year, an annual report covering the matters specified in paragraph (b) for the preceding Calendar Year.

- The Contractor shall submit copies of all contracts or agreements with Subcontractors as soon as practicable after execution of such contracts or agreements.

The table below shows the reports and the reporting process of the three oil and gas companies in this study to the Ethiopia's Ministry of Mines.

During Exploration and Appraisal Process		
<u>Beginning of each year:</u> IOC Constructs a work program and budget for the year. This work program and budget can be revised if necessary.		
G&G Study	Seismic Acquisition	Well Drilling
*Prepare G&G Study work program at the beginning of each year. *Final report of the G&G study made to MOM when study is finished.	*MOM must first approve a technical proposal of the seismic acquisition made by the IOC. *Prepare seismic acquisition work program at the beginning of each year. *Make weekly operational report to MOM based on the work program.	*Prepare Drilling work Program at the beginning of each year. *Make daily operational drilling report to MOM based on the work program.
<u>End of each year:</u> Operation and budget report based on the work program and budget prepared at the beginning of the year.		
<i>N.B Data acquired at the end of studies belongs to the HG.</i>		

Table 4.1. Reporting Process

4.4. Merits and Demerits of the terms of the contract for the contractor

Demerits

- There is a specified level of obligation that the contractor must meet in the Initial exploration period and the extension periods that might follow. The specified obligations include G&G and Drilling Operations. The contract stated how much kilometer of seismic survey must be done in specified number of months and how much minimum budget the contractor needs to set for this. The contract also stated how much meter depth per well needs to be drilled in specified number of months and how much minimum budget the contractor needs to set for this. Any work less than what meets this obligation could lead to the termination of the contract.
- The contract obliges the contractor and its subcontractors to give preference to the employment of local employees. Even though it is clear why the ministry or the Ethiopian government has requested this to be one of the obligations, it's really challenging for foreign oil and gas companies. There could be language barriers, cultural and procedural differences. And the contractor has to spend on training fees for the local employees it is obligated to hire.
- The contractor must provide a bank guarantee to the ministry or the Ethiopian government in case it fails to meet its obligations. This money can only be released when the work has been done. The contractor loses interest or other benefits this money can provide because it is held in a trust until the contractor can meet its minimum work obligation.
- The contractor needs to pay the ministry annual land rent for the development area agreed on the contract. The land rent payable is not dependent on where the contractor is working on in a specific time. The contractor needs to pay this rent for the entire land it has occupied every year until the termination of the contract.

Merits

- The contractor and its subcontractors are exempted from paying import tax, changes, duties, levies and imposts when importing gears and equipment for the petroleum operation they are undertaking in at the contractual area.
- Expatriate employees of both the contractor and the subcontractor have a right to import household goods and personal effects into the country without paying tax.
- The salaries and other benefits of expatriate employees of the contractor and its subcontractors are exempted from personal income tax.

- The contractor is entitled to export petroleum products produced free of export duties and/or taxes.

4.5. Other Laws

- The Petroleum Tax Proclamation No. 296/1986 governs all petroleum operation carried out by a contractor within the territory of Ethiopia.
- According to the Ethiopia's Value Added Tax Proclamation (Proclamation No. 285/2002) article No. 27-Sub article No.1 " *Subject to this Article, if at least 25 percent of the value of a registered person's taxable transactions for the accounting period (other than under Article 7 Sub-article (2)(d) is taxed at a zero rate, the Authority shall refund the amount of VAT applied as a credit in excess of the amount of VAT charged for the accounting period within a period of two months after the registered person files an application for refund, accompanied by documentary proof of payment of the excess amounts.*". This article states that any VAT registered person or company can apply for VAT refund when their input VAT is greater than their Output VAT. The VAT refund amount is the excess input amount after the deduction of the Output VAT. And, since petroleum companies have no output VAT they can request from the tax office the entire input VAT amount since their Output VAT is Zero.
- According to the Ethiopia's Value Added Tax Proclamation (Proclamation No. 285/2002) article No. 23, if the subcontract the contractor chose to render services is not registered for VAT in Ethiopia, the rendering of services is taxed accordingly. The contractor as a VAT registered company will pay the taxed VAT for the service on behalf of the subcontractor and will eventually ask for the VAT refund of that amount with other inland transactions.

4.6. Economic Analysis

A PSA does not allow for up- or downgrading of the contract terms once the exploration period comes to an end and information about the exact size and characteristics of the deposit is available. The same problem arises at the start of exploration because the work obligation during this phase is finalized before work begins. It would appear that it is in the IOC's interest to have a

short initial exploration period and then negotiate the work programme for subsequent phases if needed.

Once development commences cost oil enables the IOC to recover its costs even if the project is not profitable. Under different contract forms costs are often deductible from taxable income which in the case of PSAs is the IOC's profit oil. If the project does not realize any profit then there might not be a taxable income against which to deduct costs. With cost oil, however, at least part of the expenditure can be recovered provided there is some cash flow.

Not surprisingly, IOCs are therefore keen on high cost recovery limits. The problem for the government is that the higher the cost recovery the lower the nominal profit oil to be shared between the parties. One way around this dilemma is to impose royalties thereby generating a guaranteed minimum revenue stream.

Depending on the discount rate marginal projects might not be profitable if the fiscal system is not sufficiently geared towards economic rents. Governments have recognized that this kind of rigidity can work detrimentally to their goal of maximizing revenue. Thus, most **PSAs** now offer sliding scales for the calculation of profit oil. We have shown that such a sliding scale is particularly effective if it is based on the IOC's rate of return. These so called sliding scales indicate that contracts have become more profit related. However, if the contract parameters are badly structured they can still work as disincentives in a low oil price scenario. If the oil price is high economic rent is large. Even if the government take is great the project is likely to be profitable for the IOC in which case a badly structured scheme is not a disincentive.

Figure 4.2 summarizes how **PSAs** deal with risks and rewards. The first column displays the various uncertainties encountered during the lifetime of a **PSA**. Next, in column two we consider who bears a particular risk, the government and/or the IOC, and then specify that risk. The third column shows how each party tries to control their risks, while column four discloses how the **PSA** addresses these issues.

The first uncertainty concerns reserves both during exploration and production. The main risk for the IOC is that reserves are not large enough to be commercially viable. Hence, if the contract

never enters into its production stage, the IOC has no way of recovering its exploration costs. However, if commerciality is declared and production begins, the IOC will want to recover its costs as early as possible. This is done through the cost oil allowance which is specified in the **PSA**. The government's main concern in this context is that the IOC applies best-practice methods during both stages in order to maximize total production. They can ensure this by monitoring the operation and by taking up their participation option.

The second row of Figure 4.2 deals with price uncertainty. Both parties to the contract will be concerned about the give-away of revenues if, during the production period, the oil price changes substantially and the contract is not sufficiently flexible to accommodate this change. In addition, a low-price environment may result in the non-exploration of some oilfields, and the non-profitability of existing operations. The aim for the contract partners is therefore to provide for an upsided ownside trade-off. Sliding scales, especially those for profit-oil shares, achieve this objective.

A further concern is the uncertainty regarding costs during development and production. The government's risk depends largely on its participation. However, if costs change significantly this will affect the amount of cost oil and/or the length of time during which the IOC requires the maximum cost-oil allowance. This in turn has an impact on the volume of production available for profit oil and thus on the government's profit oil. The IOC, in order to minimize its risk with regard to operation and capital costs, will have two aims. First, they want to recover their costs as early as possible. Second, they prefer contracts to display a degree of flexibility, possibly in the form of contract elements being linked to rates of return. The **PSA** takes care of these issues through cost oil allowances and sliding scales.

The last two rows raise the issues of infrastructure such as building roads or export terminals, and sovereignty. For the government both these areas are risk-free. The IOC is mainly concerned with costs, profitability, and expropriation. In addition they may fear that the government as the sovereign may impose adverse tax changes or price controls. In both cases it is in the IOC's interest to recover its costs as soon as possible, and for the payback to set in at an early stage.

While infrastructure and transport requirements vary widely and are contract-specific, the most common PSA response to sovereign risk is international arbitration.

Table:4.2.PSA Risks and Rewards

Uncertainty		Risk		Objective		PSA Response
		GOV	IOC	GOV	IOC	
Reserves	Exploration Stage	IOC not applying its best practice methods	Reserves are not commercially viable	Monitor operations	Cost Recovery	*Cost oil *Participation Clause
	Production Stage	IOC not applying its best practice methods		Taking up Participation option		
Oil Prices	High	Giveaway of revenue		Trade off upside for downside		Sliding Scales
	Low	Non-exploration of some oilfields	Non Profitability of existing operations			
Costs (Develop & Prod)		Depending on participation	*Operation costs *Capital costs	Flexibility		*Cost oil *Sliding Scales
					Link to rate of return	
Infrastructure/Transport		None	*Costs *Expropriation *Non-Commerciality		Cost Recovery	Contract specific
Sovereign Risk		None	*Expropriation *Tax Changes		Early Payback	International Arbitration

Table:4.3.Investment and Cost

	Blocks in the Ogaden Basin												Inv't Promise	Cost	Signing Bonus to GOV
	Exploration Blocks											Development Block			
	Block 1&2	Block 3&4	Block 5&6	Block 7&8	Block 9&10	Block 11&15	Block 12&16	Block 13&14	Block 17&20	Block 18&19	Block 22	Calub & Hilala			
Potential												118 Billion Cu.M			
Petronas		×					×		×			×	\$1.9 Bill	\$190 Mill	\$ 80 Mill
PetroTrans		×				×	×		×			×	\$4 Bill	\$1.4 Bill	\$130 Mill
POLY-GCL		×				×	×		×			×	\$4 Billion	\$1.6 Bill	\$150 Mill

Chapter 5: Conclusion and Recommendation

The basic intent of this chapter is to present the overall overviews of the research by summing the main findings. Accordingly, the chapter starts its discussion by briefly summing up the overviews of the study and its main findings. In section two based on the study finding the researcher highlight some recommendations the study pivoting on.

5.1. Summary

When designing a fiscal system a government aims to maximize revenue from its natural resources while at the same time providing sufficient incentives to foreign investors. The oil industry relies on many different contract forms. One of the most widespread types is the production-sharing agreement.

Under a PSA the IOC receives a share of production as a reward for its investment and operating costs and the work performed. It usually bears the entire exploration cost risk and shares the revenue risk with the host country. The contract is signed before exploration begins and the foreign partner will therefore expect significant rewards later on in the life of the contract. The IOC's revenue is made up of cost oil and profit oil, while the direct sources of revenue for the government can comprise royalties, profit oil, bonuses, taxes, customs duties, and indirect benefits that arise. PSAs do not divide profits out of market proceeds but instead divide the physical production after allowing a portion of output to be retained by the IOC for the recovery of pre-production and production costs. This means that costs can only be recovered once oil is produced. A source of disagreement at this point can be the definition of costs. This is the basis for the determination of the profit-oil volume that is the part of production remaining after costs in the form of oil have been deducted. The sharing of production follows a pre agreed split between the IOC and the state or its NOC. In theory the state controls the operation but the risk-taking private partner manages the project unless the NOC takes up its option to participate in the venture, which has become more common over time.

PSAs address the important issue of ownership of oil reserves which has made this contract form politically acceptable in most developing countries. Before the introduction of PSAs the concession agreement vested, for all intents and purposes, the ownership with the foreign company at the wellhead. Under PSAs reserves and all installations and plants built by the IOC are government property. The PSA is attractive to foreign firms because they can book the reserves in their balance sheets notwithstanding the fact that they do not own them. It seems that the rationale is that the company is entitled to produce for a long period of time, in many cases for as long as the field is alive. During this time it can book the reserves because of access rather than legal title.

5.2. Conclusion

The question this research tries to answer is how oil and gas companies in Ethiopia (especially in the Ogaden basin) use the product sharing agreement they signed with the Ethiopian government to make strategic decisions. A qualitative approach was adopted using a range of complementary methods. The study has provided insights on the types of decisions that oil and gas companies make in on a day-to-day basis based on the agreement they have signed.. Although this was a relatively small-scale exploratory study, confidence in the generalisability of the headline findings is enhanced by the high level of consistency in the findings, obtained using multiple methods, and the notable consensus among participants.

The apparently high level of consistency across the participate contracts suggests that the issues identified may be generic and relevant to other IOC both currently working and planning to invest in Ethiopia's oil and gas industry.

In view of the remit of this study, aspects relating to the three contracts taken as a sample for this research. This research first analyses the three contracts and the contractual parties involved. It then assesses the contracts the IOC (Petronas, PetroTranse and POLY GCL) signed with the SOC (in Ethiopia's Case, Ministry of Mines). By doing that it also reviews the reporting obligation and process of the IOCs to the Ministry. And finally, based on the analysis came up with the merits and Demerits of the three PSAs that were signed.

5.3. Recommendation

The following recommendations for research are based on the study findings:

The IOCs not only have to abide by the terms of the product sharing agreement but also by the laws that govern the industry they are working in . In Ethiopia there are different laws that affect the oil and gas companies working in the petroleum industry. In section 4.5. of this paper the major tax laws that affect IOC in Ethiopia have been discussed. If the decisions of the IOC are based on and/or follow the terms of the PSA and the laws of the proclamations motioned above, then there can't be any disagreement between them and the SOE that can terminate the agreement and the project.

For the IOC though cost recovery may not amount to full recovery of costs (and may even result to a loss to the IOC). The balance should be based on the apparent benefits included in the other parts of the contract. If coupled with incentives to compensate for this loss then cost recovery should be favorable to the IOC. IOCs need to bear in mind that as the global energy demand increases, new entrants in the form of smaller oil companies who have had adequate experience would be concluding contracts with HG's and at a time of rising oil prices these contracts would tend to be more favorable to the HG's. Without realizing this competition IOC's would be left behind as they continuously seek for more favorable terms.

On the other hand, while NOC's own the resources, they do not own the market, HC's especially those new to the industry, must be aware that to attract sound investment the design of the fiscal regime, more specifically cost oil, would be the essential pulling force for any IOC. There must be minimum assurances with clear incentives in recognition of the technical ability of the contractor.

The researcher would like to suggest that countries should not follow blindly in the way others sign international petroleum agreements. Each oil-producing country is unique in terms of its geological structure, oil and gas deposits, political system, labour so all these should be considered carefully when selecting fiscal systems. These systems should be tailored to suit the circumstances of the country.

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Annex

MODEL PETROLEUM PRODUCTION SHARING AGREEMENT

FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

8/26/2011

TABLE OF CONTENTS

MODEL PETROLEUM PRODUCTION SHARING AGREEMENT	5
SECTION I	6
SCOPE AND DEFINITIONS	6
1.1. SCOPE	6
1.2. DEFINITIONS	6
SECTION II:	9
TERM, SURRENDER AND TERMINATION	9
2.1 TERM	9
2.2 EXPLORATION PERIOD	9
2.3. SURRENDER DURING EXPLORATION PERIOD	10
2.4. DEVELOPMENT AND PRODUCTION PERIOD	10
2.5. TERMINATION	11
SECTION III: 13	
GENERAL RIGHTS AND OBLIGATIONS OF THE CONTRACTOR	13
3.1. RIGHTS OF THE CONTRACTOR	13
3.2. OBLIGATIONS IN RESPECT OF THE CONDUCT OF PETROLEUM OPERATIONS	14
3.3. ABANDONMENT AND DISPOSAL OF ASSETS	15
3.4. RECORDS AND REPORTS OF PETROLEUM OPERATIONS	16
3.5. JOINT LIABILITY AND INDEMNITY	17
3.6. LOCAL EMPLOYMENT, TRAINING AND PREFERENCE	18
3.7. ENVIRONMENTAL AND SAFETY MEASURES	18
3.8 REGISTRATION AND OFFICE	20
SECTION IV: 21	
GENERAL RIGHTS AND OBLIGATIONS OF THE	21
GOVERNMENT AND THE MINISTER	21
4.1. RIGHTS OF THE MINISTER	21
4.2. OBLIGATIONS OF THE GOVERNMENT AND THE MINISTER	21
SECTION V 22	
WORK OBLIGATIONS, EXPENDITURE AND BUDGETS	22
5.1. EXPLORATION	22
5.2. BANK GUARANTEE	24
5.3. DISCOVERY AND APPRAISAL	25
5.4. DEVELOPMENT AND PRODUCTION	26
SECTION VI: 29	
GOVERNMENT PARTICIPATION	29
6.1. GOVERNMENT PARTICIPATION	29

SECTION VII	31
COST RECOVERY AND PRODUCTION SHARING	31
7.1. COST RECOVERY	31
7.2. PRODUCTION SHARING	31
SECTION VIII:	33
PRODUCTION RATE AND MARKETING	33
8.1. PRODUCTION RATE	33
8.2. MARKETING	33
SECTION IX:	35
UNITIZATION	35
9.1. UNITIZATION	35
SECTION X:	36
DOMESTIC CONSUMPTION	36
10.1. DOMESTIC CONSUMPTION	36
SECTION XI:	37
BONUSES, RENTALS, ROYALTIES AND PAYMENTS	37
11.1. ANNUAL RENTALS	37
11.2. ROYALTIES	37
11.3. PRODUCTION BONUSES	38
11.4. SIGNATURE BONUS	39
SECTION XII	40
VALUATION AND MEASUREMENT	40
12.1. VALUATION	40
12.2. MEASUREMENT	41
SECTION XIII:	42
NATURAL GAS	42
13.1. NON-ASSOCIATED NATURAL GAS	42
13.2. ASSOCIATED NATURAL GAS	44
13.3. OTHER PROVISIONS	44
SECTION XIV:	46
FINANCIAL AND FISCAL MATTERS AND ACCOUNTING	46
14.1. FINANCES	46
14.2. TAXATION	46
14.3. FOREIGN EXCHANGE CONTROL	46
14.4. ACCOUNTING	48
SECTION XV:	48

IMPORTS AND EXPORTS	48
15.1 IMPORTS	48
15.2 EXPORTS	49
SECTION XVI	50
GOVERNING LAW AND DISPUTES	50
16.1 GOVERNING LAW	50
16.2 ARBITRATION	50
16.3 FORCE MAJEURE	51
SECTION XVII	52
GENERAL	52
17.1 CONFIDENTIALITY	52
17.2 WAIVER	52
17.3 NOTICE	53
17.4 HEADINGS AND AMENDMENTS	53
APPENDIX I	1
ACCOUNTING PROCEDURES	1
SECTION I: 2	
GENERAL PROVISIONS AND DEFINITIONS 2	
1.1 Purpose	2
1.2.1 Definitions	2
SECTION II: 3	
2.1 General Principles of Entries to the Accounts	3
SECTION III: 5	
3 PRODUCTION SHARING AGREEMENT STATEMENTS TO BE SUBMITTED 5	
3.1 Production Statement	5
3.2 Value of Production Statement	5
3.3 Cost Recovery Statement	5
3.4 Income Tax Statement	6
3.5 Statement of Expenditure and Receipts	6
3.6 Budget Statement	7
3.7 Final End-Of-year Statement	7
3.8 Annual Balance Sheet and Profit and Loss Account	7
SECTION IV: 8	
4. CHARGES AND CREDITS TO PETROLEUM OPERATIONS COSTS 8	
4.1 General	8
4.2 Goods and services provided by the Parties	8
4.3 Labor and related costs	8
4.4 Materials	9
4.5 Technical Services	9
4.5.2 The costs included in Petroleum Operations Costs shall be:	10
4.6 Insurance	10
4.7 Legal Expenses	10
4.8 Other Goods and Services	10
4.9 General and administrative expenses	11
4.10 Interest payments	11
4.11 Payments to the Government of Ethiopia	11
4.12 Training Costs	11
4.13 Abandonment Costs	11
4.14 Ecological and Environmental Protection	11
4.15 Miscellaneous transactions	12
	3

4.16	<i>Credits to the Account</i>	12
4.17	<i>Recoverability and deductibility of Petroleum Operations Costs</i>	12
SECTION V:		13
REVISION OF ACCOUNTING PROCEDURES		13
ANNEX A	14	

MODEL PETROLEUM PRODUCTION SHARING AGREEMENT

THIS AGREEMENT made and entered into on this day of, ----- 2007 by and between:

THE GOVERNMENT OF THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA (herein referred to as the "Government"), represented for the purposes of this Agreement by the Minister of Mines (herein referred to as the "Minister"),

and,

----- a corporation duly organized and existing under the laws of _____ (herein referred to as the "Contractor"), represented for the purposes of this Agreement by-----, its-----.

The Government and the Contractor are herein referred to either individually as "Party" or collectively as "Parties".

WITNESSETH:

WHEREAS, the title to all Petroleum existing in its natural condition on, in or under the Territory of Ethiopia is vested in the State and the People of Ethiopia; and

WHEREAS, the Government wishes to promote the exploration, development and production of the Petroleum on, in or under the Contract Area and the Contractor desires to join and assist the Government in the exploration, development and production of potential Petroleum within the Contract Area; and

WHEREAS, the Contractor represents that it has the financial ability, technical competence and professional skills to carry out the Petroleum Operations herein described; and

WHEREAS, the Petroleum Operations Proclamation No. 295 of 1986 provides that a Petroleum Agreement may be entered into between the Government and any person;

NOW, THEREFORE, the Government hereby grants to the Contractor in consideration of the payments, covenants and agreements contained herein on the part of the Contractor, the sole right to explore, develop and produce Petroleum in the Contract Area and to exercise other rights granted by this Agreement, and, further in consideration of the undertakings and covenants contained herein, the Parties agree as follows:

SECTION I

SCOPE AND DEFINITIONS

1.1. Scope

This Agreement is a production sharing agreement and it shall cover Petroleum Operations in the Contract Area. The Contract Area is described and delineated in Appendix II hereto periodically adjusted in accordance with the provisions of this Agreement. During the term of this Agreement all Petroleum production resulting from the conduct of Petroleum Operations shall be divided between the Parties in accordance with the provisions of Sections VI through XIII hereof.

1.2. Definitions

In this Agreement, unless the context clearly indicates otherwise, words in the singular include the plural, the plural indicates the singular, and words that are not defined herein, but that are defined in the Petroleum Proclamation, shall have the meanings set forth in that law.

1.2.1 "Accounting Procedures" means the accounting procedures and reporting requirements set forth in Appendix I hereto.

1.2.2 "Affiliate" of any specified person means any person directly or indirectly controlling or controlled by or under direct or indirect common control of another person. For the purposes of this definition, "control" means the power to direct, administer, or dictate the management and policies of such person or the ownership of fifty per cent (50 %) or more of voting rights in such person; and the terms "controlling" and "controlled" have meanings correlative to the foregoing.

1.2.3 "Appraisal Area" means the area within the Contract Area subject to an appraisal work program and budget as set forth in Section 5.3.2.

1.2.4 "Associated Natural Gas" means Natural Gas which exists in a reservoir in solution with Crude Oil or, as gas-cap gas, in contact with Crude Oil, and is or could be produced with Crude Oil.

1.2.5 "Barrel" means a quantity consisting of 158.984 liters at standard atmospheric pressure of 1.01325 bar and temperature of fifteen degrees Celsius (15 °C).

1.2.6 "Calendar Quarter" means a period of three (3) consecutive months beginning January 1, April 1, July 1, or October 1 and ending March 31, June 30, September 30 and December 31, respectively.

1.2.7 "Calendar Year" means a period of twelve (12) consecutive months commencing January 1 and ending the following December 31, according to the Gregorian Calendar.

- 1.2.8 "Commercial Discovery" means a discovery or an accumulation of discoveries of Petroleum that, in the judgment of the Contractor, can be demonstrated to be producible commercially based on consideration of all pertinent operating and financial data as set forth in Section 5.3.5.
- 1.2.9. "Contract Area" means the area escribed and delineated in Appendix II hereto as adjusted in accordance with the provisions of this Agreement regarding term, surrender and termination.
- 1.2.10 "Contractor" means the Contractor, its successors or any assignee or assignees of any interest of the Contractor.
- 1.2.11 "Crude Oil" means all hydrocarbons regardless of gravity which are produced at the wellhead in a liquid state at atmospheric pressure, asphalt and ozokerites and the liquid hydrocarbons known as distillate, condensate or natural gas liquids obtained from Natural Gas by condensation or extraction.
- 1.2.12 "Development Area" means an area within the Contract Area containing a Commercial Discovery as set forth in Section 5.4.3.
- 1.2.13 "Development and Production Period" means the period set forth in Sections 2.1 and 2.4.
- 1.2.14 "Effective Date" means the date this Agreement is signed by the Minister and the Contractor.
- 1.2.15 "Exploration Period" means the period set forth in Sections 2.1, 2.2 and 2.3.
- 1.2.16. "Minister" means the Minister of Mines or any successors in jurisdiction.
- 1.2.17 "Natural Gas" means hydrocarbons that are in a gaseous phase at atmospheric conditions of temperature and pressure including wet mineral gas, dry mineral gas, casing-head gas and residue gas remaining after the extraction or separation of liquid hydrocarbons from wet gas, and non-hydrocarbon gas produced in association with liquid or gaseous hydrocarbons.
- 1.2.18 "Non associated Natural Gas" means Natural Gas other than Associated Natural Gas.
- 1.2.19 "Operating Agreement" means the agreement set forth in Section 6.1.
- 1.2.20. "Participating Interest" means the Government's interest in Petroleum Operations for a particular Development Area as set forth in Section 6.1.
- 1.2.21 "Petroleum Proclamation" means the "Petroleum Operations Proclamation No. 295 of 1986, Petroleum Operations Income Tax Proclamation No. 296 of 1986 and Petroleum Operations Income Tax Proclamation (amendment) No. 226 of 2000".
- ".
- 1.2.22 "Petroleum" means Crude Oil and Natural Gas and includes hydrocarbons produced from oil shales or tar sands.

- 1.2.23 "Petroleum Operations" means the operations authorized under this Agreement, related to the exploration, development, extraction, production, field separation treatment (but excluding refining), storage, transportation of Petroleum up to the Point of Delivery, and marketing of Petroleum, excluding refining of Crude Oil, but including the processing of Natural Gas.
- 1.2.24 "Petroleum Operations Costs" means the costs and expenses incurred and paid by Contractor for the purposes of conducting Petroleum Operations under this Agreement, as set forth in Appendix I hereto.
- 1.2.25. "Point of Delivery" means the point where Petroleum is delivered at the outlet flange at the point of either exportation from the State or entry into the State domestic system or any other transfer point mutually agreed between the Parties.
- 1.2.26 "Commencement of Regular Production" means the commencement of regular production from the first Development Area developed by the Contractor, starting on the day of first loading at the Point of Delivery.
- 1.2.27 "Government" means the Government of the Federal Democratic Republic of Ethiopia.
- 1.2.28 "Subcontractor" means any person with whom the Contractor establishes a relationship for the provision of services required for performance under this Agreement.

SECTION II:

TERM, SURRENDER AND TERMINATION

2.1 Term

- 2.1.1 This Agreement shall consist of an Exploration Period, and a Development and a Production Period, both of which may run concurrently.
- 2.1.2 This Agreement shall remain in effect during the initial term of the Exploration Period and all extensions thereof and shall automatically terminate in its entirety at the end of the Exploration Period, except as to any Development Area.
- 2.1.3. After expiration of the Exploration Period, this Agreement shall remain in effect as to each Development Area during the Development and Production Period for the Development Area and shall automatically terminate with respect to each Development Area upon the expiration of the Development and Production Period for the relevant Development Area.

2.2 Exploration Period

- 2.2.1 The initial term of the Exploration Period provided by this Agreement shall be ____ (____) years, commencing on the Effective Date hereof.
- 2.2.2 The Contractor shall begin Petroleum Operations within ninety (90) days after the Effective Date and shall notify the Ministry of the date on which it has commenced Petroleum Operations.
- 2.2.3 The Exploration Period shall have a first extension and a second extension, following the initial term, for successive terms of ____ (____) years and ____ (____) years, respectively, each upon the Contractor's application to the Minister at least thirty (30) days prior to the termination date of the current term of the Exploration Period, provided that the Contractor has fulfilled the exploration work and expenditure obligations set forth in section 5.1 for the current term under this Agreement.

In order to enable the Contractor to complete drilling, logging, testing or plugging of any exploratory well which is actually being drilled, logged, tested or plugged at the end of the second extension of the Exploration Period, the Minister shall grant a further extension to such second extension for such a time as he determines may be reasonable, which in any event shall not extend the term of the second extension by more than six (6) months.

- 2.2.4. In order to expeditiously complete the evaluation of a discovery, the Minister shall extend the term of the Exploration Period for an additional ____ (____) months term beyond the second extension period for each area designated as an Appraisal Area upon the Contractor's submission to the Minister, at least sixty (60) days prior to the termination date

of the second extension, of an appraisal work programme and budget under Section 5.3.2; provided, however, that the Contractor has fulfilled the exploration work and expenditure obligations set forth in Section 5.1 for the current term under this Agreement. Thereafter, if the Contractor shall determine that an Appraisal Area does not contain a Commercial Discovery and if no further extension is granted under Section 2.2.5, the Exploration Period for the relevant Appraisal Area shall terminate.

- 2.2.5. Upon justification by the Contractor and in addition to the extensions set forth above, the Minister may extend the term of the Exploration Period in respect to the Appraisal Area of a Natural Gas discovery for a period up to ____ (____) years for the purposes of further appraising and evaluating the Natural Gas discovery and establishing its economic viability as well as preparing a preliminary development scheme of a Natural Gas project.

2.3. Surrender during Exploration Period

- 2.3.1. At or prior to the end of the initial term of the Exploration Period the Contractor shall surrender at least ____ percent (____) of the original Contract Area.
- 2.3.2. At or prior to the end of the first extension of the Exploration Period the Contractor shall surrender at least percent ____ (____) of the original Contract Area.
- 2.3.3. When calculating the surrender obligation under Sections 2.3.1. And 2.3.2, each area then designated as a Development Area shall be deducted from the original Contract Area.
- 2.3.4. At or prior to the end of the second extension to the Exploration Period, the Contractor shall surrender the remainder of the original Contract Area which is not included within an Appraisal Area or Development Area.
- 2.3.5 The Contractor shall have the right to surrender at any time all or part of the Contract Area not designated as a Development Area, by giving the Minister sixty (60) days prior written notice.
- 2.3.6 The location and configuration of any area to be surrendered by the Contractor under this Section shall be submitted for approval to the Minister which approval shall not be unreasonably withheld, sixty (60) days prior to the date of each surrender and shall consist, as far as practicable, of a contiguous area in order to facilitate further exploration.
- 2.3.7. No surrender shall reduce the minimum amount of Contractor's exploration work and expenditure obligations or the related bank guarantee in respect thereof as provided in Sections 5.1 and 5.2.
- 2.3.8. Any surrender under Section 2.3.5 shall be credited toward the Contractor's next surrender obligation under Sections 2.3.1 and 2.3.2.

2.4. Development and Production Period

- 2.4.1 The term of the Development and Production Period provided for by this Agreement in respect of a Commercial Discovery shall commence on the date of adoption of the development plan as set forth in Section 5.4.5 and shall continue for twenty-five (25) years.
- 2.4.2 If, at the expiration of the Development and Production Period for any Development Area, commercial production remains economically feasible, the Minister shall, at the Contractor's request, enter into good faith negotiations regarding an extension of the Development and Production Period.
- 2.4.3. If, subsequent to the designation of the area encompassing a Commercial Discovery as a Development Area, the extent of the area encompassing the Commercial Discovery is demonstrated to be different than that designated in the development plan under Section 5.4.5, the Development Area shall be adjusted accordingly, provided that the area covered shall be entirely within the original Contract Area and is not subject to any other petroleum agreement.
- 2.4.4. If the Contractor makes more than one Commercial Discovery, the term of the Development and Production Period or extension thereof for each Development Area embracing a Commercial Discovery shall be determined for that Development Area in accordance with the foregoing provisions independently of the term of the Development and Production Period for any other Development Area.
- 2.4.5. The Contractor shall have the right to surrender all or part of the area included within any Development Area upon giving the Minister one hundred eighty (180) days written notice of its intention to do so.

2.5. Termination

- 2.5.1. The Contractor may terminate this Agreement by giving the Minister one hundred eighty (180) days prior written notice. A surrender of all the area included in the Contract Area shall constitute a termination of this Agreement.
- 2.5.2. The Minister may terminate this Agreement by giving the Contractor prior written notice for a period specified in Section 2.5.3, if any of the following termination events shall occur:
- (a) if the Contractor fails to make any payment required under this Agreement;
 - (b) if the Contractor fails to comply with any other material obligation that it has, assumed under this Agreement;
 - (c) if the Contractor fails to maintain that same degree of financial ability, technical competence and professional skill necessary to carry out Petroleum Operations that it possessed as of the date of the signing of this Agreement, so as to adversely affect the performance of its obligations hereunder;
 - (d) if the Contractor becomes insolvent, makes a composition with creditors, or goes into liquidation other than for reconstruction or amalgamation; or

(e) If Petroleum Operations are interrupted for more than one hundred eighty (180) days.

2.5.3. The period of notice with respect to a termination event under Section 2.5.2 (a) above shall be thirty (30) days, and with respect to any other termination event specified in Section 2.5.2 shall be ninety (90) days. If, however, the Contractor remedies the termination event within the period of the notice, the Minister shall withdraw the notice to the same effect as if the termination event had not occurred under this Agreement, unless a termination event of the same type has previously occurred under this Agreement, in which case the Minister may, but is not required to, withdraw the notice.

2.5.4. If a termination event specified in Section 2.5.2 is the result of Force Majeure as set forth in Section 16.3, then neither occurrence of the termination event nor the continuance of it unremedied shall result in termination of this Agreement for so long as such Force Majeure continues.

2.5.5. When this Agreement is terminated or expires, in whole or in part, the Contractor shall conclude Petroleum Operations in the area as to which this Agreement has terminated or expired in an orderly manner so as to minimize harm or loss to the State or any person, in accordance with generally accepted international petroleum industry practice.

In the event of surrender of an Appraisal Area or a Development Area or termination of this Agreement, the Minister may require the Contractor to continue, for the account of the Government, Petroleum Operations for properties currently producing or capable of producing Petroleum until the right and responsibility for continuing such operations have been transferred to another person or the Government or an agency thereof but for a period not to exceed one hundred eighty (180) days after the date this Agreement would otherwise terminate with respect to all or any portion of the Contract Area concerned; provided, however, that the Government:

(a) shall bear all costs, risks and expenses of Petroleum Operations during such take-over period to the extent this period extends beyond the date that this Agreement would otherwise terminate and shall be entitled during this same period to all the production and proceeds from the sale thereof;

(b) Shall reimburse the Contractor within thirty (30) days after the submission of an invoice specifying the costs and expenses of such operations during such take-over period, such invoices to be submitted no more than every thirty (30) days.

2.5.6. Termination of this Contract, whatever the reason thereof, shall not relieve the Contractor of the performance of its obligations outstanding hereunder prior to, or arising from, the termination.

SECTION III:

GENERAL RIGHTS AND OBLIGATIONS OF THE CONTRACTOR

3.1. Rights of the Contractor

3.1.1. The Contractor shall:

- (a) Have the sole and exclusive right to conduct Petroleum Operations in the Contract Area in accordance with the provisions of this Agreement;
- (b) have the right to enter upon the Contract Area and conduct Petroleum Operations there, but notwithstanding this provision and the provisions of Section 3.1.1(a):
 - (i) permission may be granted to other persons to explore for, develop and produce minerals in the Contract Area other than Petroleum, so long as the activities of such persons do not unreasonably interfere with Petroleum Operations; and
 - (ii) Easements and rights of ways in the Contract Area of reasonable scope and duration may be granted to other persons for the benefit of land adjacent to the Contract Area;
- (c) subject to the approval of the Minister, which approval shall not be unreasonably withheld, have access over the Territory of Ethiopia for the purpose of constructing, laying, operating and maintaining onshore pipelines, cables and any other facilities required for Petroleum Operations;
- (d) have the right, subject to approval of the Minister, to use water in the Contract Area for operational purposes, but the Contractor shall not deprive any land, domestic settlement or livestock watering place of the water supply to which they are accustomed;
- (e) have the right for the purposes of Petroleum Operations to use gravel, sand, clay and stone in the Contract Area subject to the limitations set forth in Section 3.1.1 (b) and;
- (f) have the right, subject to the approval of the concerned authorities, to install, operate and use telecommunication facilities.

3.1.2. The Contractor shall not carry on Petroleum Operations on any part of the land in the Contract Area designated for a public purpose but may have surface access over, on and through such land for the purpose of conducting Petroleum Operations to the extent such access does not interfere with the public purpose.

3.1.3. The Contractor shall have the right to sell, assign, transfer, convey or otherwise dispose of all or any part of the rights and interests under this Agreement to any Affiliate or other person with the prior written consent of the Minister, which consent shall not be unreasonably withheld.

3.2. Obligations in respect of the conduct of Petroleum Operations

3.2.1. The Contractor shall carry out the Petroleum Operations within the scope of this Agreement diligently and in accordance with generally accepted international petroleum industry practice. The Contractor and its employees shall perform no business activities in Ethiopia outside the scope of this Agreement without the prior written consent of the Minister.

3.2.2. The Contractor shall, in accordance with generally accepted international petroleum industry practice, take all necessary steps to:

- (a) Ensure that all machinery, plant, equipment and installations used in Petroleum Operations are of proper and accepted construction and are kept in good repair;
- (b) Ensure that all exploratory wells with significant shows of Petroleum are properly tested;
- (c) Use the resources of the Contract Area as productively as practicable, prevent damage to producing formations and ensure that Petroleum discovered, mud or any other fluids or substances do not escape or waste;
- (d) Prevent damage to Petroleum and water bearing strata that are adjacent to a producing formation or formations and prevent water from entering any strata bearing Petroleum, except where water injection methods are used for secondary recovery operations or are intended otherwise in accordance with generally accepted international petroleum industry practice;
- (e) Protect the State from loss of production by reason of production on adjacent areas under the control of authorities other than the State, including complying with the provisions of Section 9.1;
- (f) Properly store Petroleum in receptacles constructed for that purpose, and not store Crude Oil in an earthen reservoir, except temporarily in an emergency; and
- (g) Drain waste oil and salt water and place refuse into receptacles constructed for that purpose and situated at a safe distance from any tank, well, storage or other facility and dispose of waste oil, salt water and refuse in accordance with generally accepted international petroleum industry practice, avoiding pollution.

3.2.3. Prior to commencing the drilling of any well covered by this Agreement or reentering any well on which work has been discontinued for more than six (6) months, the Contractor shall give the Minister thirty (30) days written notice explaining the justification for such drilling and submit a drilling programme with a well location report. The Minister may, in his discretion, waive this thirty (30) day notice requirement.

- 3.2.4. The Contractor shall be entitled to employ any person qualified in the judgment of the Contractor to undertake Petroleum Operations on the Contractor's behalf.

Any Subcontractor retained by the Contractor shall have the necessary professional experience to perform the task to be assigned and the Contractor shall require that any Subcontractor shall abide by all applicable laws and regulations of Ethiopia and the relevant provisions of this Agreement. The Contractor shall notify the Minister in writing of the name and address of any Subcontractor retained within thirty (30) days of such retention.

The employees of the Contractor and any Subcontractor shall abide by the applicable laws of Ethiopia and shall respect local customs in the country.

3.3. Abandonment and disposal of assets

- 3.3.1. The Contractor shall not, except where there is danger to the safety and health of human life or a risk of significant damage to the environment or a risk of significant economic loss, abandon a well or withdraw casing, tubing or down-hole pumps or other down-hole equipment therefrom or remove surface equipment used or useful in production therefrom, if any, prior to giving the Minister (a) thirty (30) days written notice of such action with respect to a well that is or has been producing within a Development Area and (b) seventy-two (72) hours written notice of such action with respect to any other well.

- 3.3.2. The Contractor shall securely plug and clearly mark any well that it abandons in accordance with generally accepted international petroleum industry practice to prevent pollution, sub-sea damage or damage to underground strata through the entry of water or otherwise.

- 3.3.3. The Contractor shall state in its notice of abandonment of a well whether the well is capable of providing a fresh water supply and if required by the Minister, the Contractor shall complete such well and render it operational for producing water at its own cost and expense.

- 3.3.4. Where the Contractor intends to permanently abandon an exploratory well in which Petroleum of potentially commercial significance has not been found, the Minister may request the Contractor to deepen, sidetrack or test that well subject to the following provisions:

- (a) Any such additional Petroleum Operations shall be at the sole cost, risk and expense of the Government and the Government shall advance to the Contractor the funds necessary to conduct the drilling operations;
- (b) the Contractor shall not be obligated to undertake such additional work if it will materially interfere with the conduct of the Contractor's Petroleum Operations or if it is not technically or operationally feasible; and
- (c) the Government shall keep the Contractor informed about such additional work and in the event that the operations undertaken under this Section 3.3.4 result in a discovery which the Contractor elects to evaluate and/or develop as a Commercial

Discovery, the Contractor shall reimburse the Government _____ per cent (_____ %) of the costs and expenses incurred by the Government for the conduct of the operations and such sum shall be paid within thirty (30) days of such election made by the Contractor. If the Contractor does not make such election, the Government may require the Contractor to surrender all its rights over such discovery.

- 3.3.5. The Contractor shall within sixty (60) days after termination or expiration of this Agreement or the surrender of part of the Contract Area, or the expiration of the take-over period in Section 2.5.5, if later, deliver to the Minister in good repair and working order, each well within the area covered by the termination, expiration, or surrender, then producing or capable of producing Petroleum, together with all casing, tubing and surface or sub-surface equipment used or useful in the conduct of producing operations, unless the Minister requires the Contractor to plug the well.
- 3.3.6. In the case of termination or expiration of this Agreement or the surrender of an area within the Contract Area pursuant to the terms hereof, if the area, or part thereof, subject to the termination, expiry or surrender has been determined to be capable of production or is currently producing or has previously produced Petroleum commercially, the Contractor shall transfer at no cost to the Government the plants, appliances and installations in the area subject to the termination, expiry or surrender. The Minister may decline the transfer and require the Contractor to remove, in accordance with generally accepted international petroleum practice, all or some of the plants, appliances and installations at no cost to the Government

3.4. Records and reports of Petroleum Operations

- 3.4.1. The Contractor shall record, in an original or reproducible form of good quality and on tapes where relevant, all geological and geophysical information and data relating to the Contract Area obtained by the Contractor in the course of conducting Petroleum Operations thereon and shall deliver a copy of all such information and data, including, but not limited to, the interpretations thereof and logs and records of wells, to the Minister as soon as practicable after the same has come into the possession of the Contractor. The Government shall have title to all such information and data and the Contractor may retain copies thereof for the purposes of Petroleum Operations.
- 3.4.2. The Contractor shall keep logs and records of the drilling, deepening, plugging or abandonment of wells consistent with generally accepted international petroleum industry practice and containing particulars of:
- (a) The sub-surface strata through which the well was drilled;
 - (b) The casing, tubing and down-hole equipment run in the well and modifications and alterations thereof;
 - (c) Petroleum, water and workable minerals encountered; and
 - (d) Any other information reasonably required by the Minister.

- 3.4.3. The information required by Section 3.4.2 shall be submitted to the Minister in the form, inter alia, of well completion reports as soon as practicable.
- 3.4.4. The Contractor may remove, for the purpose of laboratory examination or analysis, petrological specimens or samples of Petroleum found in the Contract Area and characteristic samples of the strata or water encountered in a well and, as soon as practicable, shall give the Minister, without charge, a representative part of each specimen and sample removed.
- 3.4.5. The Contractor shall supply to the Minister:
- (a) Daily reports on drilling operations and weekly reports on geophysical operations;
 - (b) within thirty (30) days after the end of each Calendar Quarter, a report on the progress of Petroleum Operations during the preceding Calendar Quarter covering:
 - (i) a detailed description of the Petroleum Operations carried out and the factual information obtained;
 - (ii) a description of the area in which the Contractor has operated;
 - (iii) an account of the expenditure on Petroleum Operations in accordance with the Accounting Procedures set forth in Appendix I; and
 - (iv) a map indicating the location of all wells and other Petroleum Operations;
 - (c) Within three (3) months of the end of each Calendar Year, an annual report covering the matters specified in paragraph (b) for the preceding Calendar Year.
- 3.4.6. The Contractor shall submit copies of all contracts or agreements with Subcontractors as soon as practicable after execution of such contracts or agreements.
- 3.4.7. The Contractor shall supply any further information concerning the Petroleum Operations that the Minister may reasonably require.

3.5. Joint liability and indemnity

- 3.5.1. At any time where the Contractor consists of more than one person, their liability shall be joint and several.

The Contractor shall supply to the Minister a copy of the joint operating agreement between those persons as soon as it is available.

- 3.5.2. The Contractor shall obtain and maintain for the Petroleum Operations insurance of the type and for such reasonable amounts and coverage as may be approved by the Minister, and produce evidence of such insurance once each year. The said insurance shall, inter alia,

cover loss or damage to all installations and equipment used in Petroleum Operations, pollution, property insurance and third party liability insurance.

- 3.5.3. The Contractor shall defend, indemnify and save the State harmless against all claims, losses and damage of any nature whatsoever, which may be made or brought against the Government by any third party, including without limitation, claims for loss of and damage to property, or death of or injury to persons, caused by, or resulting from, any operation conducted by or on behalf of the Contractor under the terms of this Agreement.

3.6. Local employment, training and preference

- 3.6.1. The Contractor and the Subcontractors shall give preference to the employment of Ethiopian nationals in all Petroleum Operations to the fullest extent possible, provided such nationals have the required qualifications and experience.

- 3.6.2. The Contractor shall establish a training and employment programme, approved by the Minister, for Ethiopian nationals.

The Contractor shall contribute a minimum of _____(____) United States dollars per year during the Exploration Period, increased to a minimum of _____ (_____)United States dollars per year during the Development and Production Period, for the training of Ethiopian Government personnel and/or acquisition of training facilities, identified by the Minister.

- 3.6.3. The Contractor and the Subcontractors shall give preference to Ethiopian materials, products and services used in Petroleum Operations where those materials, products and services are of comparable quality and are readily available at competitive prices.

- 3.6.4. The Contractor shall submit a report on a regular basis detailing the employment of Ethiopian nationals and the utilization of Ethiopian materials, products and services in a form to be specified by the Minister. In addition, the Contractor shall, within thirty (30) days of employing, notify the Minister the name and the terms and conditions of employment of any Ethiopian national.

- 3.6.5. The contractor shall prepare a community development programme to be carried out in the Contract Area for the duration of the Exploration Period. The programme shall be mutually agreed by both parties and the Contractor shall contribute ----- (-----)United States Dollars (US) per year and ----- (-----)United States Dollars (US) for development period.

3.7. Environmental and safety measures

- 3.7.1. The contractor shall conduct Petroleum Operations in a safe and proper manner in accordance with generally accepted international petroleum industry practice and shall not cause damage to the general environment, including, inter alia, the surface, air, lakes, rivers, marine life, animal life, plant life, crops, other natural resources and property, and shall forthwith repair any damage caused to the extent reparable, and shall pay reasonable compensation for all damage which is beyond repairs.

- 3.7.2. Contractor shall comply with the applicable laws, regulations, and directives relating to the environment, to avoid the damages the Petroleum Operations may cause on the human and natural environment. In the absence of applicable laws, the Contractor shall apply the most appropriate internationally accepted environment standards.
- 3.7.3. Without prejudice to the provisions of Section 3.7.1. the Contractor shall in conducting its Petroleum Operations, pay strict attention to the prevention of pollution, the treatment of wastes, the safeguarding of the natural environment, and the progressive reclamation and rehabilitation of lands disturbed by the Contractor's Petroleum Operations.
- 3.7.4. The Contractor shall establish and implement upon approval by the Ministry, an active, continuing, and self monitoring Environmental Management Program, and shall ensure that all employees, subcontractors and the indigenous community in the Contract Area are fully aware of the Contractor's environmental policy and shall endeavor to ensure that they assist in the implementation of the policy.
- 3.7.5. The Contractor shall bear all costs for clean-up, rehabilitation, and reclamation of any and all environmental damage caused by the Contractor's Petroleum Operations.
- 3.7.6. The Contractor shall submit to the Minister an annual report on the implementation of the Contractor's Environmental Management Program, and at other such time as the Minister may reasonably require.
- 3.7.7. In the event the Contractor's Petroleum Operations require the displacement of peoples occupying land in the Contract Area that is required for the Contractor's Petroleum Operations, the Contractor shall attempt to negotiate a compensation settlement with such occupants. If any such occupants refuse to be displaced, or refuse to agree on a reasonable amount of compensation for being displaced, the Minister may cause the expropriation of immovable property, if any, and cause the eviction of such occupants for the purpose of the Contractor's Petroleum Operations, subject to the payment of a reasonable compensation to the displaced occupants to be determined by the Minister.
- 3.7.8. Without prejudice to the provision of Section 3.7.6. The Minister may require the Contractor to submit adequate re-settlement program for people occupying land required for the Contractor's Petroleum Operations, instead of paying compensation to such occupants. In such event the Contractor shall implement the re-settlement program upon approval by the Minister.
- 3.7.9. In the event of a blowout, accident or other emergency, the Contractor shall take immediate steps to bring the emergency situation under control and protect against loss of life and property and prevent harm to natural resources and the general environment.
- 3.7.10. If the Minister reasonably determines that certain of the Contractor's Petroleum Operations are threatening to endanger persons or property, or harm the natural environment, or cause pollution, or harm animals, or cause irreparable damage to plant life, the Minister may order the Contractor to discontinue Petroleum Operations at risk until such time as the Contractor has taken remedial measures to eliminate the threat.

3.8 Registration and office

- 3.8.1. The Contractor shall register to do business with the appropriate Ethiopian authorities and shall establish and maintain an office in Ethiopia within three (3) months of the Effective Date.
- 3.8.2. The Contractor shall notify the Minister, before Petroleum Operations begin, the name and address of the person resident in Ethiopia who will supervise the Petroleum Operations, and prior notice of any subsequent change shall be given to the Minister

SECTION IV:

GENERAL RIGHTS AND OBLIGATIONS OF THE GOVERNMENT AND THE MINISTER

4.1. Rights of the Minister

- 4.1.1. The Minister, or a person authorized by him in writing, may at all reasonable times inspect any Petroleum Operations, and any records of the Contractor relating thereto, and the Contractor shall provide facilities similar to those applicable to its own staff for transport, subsistence and accommodation free of charge and pay all reasonable expenses directly connected with such an inspection.
- 4.1.2. The Minister may require the Contractor to perform an obligation which the Contractor has failed to perform under this Agreement by giving reasonable written notice, and after failure to comply with that notice, may execute any necessary works for which the Contractor shall pay forthwith. The Minister may give notice to the Contractor to perform an obligation hereunder at any time, but not later than ninety (90) days after the termination or expiration of this Agreement or surrender of the part of the Contract Area to which the obligation relates. Failure of the Minister to provide notice to the Contractor under this provision shall not constitute a waiver of any other rights the Minister may have under this Agreement in connection with the performance of any obligation of the Contractor.

4.2. Obligations of the Government and the Minister

- 4.2.1. The Government shall not unreasonably refuse to grant or renew any visas, work and entry or exit permits necessary for personnel employed in the Petroleum Operations by the Contractor or its Subcontractors and their dependants; nor shall the Government unreasonably refuse to grant any necessary rights of way and easements as may be required by the Contractor or its Subcontractors.
- 4.2.2. The Minister shall use his best efforts to assist and expedite the execution of Petroleum Operations carried on hereunder by rendering all necessary assistance in obtaining visas, work or other permits, authorizations, import or other licenses, and rights of way and easements as may be necessary

SECTION V

WORK OBLIGATIONS, EXPENDITURE AND BUDGETS

5.1. Exploration

5.1.1. The Contractor shall carry out the following work obligations and make the following exploration expenditure during the initial term of the Exploration Period:

- (a) geological and geophysical operations, including ____ (____) kilometers of seismic surveys, such shooting to commence within ____ (____) months after the Effective Date, with minimum expenditure of ____ (____) United States dollars for such seismic operations; and
- (b) Drill ____ (____) exploratory well(s) to a minimum depth of ____ (____) meters per well, the first such well to commence not later than ____ months after the Effective Date, with minimum drilling expenditure of ____ (____) United States dollars for each such well.

5.1.2. The Contractor shall carry out the following work obligations and make the following exploration expenditures during the first extension to the Exploration Period:

- (a) geological and geophysical operations, including ____ (____) kilometers of seismic surveys with minimum expenditure of ____ (____) United States dollars for such seismic operations; and
- (b) drill ____ (____) exploratory well(s) to a minimum depth of ____ (____) meters per well with minimum drilling expenditure of ____ (____) United States dollars for each such well.

5.1.3. The Contractor shall carry out the following work obligations and make the following exploration expenditures during the second extension to the Exploration Period:

- (a) geological and geophysical operations, including ____ (____) kilometers of seismic surveys with minimum expenditure of ____ (____) United States dollars for such seismic operations; and
- (b) Drill ____ (____) exploratory well(s) to a minimum depth of ____ (____) meters per well with minimum drilling expenditure of ____ (____) United States dollars for each such well.

5.1.4. The required minimum expenditure obligations set forth in Sections 5.1.1, 5.1.2 and 5.1.3 are expressed in constant United States dollars of the month of the Effective Date and shall be adjusted annually on the anniversary of the Effective Date, so as to reflect the balance of Contractor's minimum expenditure obligations, as follows:

- (a) At the end of each year of the Exploration Period, the minimum expenditure obligations for the initial term of the Exploration Period, the first extension or second extension, whichever is applicable, shall be reduced in accordance with paragraph (b) below by the amount of expenditure actually made during that year on seismic and exploratory drilling work;
- (b) in determining the amount of expenditure actually made during a year on seismic and exploratory drilling work and only for the purposes of making the adjustment provided for in Sections 5.1.4.(a) and 5.1.5, no amount of expenditure in excess of the amount specified for each specific work in Sections 5.1.1, 5.1.2 and 5.1.3 (as adjusted for inflation, in accordance with paragraph (c) below, between (i) the month of the Effective Date and (ii) the month in the prior year corresponding to the month of the Effective Date) shall be considered, unless otherwise agreed to in writing by the Minister;
- (c) at the end of each year of the Exploration Period, in order to determine the minimum expenditure obligations for the remaining years of the initial term of the Exploration Period, the first extension or second extension, whichever is applicable, the balance of the minimum expenditure obligations corresponding to such term at the end of the prior year, as reduced for expenditure under the provisions of Section 5.1.4 (a), shall be adjusted by multiplying that amount by the number which is the sum of one (1) and the decimal equivalent of the percentage change in the monthly index of U.S. Consumer Prices, seasonally adjusted, as reported in the "International Financial Statistics" of the International Monetary Fund between (i) the month in the year of the adjustment corresponding to the month of the Effective Date and (ii) the month in the prior year corresponding to the month of the Effective Date.

Note: Where the minimum expenditure obligations are already expressed in current United States dollars, the provisions of Article 5.1.4 have to be amended accordingly.

5.1.5. If, during the initial Exploration Period or the first extension thereof, the Contractor exceeds the work obligations for such period by carrying out work forming part of the work obligations for the following extension, then such excess work and corresponding expenditure shall be credited toward the work and corresponding expenditure obligations for the following extension of the Exploration Period.

5.1.6. The fulfillment of any work obligations shall relieve the Contractor of the corresponding expenditure obligations but the fulfillment of any expenditure obligations shall not relieve the Contractor of the corresponding work obligations.

If the continuation of any drilling activity is precluded for justifiable technical reasons, prior to reaching the minimum depth herein specified, the Minister shall authorize the Contractor to terminate such activity and may specify an appropriate and reasonable substitute work obligation or deem the Contractor to have met the work obligation in respect of that well.

5.1.7. The Contractor shall prepare and submit to the Minister for discussion, thirty (30) days after the Effective Date, the following:

- (a) a general statement of exploration work and budget for each year of the Exploration Period; and
- (b) a detailed statement of the exploration work programme and budget for the first year of the initial term of the Exploration Period.

5.1.8. The Contractor shall prepare and submit to the Minister for discussion, ninety (90) days before the end of each year in the Exploration Period, the following:

- (a) Revisions, if any, to the general statement of exploration work and budget for the remaining years of the Exploration Period; and
- (b) A detailed statement of the exploration work programme and budget for the next year in the Exploration Period.

5.1.9. The Contractor may make changes to the detailed statement of exploration work programme and budget therefore for any year of the Exploration Period, if those changes do not materially affect the original objectives of the statement. The Contractor shall notify the Minister of such changes as soon as practicable.

5.2. Bank guarantee

5.2.1. The Contractor shall provide to the Minister at the commencement of the initial term of the Exploration Period and each extension thereof, an irrevocable and unconditional bank guarantee for the minimum work obligations set forth herein for the applicable term of the Exploration Period, as adjusted under Sections 5.1.4 and 5.1.5, from an institution and in a form acceptable to the Minister, and in an amount which shall be equal to the corresponding expenditure obligations.

5.2.2. If, at the end of the initial term of the Exploration Period, any extension thereof or upon the date of expiration or termination of this Agreement, the Contractor has not made the minimum work obligations required during the initial term of the Exploration Period or any applicable extension thereof, the Contractor or its guarantor shall immediately pay the amount corresponding to the unfulfilled work obligations to the Government.

5.2.3. The amount of any bank guarantee for the initial term of the Exploration Period or any extension thereof shall be adjusted annually to reflect the amount of the expenditure actually made on seismic and exploratory drilling work (and the inflation adjustment), all as determined under the provisions of Sections 5.1.4 and 5.1.5.

- 5.2.4. The Contractor shall provide to the Minister a bank guarantee as specified in Section 5.2.1. within 90 (ninety) days after signature of this Contract.
- 5.2.5. The Contract will be void if the Contractor does not provide the said bank guarantee within the terms specified in Section 5.2.4.

5.3. Discovery and appraisal

- 5.3.1. The Contractor shall notify the Minister as soon as practicable, but in no event later than (48) hours, after the discovery of Petroleum within the Contract Area. This notice shall include all available details of the discovery and particulars on any testing programme to be undertaken in order to allow the Minister to send a representative during testing operations.
- 5.3.2. Within ninety (90) days after the date of the notice of the discovery under Section 5.3.1, if the Contractor considers that a discovery merits appraisal, the Contractor shall submit to the Minister a detailed appraisal work programme and budget to evaluate as expeditiously as possible whether the discovery is a Commercial Discovery.

This work programme shall include an indication of the location, nature and size of the discovery, with a designation of the area to be included in the evaluation, which area shall be designated as an Appraisal Area. The appraisal work programme shall also include all drilling, testing and evaluation to be conducted in the Appraisal Area and the preparation of all technical and economic studies related to recovery, treatment and transportation of Petroleum from the Appraisal Area. The duration of this appraisal work programme shall not exceed _____ (____) months unless otherwise agreed in writing by the Minister and, in any event, it shall not exceed the remaining term of the Exploration Period as provided in Section 2.2 of this Agreement. Performance of the obligations under an appraisal work programme and budget shall not satisfy all or any part of the exploration work and expenditure obligations for the Exploration Period set forth in Section 5.1, as those obligations are separate and independent.

- 5.3.3. If the Minister does not request in writing any changes to the appraisal work programme and budget for any Appraisal Area within thirty (30) days after receipt thereof, the programme shall be deemed approved and adopted by the Minister.

If the Minister requests any changes to the appraisal work programme and budget for any Appraisal Area, then the Contractor and the Minister shall meet within fifteen (15) days after the Minister's written notification as to these requested changes to agree on an appraisal work programme and budget. The work programme and budget shall be approved and adopted by the Minister after such agreement has been reached, and, in any event, shall be deemed approved and adopted by the Minister thirty (30) days after written notification of the requested changes.

- 5.3.4. After adoption of the appraisal work programme and budget, the Contractor shall diligently continue to evaluate the discovery without undue interruptions until the Contractor determines whether the discovery is a Commercial Discovery.

Within thirty (30) days after the evaluation is completed, but in any event prior to the expiration of the Exploration Period, the Contractor shall notify and report to the Minister whether the Appraisal Area or any part thereof contains a Commercial Discovery. Such report shall include all relevant technical and economic data relating thereto.

- 5.3.5. For the purposes of this Section, the Contractor shall make a determination as to whether a discovery is a Commercial Discovery on the basis of whether that discovery can be produced commercially after consideration of all pertinent operating and financial data collected during the performance of the appraisal work programme and otherwise, including but not limited to Crude Oil or Natural Gas recoverable reserves, sustainable production levels and other relevant technical and economic factors, according to generally accepted international petroleum industry practice.

5.4. Development and production

- 5.4.1. If the Contractor reports that the discovery for any Appraisal Area is a Commercial Discovery under Sections 5.3.4 and 5.3.5, a development plan shall be prepared and submitted to the Minister within six (6) months after the completion of the appraisal work programme.
- 5.4.2. The development plan shall be prepared on the basis of sound engineering and economic principles in accordance with generally accepted international petroleum industry practice, shall ensure that the Petroleum deposits do not suffer an excessive rate of decline of production or an excessive loss of reservoir pressure and shall adopt the optimum economic well spacing appropriate for the development of those Petroleum deposits.
- 5.4.3. The development plan shall contain:
- (a) details and the extent of the proposed development area relating to the Commercial Discovery, which area shall correspond as closely as possible to the geographical extension of the Commercial Discovery in the Contract Area, and shall be designated as the Development Area for the Commercial Discovery concerned;
 - (b) proposals relating to the spacing, drilling and completion of wells, the production and storage installations, and transportation and delivery facilities required for the production, storage and transportation of Petroleum;
 - (c) proposals relating to necessary infrastructure investments, training and employment of Ethiopian nationals, and plans to maximize the use of Ethiopian materials, products and services in accordance with Section 3.6 herein;
 - (d) a production forecast and a detailed estimate of the investment and expenses involved: and
 - (e) an estimate of the time required to complete each phase of the development plan.

- 5.4.4. The Minister may require the Contractor to provide within a specified time period such further information as the Minister may reasonably need to evaluate the development plan for any Development Area.

The Minister may also require that the Contractor makes such revisions to the development plan as are reasonable to contribute to the efficient development of Ethiopian infrastructure and to assist other national needs, without impairing the economic viability of the development of the Development Area.

- 5.4.5. If the Minister does not require in writing any changes to the development plan within ninety (90) days after receipt thereof, the plan shall be deemed approved and adopted by the Minister.

If the Minister requires any changes to the development plan, then the Contractor and Minister shall meet within fifteen (15) days of the Minister's written notification as to these requested changes to agree on a development plan. The plan shall be approved and adopted by the Minister after such agreement has been reached and, in any event, shall be deemed approved and adopted by the Minister sixty (60) days after written notification of the requested changes.

- 5.4.6. After the development plan has been adopted by the Minister, the Contractor shall submit to the Minister for discussion ninety (90) days before the end of each Calendar Year in the Development and Production Period a detailed statement of the development work programme and budget therefore for the following year, provided, however, that a detailed statement of the development work programme and the budget therefore for the first full Calendar Year of the Development and Production Period and the portion of the year preceding the first full Calendar Year, shall be submitted within ninety (90) days after the date of adoption by the Minister of the development plan under Section 5.4.5.

Each such annual detailed statement of the development work programme and budget therefore shall be consistent with the development plan adopted by the Minister under Section 5.4.5.

- 5.4.7. The Contractor may submit, during the term of the Development and Production Period, revisions to any development plan. These revisions shall be consistent with the provisions of Section 5.4.2 and shall be subject to the approval procedure set forth in Sections 5.4.5.

- 5.4.8. The Contractor shall commence development work not later than six (6) months after the date of adoption of the development plan under Section 5.4.5. And shall continue development operations with due diligence in accordance with such development plan.

- 5.4.9. Where the Minister and the Contractor agree that a mutual economic benefit can be achieved by constructing and operating common facilities (including, but not limited to, roads, pipelines and other transportation, communication and storage facilities), the Contractor shall use its best efforts to reach agreement with other producers on the construction and operation of such common facilities.

Other producers may use the facilities of the Contractor where there exists excess capacity and on payment of a reasonable compensation which includes a reasonable return on investment to the Contractor and provided such use does not materially interfere with the Contractor's Petroleum Operations.

SECTION VI:

GOVERNMENT PARTICIPATION

6.1. Government participation

- 6.1.1. The Government may participate in the Petroleum Operations in any Development Area and acquire a Participating Interest not to exceed _____ per cent (_____) therein. The Government may acquire such interest either directly or through a specialized Government entity.
- 6.1.2. The Government shall notify the Contractor in writing of its decision to participate within one hundred twenty (120) days after the date of adoption by the Minister of the development plan under Section 5.4.5 for the particular Development Area concerned. The notice shall specify the percentage interest to be acquired by the Government and the identity of the Government entity that will hold the interest if other than the Government itself.
- 6.1.3. If the Government elects to participate with respect to any particular Development Area, then;
- (a) the Government's participation shall be effective from the date of adoption of the development plan under Section 5.4.5 for the particular Development Area concerned;
 - (b) the Government or the Government entity, whichever is specified, and the Contractor shall within _____(_____) months after the Government participation is effective enter into an Operating Agreement in a mutually acceptable form consistent with generally accepted international petroleum industry practice and this Operating Agreement shall not create or be considered as a partnership or any other similar entity;
 - (c) the Government shall, within thirty (30) days after the end of the Calendar Quarter in which it elected to participate, reimburse the Contractor, without interest, for the Government pro-rata share of expenditure incurred by the Contractor in conducting Petroleum Operations in the Development Area concerned from the date of adoption of the development plan under Section 5.4.5 to the date of payment;
 - (d) the person acting as operator shall remain as operator of the Development Area in accordance with the rights, authorities and obligations of the operator under the Operating Agreement;
 - (e) the Government, as a party under the Operating Agreement, shall in respect of the Development Area concerned:

- (i) have the right to vote in proportion to its Participating Interest on all decisions made under an Operating Agreement which permit a vote by a party;
 - (ii) separately take and dispose of its Participating Interest share of all Petroleum produced and saved;
 - (iii) pay its proportionate part of the expenditure incurred in conducting Petroleum Operations in accordance with the Operating Agreement and accounting procedures attached thereto;
 - (iv) own a Participating Interest share in all materials and equipment acquired for use under the Operating Agreement;
 - (v) have the right in common with all other parties to carry out sole risk operations in accordance with the provisions of the Operating Agreement; and
- (f) The Government may, upon reasonable written notice, require the Contractor to lend to the Government up to _____ per cent (____ %) of the funds required to pay the Government's pro-rata share of expenditure. The loan shall bear interest at per cent. The Government shall make repayments of the loan on a quarterly basis in an amount equal to _____ per cent (____) of the difference between the gross receipts attributable to the Government's Participating Interest in the Development Area and the costs and expenses, including royalty but excluding income taxes, attributable to the Government's Participating Interest in the Development Area for Petroleum Operations. Repayments of the loan shall be applied first to accrued and unpaid interest and the balance shall be applied in reduction of the outstanding principal balance.

SECTION VII

COST RECOVERY AND PRODUCTION SHARING

7.1. Cost recovery

- 7.1.1 The Contractor shall be entitled to recover its Petroleum Operations Costs from Crude Oil produced within the Contract Area and that is not used in Petroleum Operations, to the extent permitted by the provisions of this Section 7.1 and Appendix I.
- 7.1.2 The Contractor shall retain and dispose, in each Calendar Year, of that volume of Crude Oil (hereinafter referred to as "Cost Oil") the value of which is equal to the recoverable Petroleum Operations Costs for that Calendar Year, limited to an amount not exceeding _____ per cent (_____ %) of average daily production from the Contract Area.
- 7.1.3. To the extent that the recoverable Petroleum Operations Costs for any Calendar Year exceed the value of the maximum amount of Crude Oil available under Section 7.1.2, the excess shall be carried forward for recovery in the next succeeding Calendar Year or Calendar Years.
- 7.1.4. For the purpose of valuation of Cost Oil, the provisions of Section 12.1 shall apply.

7.2. Production sharing

- 7.2.1. (a) The balance of Crude Oil remaining in any Calendar Year after deduction of the royalty payments under Section 11.2 and after recoverable Petroleum Operations Costs have been satisfied to the extent and in the manner aforesaid in Section 7.1, shall be referred to as "Profit Oil" and shall be shared, taken and disposed of between the Government and the Contractor according to the following incremental scale:

Average daily production of Crude Oil from the Contract Area	Government Share %	Contractors Share %
First 20,000 Barrels/day		
Next 20,000 Barrels/day		
Next 20,000 Barrels/day		
Next 20,000 Barrels/day		
Next 20,000 Barrels/day		
Any Volume over the First 100,000 Barrels/day		

- 7.2.1. (b) The balance of Natural Gas remaining in any Calendar Year after deduction of the royalty payments under Section 11.2 and after recoverable Petroleum Operations Costs have been satisfied to the extent and in the manner aforesaid in Section 7.1, shall

be referred to as "Profit Oil" and shall be shared, taken and disposed of between the Government and the Contractor according to the following incremental scale:

Average daily Production of Natural Gas from the contract area	Government Share %	Contractors Share %
First 50 million cu ft/day		
Next 50 million cu ft/day		
Next 50 million cu ft/day		
Next 50 million cu ft/day		
Greater than 200 million		

7.2.2. For the purpose of this Section, Cost Oil and Profit Oil calculations shall be done for each Calendar Quarter on an accumulative basis. To the extent that actual quantities, prices and expenses are not known on the date of said calculations, provisional estimates shall be made based on the annual development work programme and budget submitted to the Minister under Section 5.4.6. Within thirty (30) days of the end of each Calendar Quarter, adjustments shall be made based on actual quantities, prices and expenses in relation to such Quarter.

Within sixty (60) days of the end of each Calendar Year, a final calculation of Cost Oil and Profit Oil based on actual data pertaining to that Year shall be prepared and any necessary adjustments shall be made.

7.2.3. The Government may elect to take in kind all or any part of the total Government's share of Profit Oil under this Section 7.2 or direct the Contractor to lift and market all or any part of such Crude Oil, all in accordance with the provisions of Section 8.2.

7.2.4. If the Government elects not to take and receive in kind all or part of the Government's share of Profit Oil, the Contractor shall make payment to the Government for the Government's share of Profit Oil not taken in kind within thirty (30) days following the date of each lifting.

SECTION VIII:

PRODUCTION RATE AND MARKETING

8.1. Production rate

- 8.1.1. The Contractor shall produce Petroleum at the maximum economic efficient rate having consideration for generally accepted international petroleum industry practice and international standards for the conservation of Petroleum resources. The Contractor shall submit ninety (90) days before the start of each Calendar Year an estimated production schedule for each Development Area.
- 8.1.2. The Contractor shall submit Petroleum production reports on a regular basis and in a form to be designated by the Minister.

8.2. Marketing

- 8.2.1. The Contractor, if so directed by the Government, shall be obligated to market all or any part of the Petroleum produced and saved from the Contract Area subject to the provisions of this Agreement.
- 8.2.2. Except to the extent the provisions of Section 6.1 with respect to Government participation or Section 10.1 relating to domestic consumption are applicable, or to the extent the Minister elects to take in kind all or any part of the royalty production under Section 11.2 or the Government's share of Profit Oil under Section 7.2, the Contractor shall be entitled to take and receive and freely export Petroleum produced under this Agreement.
- 8.2.3. Title to Petroleum produced to which the Contractor is entitled under this Agreement shall pass to the Contractor at the Point of Delivery. The Contractor shall, however, take out all necessary insurance policies in order to cover all damage or loss caused by, or resulting from, Petroleum Operations, including, but not limited to, production and transportation of all Petroleum to the Point of Delivery.
- 8.2.4. One hundred and eighty (180) days prior to the estimated date of commencement of regular production from the first Development Area, the Minister shall notify the Contractor in writing whether it elects to take in kind all or any part of the royalty production under Section 11.2 or the Government's share of Profit Oil under Section 7.2.

This election shall be effective until the Minister elects in writing to change its election with respect to taking in kind all or any part of the royalty production or the Government's share of Profit Oil in which case the new election shall be effective one hundred eighty (180) days after the date the Minister gives written notice of such election; provided, however, that such election shall not interfere with the proper performance of any sales agreement for

Crude Oil produced within the Contract Area that the Contractor has executed prior to the notice of such election.

Failure by the Minister to give timely notice of its original election shall be conclusively deemed to evidence the Minister's election not to take in kind all or any part of the royalty production or the Government's share of Profit Oil. Any sale by the Contractor of the royalty production or the Government's share of Profit Oil shall not be for a term of more than twelve (12) months without the written consent of the Minister.

- 8.2.5. The Minister shall take, at the Point of Delivery, regular delivery at reasonable intervals during the period of its election to take Crude Oil in kind as provided in Section 8.2.4.

At a reasonable time prior to the date of commencement of regular production from a Development Area, the Parties shall agree on procedures covering the scheduling, storage and lifting of produced Crude Oil from the Point of Delivery.

- 8.2.6. If the Minister elects not to take and receive in kind all or any part of the royalty production or the Government's share of Profit Oil, then the Minister may direct the Contractor to market or itself buy such production, whichever the Contractor shall elect to do, and the price paid to the Government for such production shall not be less than the value for that Petroleum determined in accordance with Section 12.1. In such event, the Contractor shall pay the royalty and Government's share of Profit Oil in accordance with the provisions of Sections 7.2, 11.2 and 14.1.2.

SECTION IX:

UNITIZATION

9.1 Unitization

9.1.1. If commercially producible deposits extend beyond the Contract Area into other parts of the Territory of Ethiopia in which other persons have contracts for the exploration and production of Petroleum, or in which another contract has been granted to the Contractor, the Minister may require that the Contractor develop and produce Petroleum therefrom in co-operation with such other contractors. The Minister may require the Contractor to adopt similar arrangement for other areas within the Contract Area where those areas, if developed and produced in connection with Petroleum deposits in any adjacent areas, would be commercially producible.

9.1.2. If the Minister so requires, the Contractor shall co-operate with other contractors in preparing a proposal for joint development and production of such Petroleum deposits. This proposal shall be submitted for approval of the Minister within six (6) months after the Contractor's receipt of the Minister's notification, which approval shall not be unreasonably withheld.

9.1.3. If the proposal is not submitted within the period so stated or if the Minister does not approve that proposal, the Minister may prepare or cause to be prepared in accordance with the generally accepted international petroleum industry practice and at the cost of the Contractor and the other contractors involved, a plan for joint development and production.

If the Minister adopts such a plan, the Contractor shall comply with all the conditions contained therein, provided that those conditions do not reduce the economic benefit to the Contractor under this Agreement.

9.1.4. The provisions of Sections 9.1.1, 9.1.2 and 9.1.3 shall be applicable to deposits of Petroleum within the Contract Area that extend to areas outside the boundaries of the State; provided, however, that in these cases the Minister shall be empowered to impose the special rules and conditions which may be necessary to comply with the general principles of international law and satisfy obligations under an agreement with an adjacent state with respect to the production of such Petroleum deposits.

SECTION X:

DOMESTIC CONSUMPTION

10.1. Domestic consumption

10.1.1. The Minister may require the Contractor by written notice given one hundred eighty (180) days in advance to supply Crude Oil to the State to meet the State's domestic consumption needs. Such Crude Oil shall be supplied from the Crude Oil to which the Contractor is otherwise entitled under this Agreement.

10.1.2. The maximum amount of Crude Oil that the Contractor shall be obligated to supply to the State to meet its domestic consumption needs under Section 10.1.1 shall be equal to the difference between:

- (a) the total domestic consumption needs multiplied by a fraction the numerator of which is the total Crude Oil production from the Contract Area and the denominator is the total Crude Oil production in the Territory of Ethiopia; and
- (b) the amount of Crude Oil from the Contract Area to which the Government is entitled under this Agreement, including royalties in kind, Government participation production and Government's share of Profit Oil.

Such determination shall be made on a quarterly basis.

10.1.3. If the Contractor supplies Crude Oil for domestic consumption, the price paid to the Contractor shall be calculated in accordance with Section 12.1 and paid in United States dollars or any other currencies mutually agreed within sixty (60) days from the date of receipt of invoice.

10.1.4. The Contractor may comply with Section 10.1.1, upon the written consent of the Minister, by importing Crude Oil and exporting the same amount, with adjustments to be made in price and volume to reflect transportation costs, differences in quality, gravity and the terms of the sale.

SECTION XI:

BONUSES, RENTALS, ROYALTIES AND PAYMENTS

11.1 Annual rentals

11.1.1. The Contractor shall pay to the Minister during the term of the Exploration Period the following annual rentals for all un surrendered parts of the Contract Area that have not been designated as a Development Area:

- (a) during the initial term of the Exploration Period _____ (_____) United States dollars per square kilometer;
- (b) during the first extension to the Exploration Period _____ (_____) United States dollars per square kilometer;
- (c) during the second extension to the Exploration Period _____ (_____) United States dollars per square kilometer; and
- (d) during any other extension to the Exploration Period _____ (_____) United States dollars per square kilometer.

11.1.2. The Contractor shall pay to the Minister during the term of the Development and Production Period an annual rental of _____ (_____) United States dollars per square kilometer for each part of the Contract Area that is designated as a Development Area .

11.1.3. The first annual rental payment shall be made within thirty (30) days after the Effective Date of this Agreement. All subsequent annual rental payments shall be made within thirty (30) days after the anniversary of the Effective Date and shall be calculated on the basis of the length of time during the year that any part of the Contract Area was being held by the Exploration Period or the Development and Production Period. If during any year a change occurs with regard to the Contract Area that results in an increase in the annual rental payment due, the payment for the following year shall be adjusted to compensate for the difference.

11.2 Royalties

11.2.1. The Contractor shall pay, within ten (10) days after the end of each calendar month, to the Minister a royalty at a rate depending on the total daily production in a Development Area of all Crude Oil and Natural Gas produced and saved and not used in Petroleum Operations, and determined according to the following incremental scale:

Average Crude Oil production from a	Royalty %
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Development Area	
First 20,000 Barrels/day	
Next 20,000 Barrels/day	
Next 20,000 Barrels/day	
Next 20,000 Barrels/day	
Next 20,000 Barrels/day	
Any volume over the first 100,000 Barrels/day	

As for Natural Gas:-

Average Natural Gas production from a Development Area	Royalty %
First 50,000 million cu ft/day	
Next 50,000 million cu ft/day	
Next 50,000 million cu ft/day	
Next 50,000 million cu ft/day	
Any volume over the first 200,000 million cu ft/day	

11.2.2. The Minister may elect to take all or any part of the royalty in kind from any Development Area in accordance with the provisions of Section 8.2. and, unless the Minister elects to take royalty in kind as provided in this Section, the royalty shall be paid in cash.

11.2.3. The royalty taken in cash shall be valued at the Point of Delivery in accordance with the appropriate provisions of Section 12.1.

11.3. Production bonuses

11.3.1. The Contractor shall pay to the Minister the following sums when production of Crude Oil from the Contract Area attains the following levels for the specified periods of time:

- (a) _____(_____) United States dollars after daily production averages _____(_____) barrels per day for a period of thirty (30) consecutive days; and
- (b) _____ (_____) United States dollars after daily production averages _____ (_____) barrels per day for a period of thirty (30) consecutive days.

11.3.2. The payment under Section 11.3.1 shall be made within thirty (30) days after the last day of the applicable thirty (30) day period.

11.3.3. Production bonuses shall be deductible for income tax purposes but are not part of recoverable Petroleum Costs.

11.4 Signature Bonus

Within Thirty days following the effective date, the contractor shall pay to the Minister a signature bonus of -----(-----) United States Dollars

SECTION XII

VALUATION AND MEASUREMENT

12.1. Valuation

12.1.1. The value of Crude Oil for all purposes shall be:

- (a) If the Crude Oil is sold by the Contractor to third parties in arm's length transactions, the net realized price (i.e., after deducting commissions and brokerages) for that sale, at the F.O.B. Point of Delivery;
- (b) Where Crude Oil is sold by the Contractor other than to third parties in arm's length transactions, that Crude Oil shall be valued at the following applicable price:
 - (i) if there have been sales of Crude Oil by the Contractor to third parties in arm's length transactions during the three (3) months preceding that sale, the weighted average per unit price paid in these sales, net of commissions and brokerages, at the F.O.B. point of exportation, adjusted for quality, grade, quantity, transportation costs and any special circumstances, unless less than twenty-five per cent (25 %) by volume of Crude Oil sales during this period are made to third parties, in which event Crude Oil sold other than to third parties in arm's length transactions shall be valued according to paragraph (b) (ii) below;
 - (ii) if there have been no sales of Crude Oil by the Contractor to third parties in arm's length transactions during the three (3) months preceding that sale, the average per unit price for the prior three (3) months, net of commissions and brokerages, paid in arm's length transactions of sales of Crude Oils of a similar quality, grade, and quantity in the same international markets as those which the Ethiopian Crude Oil would normally be sold, adjusted at the F.O.B. point of exportation for quality, grade, quantity, transportation costs and any special circumstances;
 - (iii) provided that, if as a result of rapid fluctuations in prices during the three (3) months period, or any other reason, the price determined under (i) or (ii) above is not fair and equitable, the market value shall be determined by reference to prices during such period as may be appropriate.
- (c) If the Minister and the Contractor cannot reach agreement on the value of Crude Oil within thirty (30) days, such determination shall be made by an internationally recognized expert appointed by the Contractor and the Minister, but if they fail to agree within thirty (30) days on the appointment of such expert, then such appointment shall be made by the International Chamber of Commerce. The expert shall report his determination within twenty (20) days of his appointment and his determination shall be final and binding upon the Government and the Contractor.

Pending the determination of the value of Crude Oil for a given period, the value of Crude Oil determined for the preceding Calendar Quarter will be provisionally applied to make calculation and payment until the applicable value for that period is finally determined. Any adjustment to provisional calculation and payment, if necessary, will be made within thirty (30) days after such applicable value is finally determined.

12.1.2. The value of Natural Gas for all purposes shall be:

- (a) where Natural Gas is sold by the Contractor to third parties in arm's length transactions, the net realized price obtained for such Natural Gas at the point where title and risk pass to the buyer;
- (b) where Natural Gas is sold by the Contractor other than to third parties in arm's length transactions or is sold to the Government, that Natural Gas shall be valued at a price and in a currency to be determined by agreement between the Minister and the Contractor.

12.1.3. For the purposes of this Section 12.1, a sale of Petroleum is a sale at "arm's length" if the following conditions are satisfied:

- (i) the price is the sole consideration for the sale;
- (ii) the terms of the sale are not affected by any commercial relationship, other than that created by the contract of sale itself, between the seller or an Affiliate and the buyer or an Affiliate; and
- (iii) the seller or an Affiliate do not have, directly or indirectly, an interest in the subsequent resale or disposal of the Petroleum or any product derived therefrom.

12.2. Measurement

12.2.1. The volume and quality of Petroleum produced and saved by the Contractor shall be measured by methods and appliances in accordance with generally accepted international petroleum industry practice, which shall be approved by the Minister.

12.2.2. The Minister may inspect the appliances used for measuring the volume and determining the quality of Petroleum and may appoint an inspector to supervise the measurement of volume and determination of quality.

12.2.3. Where the method of measurement, or the appliances used therefore, have caused an overstatement or understatement of royalties or share of the production, the error shall be presumed to have existed since the date of the last calibration of the measurement devices, unless the contrary is shown, and an appropriate adjustment shall be made at the average value for the period of the error, or by an adjustment in deliveries in kind over an equivalent period.

12.2.4. The Contractor and the Minister shall determine the points at which production shall be measured.

SECTION XIII:

NATURAL GAS

13.1. Non-associated Natural Gas

13.1.1. If Non-associated Natural Gas is discovered, the Contractor and the Minister shall engage in good faith discussions to determine whether the Natural Gas discovery should be appraised with a view to its eventual development and production. Such discussions shall take into consideration among other things the following factors:

- (a) priority uses for Natural Gas will be (i) its use in Petroleum Operations, (ii) its utilization in Ethiopia, and (iii) its sale for export projects, depending on the existence or potential of the respective markets;
- (b) the quality, minimum quantities and costs of facilities required to produce, develop, transport and market the Natural Gas;
- (c) the pricing of the Natural Gas for domestic utilization at levels that will ensure the economic viability of the project and the economic utilization of the Natural Gas for each particular use, including reference to the value of the energy it may displace;
- (d) the willingness of the Government to enter into long term sales arrangements with adequate safeguards for and from the Contractor in order to promote and develop the use of indigenous resources of Natural Gas in Ethiopia, as well as to develop on a timely basis the necessary downstream components of the project.

13.1.2. If the Contractor, after discussions with the Minister under Section 13.1.1, considers that the Non-associated Natural Gas discovery merits appraisal, the Contractor shall proceed with the appraisal programme as stipulated under Section 5.3 and, if necessary, the provisions of Section 2.2.5 shall apply.

13.1.3. If the Contractor and the Minister agree, after discussions under 13.1.1 and the completion of the appraisal programme, that the Non-associated Natural Gas discovery constitutes a Commercial Discovery the Contractor could proceed with its development and production through submission of a development plan in accordance with the provisions of Section 5.4. The Contractor and the Minister shall enter into good faith negotiations for detailed separate agreements to govern the development, processing, utilization and disposition or sale of the Natural Gas concerned.

For the purpose of expediting the execution of a domestic Gas development project, a Gas development advisory committee shall be established with representatives of the Government and the Contractor to coordinate all upstream and downstream components of the project and facilitate its evaluation and implementation.

Unless otherwise agreed, the adoption of the relevant development plan under Section 5.4 shall be made only once all agreements for the disposition or sale of the Natural Gas concerned have been concluded.

13.1.4. If the Contractor elects not to develop a Non-associated Natural Gas discovery which has been appraised and found of potential commercial interest in accordance with the provisions of Section 13.1.3, the Government shall have the right to proceed with the development and production of the discovery at its sole risk, cost and expense, and shall reimburse the Contractor the certified costs and expenses directly attributable to the appraisal of such discovery provided, however, that:

- (a) The Contractor surrenders all its rights under this Agreement in respect of the area corresponding to the Non-associated Natural Gas discovery;
- (b) The appraisal programme was approved in writing by the Minister;
- (c) The Contractor and the Government agree, with the assistance of specialized third parties when necessary, that sufficient economically recoverable gas reserves have been proved to support the demand for and the economic viability of a pre-identified domestic Natural Gas project for a period of at least twenty five (25) years under the pricing principles specified under Section 12.1 and taking into account the reimbursement included herein; and
- (d) Such reimbursement to the Contractor shall be made in ____ (____) years, without interest, in equal quarterly installments starting six (6) months after the date of adoption by the Minister of the development plan for the particular Natural Gas discovery concerned. The Government may elect to make reimbursements either in cash or in Crude Oil valued pursuant to the provisions of Section 12.1.

13.1.5. If the Contractor decides, after discussions under Section 13.1.1 and the completion of the appraisal programme, that the Non-associated Natural Gas discovery is not a Commercial Discovery, the Government shall have the right to proceed with further appraisal and development of the reservoirs corresponding to the Natural Gas discovery at its sole risk, cost and expense. The Government may develop, produce, take, process and utilize or sell the Non-associated Natural Gas without compensation to the Contractor provided, however, that:

- (a) the Government shall bear all costs for any new fixtures and installations required for the development, production, transportation, processing and utilization thereof;
- (b) the production of Natural Gas shall not materially interfere with other Petroleum Operations; and
- (c) rights of the Contractor under this Agreement in respect of reservoirs other than the identified Non-associated Natural Gas reservoirs will remain unaffected.

13.1.6. If after good faith discussions with the Minister under Section 13.1.1, the Contractor decides that there is no merit in appraising the Non-associated Natural Gas discovery, the

Contractor shall submit to the Minister a report justifying its decision on the basis of at least the following factors:

- (a) evaluation of possible reserves taking into account test results of the discovery well and any other relevant information;
- (b) market alternatives considered for the Non-associated Natural Gas;
- (c) investment and cost estimates; and
- (d) economic reserves under different price assumptions.

If the Contractor fails to comply with this requirement within a period of one (1) year after the date of the discovery, the Minister may at his discretion terminate the rights of the Contractor in respect of the area corresponding to the Non-associated Natural Gas discovery.

13.2. Associated Natural Gas

13.2.1. Associated Natural Gas, which is not required for use in Petroleum Operations and the development, production, processing and utilization or sale of which the Contractor concludes is not economical, shall be returned to the subsurface structure, but the Contractor has the right to flare such Natural Gas in accordance with generally accepted international petroleum industry practice, provided the Contractor demonstrates that the flaring is required for technical and economic reasons and the Minister approves the flaring, which approval shall not be unreasonably withheld.

If the Contractor determines to flare such Natural Gas, the Government has the right to take such gas at no cost except to compensate the Contractor for the additional costs to deliver the Natural Gas to the Government.

13.2.2. If the Contractor and the Minister agree that the Associated Natural Gas that is not required for Petroleum Operations may be economically processed and utilized or sold other than in gas recycling, reservoir pressure maintenance, gas lift or secondary recovery operations, the Contractor and the Minister shall enter into good faith negotiations for a separate agreement to govern the processing, utilization and disposition or sale of the Natural Gas concerned.

13.3 Other provisions

13.3.1. The development and production of Natural Gas, whether associated or non associated, shall be subject to this Agreement and the Accounting Procedures attached hereto as Appendix I as well as any special agreement entered into between the Minister and the Contractor pursuant to the provisions of Sections 13.1 and 13.2. However, the Minister and the Contractor may engage in good faith negotiations to modify the provisions of Section VII on cost recovery and production sharing in respect of Natural Gas, if the Minister determines that special circumstances relating to Natural Gas development and production exist which warrant such modification.

13.3.2. Except as otherwise agreed, the provisions of this Agreement shall apply mutatis mutandis to a production of Natural Gas and considering that six thousand (6000) cubic feet of Natural Gas at a temperature of fifteen degrees Celsius (15°C) and standard atmospheric pressure of 1.01325 bar shall be deemed to be equivalent to one (1) Barrel of Crude Oil.

For production sharing purposes, LPG shall be treated as Natural Gas.

13.3.3. The value of Natural Gas for all purposes shall be determined in accordance with the provisions of Section 12.1.

SECTION XIV:

FINANCIAL AND FISCAL MATTERS AND ACCOUNTING

14.1. Finances

14.1.1. The Contractor shall provide all funds necessary to conduct Petroleum Operations, shall bear the sole financial risk in carrying out such Petroleum Operations, and shall therefore have an economic interest in the development and production of Petroleum from the Contract Area, except otherwise provided in this Agreement.

14.1.2. All payments under this Agreement by the Contractor to the Government or the Minister shall be made in United States dollars unless the Minister and the Contractor shall agree upon payment in other freely convertible foreign currency. Any delayed payments shall bear interest at _____ per cent (____) per year.

14.1.3. Charges for services requested by the Contractor and actually rendered by the Government or its administrative or political subdivisions shall be made at generally applicable rates for such services.

14.2. Taxation

14.2.1. The Contractor and the Subcontractors shall be subject to, and comply with, all income tax laws and regulations of Ethiopia.

Unless otherwise agreed by the Parties, the provisions of Section 14.1.2 shall apply to income tax payments.

14.2.2. The salaries and other benefits in cash or in kind of expatriate employees of the Contractor and the Subcontractors derived from activities required for performance under this Agreement shall be exempt from personal income tax.

14.3. Foreign exchange control

14.3.1. The Contractor shall comply with the procedures and formalities required by the legislation and regulations relating to foreign exchange in force from time to time in Ethiopia, provided, however, that the Contractor shall have the right:

- (a) to open and keep one or more transferable or non-transferable Birr accounts with the Commercial Bank of Ethiopia. Such Birr accounts shall be credited with:
 - (i) the proceeds of the conversion into Birr pursuant to paragraph (c) below of funds deposited in the external accounts referred to in paragraph (b) below; and

- (ii) amounts received in Birr, subject to approval of the National Bank of Ethiopia as to the source or origin;
- (b) to open and keep foreign currency account with the Commercial Bank of Ethiopia and freely dispose of the sums deposited therein. Such account shall be credited only with sums deposited in convertible currencies;
- (c) to convert to Birr the foreign convertible currencies acceptable to Ethiopian banks at rates of exchange quoted by commercial banks operating in Ethiopia. Such rates shall not be less favorable to the Contractor than the effective rate applicable for similar transactions undertaken by any private or state enterprise on the date of the transaction;
- (d) to open and freely maintain foreign bank accounts outside Ethiopia. Said bank accounts may be credited, with funds from any source, except that such accounts shall not be credited with the proceeds of the sale of Birr without the prior approval of the National Bank of Ethiopia. Save in respect of funds needed by the Contractor to discharge its obligations in Ethiopia under this Agreement, the Contractor shall have the right to retain abroad all proceeds and payments under this Agreement received in said bank accounts, including but not limited to the proceeds of sales of Petroleum hereunder, and to dispose freely of the same without any obligation to repatriate the same or any part thereof to Ethiopia;
- (e) pay directly outside Ethiopia foreign Subcontractors for purchases of goods and services necessary to carry out Petroleum Operations hereunder; and
- (f) freely repatriate abroad all proceeds from Contractor's Petroleum Operations within Ethiopia.

Foreign Subcontractors of the Contractor shall have the same rights and obligations specified above as the Contractor.

14.3.2. Any foreign Subcontractor of the Contractor and any of the expatriate personnel of the Contractor or of any of its Subcontractors, shall be entitled to receive outside Ethiopia the whole or any part of his compensation provided, however, that such foreign Subcontractor and expatriate personnel shall be required to bring into Ethiopia such freely convertible currencies to meet payments of Ethiopian taxes, living and other expenses.

14.3.3. The payment of principal, interest and/or costs due on funds and loans in foreign currency shall not be made out of funds deposited in the accounts opened and kept under Section 14.3.1 (a) above.

14.3.4. The Contractor and the Subcontractors shall, within thirty (30) days after the end of each Calendar Quarter, submit to the National Bank of Ethiopia, with a copy to the Minister, a summary of all currency received, imported, remitted and maintained abroad pursuant to Section 14.3.1 during the relevant quarter.

14.3.5. Except as otherwise provided herein, expatriate employees of the Contractor and the Subcontractors shall comply with applicable foreign exchange legislation and regulations.

14.4. Accounting

14.4.1. The Contractor shall keep in Addis Ababa complete financial accounts and records in English and in United States dollars reflecting all Petroleum Operations.

If payments are made in other than United States dollars, such payments shall be recorded in United States dollars based on the exchange rate for the currency in which the payments are made, as quoted by _____ on the date of the actual transfer of funds.

Such accounts and records shall be prepared and maintained in accordance with generally accepted international petroleum industry practice and as prescribed in Appendix I to this Agreement and as may be prescribed in regulations issued pursuant to the Petroleum Proclamation.

14.4.2. The Contractor shall prepare on a Calendar Year basis an annual balance sheet and profit and loss statement in accordance with the Accounting Procedures set forth in Appendix I hereto and the generally applicable laws of Ethiopia. Such accounts and the reports to the Minister derived therefrom shall be certified by an independent

auditor acceptable to the Minister and shall be submitted, along with the auditor's report, to the Minister and other appropriate authorities within ninety (90) days after the end of the Calendar Year to which they pertain.

14.4.3. The Government shall have the right, at its cost and expense, to carry out additional audits of the Contractor's books, records and accounts relating to this Agreement for each Calendar Year within five (5) Years from the end of such Year.

SECTION XV:

IMPORTS AND EXPORTS

15.1 Imports

15.1.1. Subject to the local purchase obligations of Section 3.6, the Contractor and each Subcontractor shall be entitled to import into Ethiopia any and all drilling, geological, geophysical, production, treating, processing, transportation and other machinery and equipment necessary for Petroleum Operations, including aircraft, vessels, vehicles and other transportation equipment and parts therefore (other than sedan cars and fuel therefore), fuels, chemicals, lubricants, films, seismic tapes, house trailers, office trailers, disassembled prefabricated structures and other materials necessary for Petroleum Operations free of import taxes, charges, duties, levies and imposts of any kind, provided, however, that this shall not preclude the Contractor and the Subcontractor from paying charges to the Government for services actually rendered by any appropriate Government agency.

- 15.1.2. Other than as specified in this Agreement and the Petroleum Proclamation, all other imports by the Contractor, each Subcontractor and their employees shall be subject to all generally applicable import duties and taxes of Ethiopia.
- 15.1.3. Each expatriate employee of the Contractor and Subcontractors may, in accordance with prevailing regulations, import household goods and personal effects including one (1) sedan car per employee, within six (6) months of the employee's arrival, free of import taxes, charges, duties, levies and imposts of any kind, provided, however, that such properties are imported for the sole use of the employee and his family.

15.2. Exports

- 15.2.1. All items imported under Section 15.1, and taken out from Ethiopia shall be exempt from export duties and other taxes and duties levied on exports, provided, however, that if these items are disposed of within Ethiopia, the Contractor, Subcontractors and expatriate employees, as the case may be, shall pay customs duties and taxes in accordance with the applicable laws.
- 15.2.2. The Contractor may export from Ethiopia, exempt of all export duties and other taxes levied on exports, the Petroleum produced from the Contract Area to which the Contractor is entitled in accordance with the provisions of this Agreement.
- 15.2.3. Notwithstanding any other provision of this Agreement, the Contractor shall not make shipments of Petroleum produced from Petroleum Operations in Ethiopia to or through countries whose export destinations are proscribed by the State.

SECTION XVI

GOVERNING LAW AND DISPUTES

16.1. Governing law

16.1.1. This Agreement shall be governed by, interpreted and construed in accordance with the laws of Ethiopia.

16.1.2. The Contractor agrees that it will abide by all laws and regulations in force in Ethiopia.

16.1.3. In the event that after the Effective Date of this Agreement the economic benefits to be derived by a Party from the Petroleum Operations under this Agreement are substantially affected by the promulgation of new laws and regulations or of any amendments to the applicable laws and regulations of Ethiopia and if the affected Party so requests, the Parties shall agree to make the necessary adjustments to the relevant provisions of this Agreement, in order to ensure that the affected Party is restored to the same economic condition it would have been in if such change in the applicable laws had not taken place.

16.2. Arbitration

16.2.1. Except as otherwise provided in this Agreement, if, during the term of this Agreement or thereafter, any difference or dispute arises with respect to the construction, meaning or effect of this Agreement or arising out of or related or in connection with this Agreement or concerning the rights and obligations hereunder, which difference or dispute cannot be mutually resolved by the Parties within ninety (90) days, either Party shall have the right to submit the difference or dispute to a formal settlement process under this Section 16.2.

16.2.2. The difference or dispute referred to under Section 16.2.1 shall be finally settled by arbitration in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law.

16.2.3. The arbitration, including the rendering of the award, shall take place in _____ and shall be in English. The decision of a majority of the arbitrators shall be final and binding upon the Parties. Any judgment upon the award of the arbitrators may be entered in any court having jurisdiction thereof.

16.2.4. The number of arbitrators shall be three (3) and shall be appointed as follows:

- (a) Each Party shall appoint one (1) arbitrator and so notify the other Party of such appointment and those two (2) arbitrators shall appoint the third arbitrator;
- (b) If any of the arbitrators shall not have been appointed within thirty (30) days after receipt of written request to do so, either Party may request in writing the Secretary-

General of the International Centre for Settlement of Investment Disputes to appoint the arbitrator or arbitrators not yet appointed and to designate an arbitrator to be the Chairman of the arbitral tribunal. The Secretary-General shall forthwith send a copy of that request to the other Party.

The Secretary-General shall comply with the request within thirty (30) days from the receipt thereof or such longer period as the Parties may agree and shall promptly notify the Parties of any appointment or designation made by him pursuant to the aforesaid request.

- (c) If the arbitrator fails or is unable to act, his successor shall be appointed in the same manner as the arbitrator whom he succeeds.

16.3. Force Majeure

16.3.1. In this Agreement "Force Majeure" means an occurrence beyond the reasonable control of the Contractor, the Minister or the Government, which hinders or prevents any of them from performing their obligations under this Agreement, including but not limited to occurrences such as riots, strikes, wars (declared or undeclared), insurrections, rebellions, terrorist acts, civil disturbances, natural phenomena or calamities; provided, however, that the inability to obtain equipment, supplies, or fuel shall not be a cause of Force Majeure, and provided further that if any failure to comply with the provisions of this Agreement is occasioned by a law, regulation or order of the Government, and the Contractor is operating in accordance with generally accepted international petroleum industry practice in the Contract Area and is making reasonable efforts to comply with such law, regulation or order, the occurrence shall be deemed beyond the reasonable control of the Contractor.

16.3.2. If the Contractor, the Minister or the Government is prevented from complying with this Agreement, in whole or in part, by Force Majeure, the Party claiming Force Majeure shall give written notice, along with details providing evidence of the nature and cause of such Force Majeure, to the other Party as soon as practicable after its occurrence and the obligations of the affected person which are directly related to the Force Majeure shall be suspended in respect of the area affected during the continuance of the Force Majeure.

The Party affected by Force Majeure shall take all reasonable measures to remove such Party's inability to fulfill its obligations hereunder with a minimum of delay.

Obligations other than those concerned by Force Majeure shall continue to be performed in accordance with the provisions of this Agreement.

16.3.3. Subject to Section 16.3.4., the term of this Agreement shall be extended for the period of Force Majeure but only in respect of the area affected.

16.3.4. If an obligation is suspended by Force Majeure for more than one (1) year, the Contractor and the Minister may enter into good faith negotiations on the continuation of this Agreement.

SECTION XVII

GENERAL

17.1. Confidentiality

- 17.1.1. Any information and data (referred to herein as "information") which the Contractor may supply to the Minister under this Agreement shall be supplied at the expense of the Contractor and the Minister shall, except with the consent of the Contractor, which shall not be unreasonably withheld, keep such information confidential, and shall not disclose such information other than to a person employed by or on behalf of the Government.
- 17.1.2. Notwithstanding the provisions of Section 17.1.1, the Minister may use any information supplied, for the purpose of preparing and publishing any reports and returns required by law, and for the purpose of preparing and publishing reports and surveys of a general nature.
- 17.1.3. The Minister may publish any information which relates to a surrendered area at any time after the surrender, and in any other case, three(3) years after the information was received unless the Minister determines, after representations by the Contractor, that a longer period shall apply.
- 17.1.4. The Minister may disclose any information obtained pursuant to this Agreement as required by lending institutions, consultants and Government entities as may need to be made aware thereof.
- 17.1.5. The Contractor shall not trade or disclose to third parties during the term of this Agreement and for a period of ten (10) years thereafter any information obtained pursuant to this Agreement without the consent of the Minister, which consent shall not be unreasonably withheld.

However, the Contractor may disclose information without obtaining such consent:

- (a) to such extent as may be required to be disclosed to any authority having jurisdiction on it by law;
- (b) subject to obtaining confidentiality undertakings from the recipients, to its Affiliates, consultants, any lending institution or any bona fide potential assignee of an interest in this Agreement.

17.2. Waiver

- 17.2. 1. Any waiver of an obligation of the Contractor shall be in writing and signed by the Minister. No waiver shall be implied if the Minister does not exercise a remedy under this Agreement.

17.3. Notice

17.3.1. Any and all notices, requests, demands and other communications required or permitted to be made or given under this Agreement shall be in writing and shall be deemed to have been duly made or given if delivered by hand, mail, cable or telex as follows:

(a) If to the Minister:- The Minister
P.O.Box 486
Addis Ababa,
Ethiopia
TeL: 251 11 646 33 57
Facsimile: 251 11646 33 64

(b) If to the Contractor _____

Either Party may designate in writing, in conformance with the above, another address at which it should receive all future notices, requests, demands and other communications required or permitted to be made or given under this Agreement.

17.3.2 All notices, requests, demands and other communications required or permitted to be made or given under this Agreement shall be in English. All reports, agreements, or other documents produced by the Contractor in connection with this Agreement shall be in English.

17.3.3. A notice shall be effective upon receipt.

17.4. Headings and amendments

17.4.1. Headings are inserted in this Agreement for convenience only and shall not affect the construction or interpretation hereof.

17.4.2. This Agreement shall not be amended, modified or supplemented except by an instrument in writing signed by the Parties.

SIGNED on the day and year first before written:

The Minister

The Contractor

Witness's

1- -----

1- -----

2- -----

2- -----

APPENDIX I
ACCOUNTING PROCEDURES

Section I:

General Provisions and Definitions

1.1 Purpose

1.1.1. The Contractor shall maintain a separate set of accounts and records for its Petroleum Operations under the Agreement to which this **Appendix** is attached, in accordance with generally accepted international petroleum industry practice as more particularly, but not exclusively, set out in these Accounting Procedures. Statements which are required to be submitted by the Contractor are detailed in Section III of this **Appendix**.

1.1.2. The Contractor may act as agent for the Government or for any other party in a number of matters. In such cases the Minister shall separately determine, as appropriate, in consultation with the Contractor, the requisite accounting procedures. Such cases may include, but not be limited to, sales of Petroleum on behalf of the Government.

1.2.1 Definitions

1.2.2 The definitions set forth in Section 1.2 of the Agreement shall apply to this **Appendix I**. In the event of any inconsistency or conflict between the provisions of this **Appendix** and the Agreement, the provisions of the Agreement shall prevail. Subject to this and for the purpose of the Agreement and these Accounting Procedures, the following terms shall have the meanings set forth below.

1.2.3 "The Account" means the accounts and records maintained for the Petroleum Operations

1.2.4 "Party" means each legal entity constituting the Contractor, or pursuant to an assignment, if applicable, each legal entity constituting the Contractor, and may be referred to as "Parties".

1.2.5 "Operator" means the Party appointed to carry out the Petroleum Operations on behalf of the other Parties.

1.2.6 "Accrual Basis" means the basis of accounting under which costs and benefits are regarded as applicable to the period in which liability to the cost is incurred or the right to the benefit arises regardless of when invoiced, paid or received.

1.2.7 "Fixed Asset" means an asset intended for continuous usage providing an enduring benefit beyond one year.

1.2.8 "Minor Asset" means an asset intended for continuous usage providing an enduring benefit beyond one year with a value of more than One Hundred and Thirty(130) United States Dollars and less than One Thousand Three Hundred (1,300) United States Dollars.

Section II:

2.1 General Principles of Entries to the Accounts

2.1.1 Reports of actual expenditure on geological studies, seismic and exploratory drilling work shall be as recorded in The Account with adjustments according to Sections 5.1, 5.2 and 5.3 of the Agreement shown separately.

Only Petroleum Operations Costs incurred in connection with geological studies, seismic and exploratory drilling work referred to in Sections 5.1.1, 5.1.2 and 5.1.3 shall be included for purposes of meeting minimum exploration expenditure obligations. Costs incurred on appraisal, development or production activity shall be excluded for purposes of meeting minimum exploration expenditure obligations.

2.1.2 Each Party shall account individually to the Government for income tax.

2.1.3 The Contractor shall account to the Government for royalties as set forth in the relevant provisions of the Agreement.

2.1.4 The Contractor shall charge to the Account only those expenditure incurred for Petroleum Operations. The application of this principle to specific Petroleum Operations Costs is set forth in Section IV of these Accounting Procedures.

2.1.5 The Operator shall deal at arm's length whenever possible, and the price in dealings not at arm's length shall be no less favorable than if such dealings were conducted at arm's length.

2.1.6 The Operator shall not make a profit or loss from the diligent exercise of his duties as Operator and, in particular, the Operator shall charge to Petroleum Operations Costs:

- a) An equitable proportion of the costs of services provided by the Operator;
- b) A rental for use of the assets of the Operator; and
- c) Administrative overhead, either as a fee approved in the annual budget, or as an agreed percentage of direct costs or by charging an equitable proportion of each element of cost incurred

2.1.7 The Contractor shall maintain accounts in a single language and a single Currency, which shall be English and United States Dollars respectively.

2.1.8 Accounts shall be maintained on an accrual basis where by entries are recorded in the period in which title or liability passes without the need to distinguish whether cash is disbursed or received in connection with the transaction.

2.1.9 The Operator may dispose of Minor Assets and credit the proceeds to The Account; provided, however, the sale of petroleum or the disposal of fixed Assets, shall not be treated in that manner.

2.1.10 The accounts of the individual operations shall be maintained in a separable form, with reasonable allocations of common costs where necessary, in order to meet the several purposes of such accounts and to allow changes in the relationships between the parties to be accounted for equitably and in particular to allow:

- (a) The consideration for transfers or participating interests to be determined;

- (b) The costs of sole risk operations to be determined; and
- (c) The costs associated with deferent Development Areas to be identified.

- 2.1.11 If Petroleum Operations are to be abandoned, the Operator shall prepare a plan for the disposal of assets and an equitable settlement for the approval of the parties.
- 2.1.12 The Contractor shall appoint an independent auditor, acceptable to the Minister, to audit annually the accounts and records, including production records, of the Petroleum Operations and report thereon. The cost of such audit shall be borne by the Contractor.
- 2.1.13 The accounts and records of the Contractor shall be maintained in accordance with these accounting procedures. Specific adjustments to meet the other purposes shall be shown separately in the reports prepared.
- 2.1.14 Receipts from sales or disposals of petroleum shall not be credited to the expenditure account.

Section III:

3 Production Sharing Agreement Statements To Be Submitted

3.1 Production Statement

3.1.1 Subsequent to the commencement of Commercial Production from the Contract Area, the Contractor shall submit a monthly Production Statement to the Minister showing the following information for each Development and Production Area:

- (a) The quantity of Crude Oil produced and saved
- (b) The quantity of Natural Gas produced and saved
- (c) The quantity of Petroleum used for the purposes of carrying on drilling and production operations or otherwise used in or disposed of during petroleum operations
- (d) The quantity of Petroleum stocks held at the beginning of the Month
- (e) The quantity of Petroleum stocks held at the end of the month
- (f) The quantity of Natural Gas flared.

3.1.2 The Production Statement of each Calendar Month shall be submitted to the Minister not later than thirty (30) days after the end of such Calendar Month.

3.2 Value of Production Statement

3.2.1 The Contractor shall for the purposes of sections 13.1 and 12.1 of the Agreement prepare a statement providing calculations of the value of petroleum produced and saved during each Calendar Quarter in relation to each production Contract Area. This statement shall contain the following information;

- (a) The quantities and prices realized therefore by the Contractor as a result of sales of petroleum to third parties made during the Calendar Quarter in question.
- (b) The quantities and prices realized therefore by the Contractor as a result of such sales made during the Calendar Quarter in question, other than to third parties.
- (c) The quantities of stocks of petroleum at the end of the preceding Calendar Quarter in question.
- (d) The quantities of stocks of petroleum at the end of the Calendar Quarter in question.
- (e) The amount and calculation of Royalties, Profit Oil and Profit Gas for the Calendar Quarter in accordance with Sections 11.2 and 7.2 of the Agreement.

3.2.2 The value of production statement of each Calendar Quarter shall be submitted to the Minister not later than sixty (60) days after the end of such Calendar Quarter.

3.3 Cost Recovery Statement

- 3.3.1 The Contractor shall submit quarterly reports to the Minister containing the Following information:
- a) Recoverable petroleum Operations Costs carried forward from the previous Calendar Quarter, if any;
 - b) Recoverable Petroleum Operations Costs incurred and paid during the Calendar Quarter in question;
 - c) Total recoverable Petroleum Operations Costs for the Calendar Quarter in question;
 - d) Quantity and value of Cost Oil & cost gas taken and separately disposed of by the Contractor for the Calendar Quarter in question;
 - e) Petroleum Operations Costs recovered for the Calendar Quarter in question and total cumulative amount of petroleum operations Costs recovered up to end of the Calendar quarter, and
 - f) Amount of recoverable petroleum Operations Costs to be carried forward into the next Calendar Quarter, if any.
- 3.3.2 The Cost Recovery Statement to each Calendar Quarter shall be submitted to the Minister not later than sixty (60) days after the end of such Calendar Quarter.

3.4 Income Tax Statement

- 3.4.1 The Contractor shall prepare an annual Income Tax Statement with the following information:
- a) The amount of taxable income for the Calendar Year in question.
 - b) The amount of income taxes payable for the Calendar Year in question.
 - c) The amount of income taxes already paid for the Calendar Year in question.
 - d) The amount of income taxes still due to be paid for the Calendar Year in question.
- 3.4.2 The Annual Income Tax statement shall be submitted to Minister not later than three (3) Calendar Months after the end of the Calendar year in question.

3.5 Statement of Expenditure and Receipts

- 3.5.1 The contractor shall prepare with respect to each Calendar Quarter a Statement of Expenditure and Receipts under the Agreement. The statement will distinguish between exploration costs, development costs and production costs and will identify major items of expenditures within these categories.

The statement will show the following:

- (a) Actual expenditures and receipts for the Calendar Quarter in question.
- (b) Cumulative expenditure and receipts for the Calendar Year in question.
- (c) Latest forecast cumulative expenditures at the Calendar Year end.
- (d) Variations between budget forecast and latest forecast and explanation thereof.

3.5.2 The Statement of Expenditure and Receipts of each Calendar Quarter shall be submitted to the Minister not later than sixty (60) days after the end of such Calendar Quarter.

3.6 Budget Statement

3.6.1 The Contractor shall prepare an Annual Budget Statement for each Calendar Year. This shall distinguish between exploration, development and production costs and shall show the following:

- (a) Forecast expenditures and receipts for such Calendar Year under the Agreement.
- (b) A schedule showing individual items of development costs for such Calendar Year.
- (c) Cumulative expenditures and receipts to the end of the preceding Calendar Year.

3.6.2 The Budget Statement shall be submitted to the Minister with respect to each Calendar Year not less than ninety (90) days before the start of that Calendar Year. If the Effective Date falls on a date less than ninety (90) days before the start of the Calendar Year, the Budget statement for such Calendar Year shall be submitted within sixty (60) days of the Effective Date and shall cover the period from the date of its submission to the end of that Calendar Year.

3.7 Final End-Of-year Statement

3.7.1 The Contractor shall prepare a final end-of-year statement. The statement shall contain information as provided in the production statement, value of production statement, cost recovery statement and statement of expenditures and receipts but will be based on actual quantities of petroleum produced and expenses incurred.

3.7.2 Based upon this statement, any adjustments that are necessary will be made to the transactions concerned under the Agreement.

3.7.3 The final end-of-year statement of each Calendar Year shall be submitted to the Minister within ninety (90) days of the end of such Calendar Year.

3.8 Annual Balance Sheet and Profit and Loss Account

The Contractor shall prepare the annual Balance Sheet and Profit and Loss Account required by the relevant provisions of the Agreement.

Section IV:

4. Charges and Credits to Petroleum Operations Costs

4.1 General

- 4.1.1 The principles of charges to Petroleum Operations Costs shall be interpreted as set out in this section IV for the specific cases covered. Transactions not covered by this section shall be treated in accordance with the general principles of these Accounting procedures.
- 4.1.2 The identified costs of goods and services provided by the Contractor or by Third parties for the purposes of conducting Petroleum Operations under this Agreement, to be included in Petroleum Operation Costs, are set out in the remaining articles of this Section IV.

4.2 Goods and services provided by the Parties

- 4.2.1 The goods and services required for the purposes of carrying out Petroleum Operations may be supplied by third parties, or the Contractor. When supplied by third parties the costs included in Petroleum Operation Costs shall be those actually incurred by the Contractor. Where supplied by the Contractor the cost to be included may be either:
- (a) An agreed total charge determined within a competitive bidding process; or
 - (b) The identified costs to the Contractor plus a mark up or apportionment of the Contractor's administrative overhead costs.
- 4.2.2 Any mark up or apportionment of overhead costs shall not exceed three percent (3%) of identified costs and shall be determined on a basis agreed in advance in the budget each year.

4.3 Labor and related costs

- 4.3.1 The costs of salaries and wages of the Party's employees for the portion of their time directly employed in Petroleum Operations whether:
- (a) Carrying out managerial, administrative, legal, accounting, treasury, auditing, tax, planning, personnel, data processing, engineering, purchasing, geological, geophysical or other functions for the benefit of the Petroleum Operations;
 - (b) Such functions are carried out in Ethiopia or another country; and
 - (c) The employee is assigned temporarily or permanently to Petroleum Operations.
- 4.3.2 The costs of holidays, sickness, living and housing allowances, travel time, bonuses, personal expenses incurred, pension contributions and social security benefits which are customarily granted to the Party's employees and their families engaged on similar ventures in similar conditions together with the costs of any amounts imposed by government authorities applicable to such employment.
- 4.3.3 Relocation costs to the contract Area vicinity of the employees of a Party permanently or temporarily assigned to the Petroleum Operations. Relocation costs from the contract Area vicinity, except when an employee is reassigned to another location classified as a foreign location by the party. Such costs include transportation of employees, families and their
- 4.3.4 Personal and household effects and all other relocation costs in accordance with the usual practice of the party

4.3.5 The cost of such transportation of employees of the Party as is required in the conduct of Petroleum Operations.

4.4 Materials

4.4.1 Where the Contractor has a pool for materials and equipments for Petroleum Operations, the material costs will be charged to Petroleum Operations Costs when consumed from inventory, otherwise, material costs will be charged to Petroleum Operations Costs when purchased. Material costs shall be calculated on a weighted average basis.

4.4.2 The costs of purchases of materials, equipment machines, tools and any other goods of a similar nature shall be charged to inventory subject to the following:

- (a) Acquisition - the Operator shall only purchase materials for use in Petroleum Operations that may be used in the foreseeable future. The accumulation of surplus stocks and inventory shall be avoided. Inventory levels shall, however, take into account the time lag for replacement, emergency needs and similar considerations.
- (b) Components of Costs - in addition to the invoice price the costs of materials purchased by the Operator may include freight, transportation and related costs such as expediting, crating, dock charges, forwarders charges, customs clearance fees, inspection costs, insurance (provided that such costs are included in the invoice price), customs duties, taxes and other items that may be charged to imported materials or to materials purchased in Ethiopia.
- (c) Supply of materials by the Parties - materials supplied by the Parties shall be charged to inventory at prices no higher than the prices for comparable material purchased on a competitive basis from third party suppliers. This criterion shall apply to both new and used materials.
- (d) Inventories - the Operator shall maintain both a physical and accounting inventory of all materials in stock in accordance with generally accepted practices in the international petroleum industry and shall take a physical inventory of all such materials at least once in any Calendar Year.

4.5 Technical Services

4.5.1. The costs of technical services (whether or not associated with the ancillary supply of goods) such as, but not limited to, the provision, construction, maintenance or operation of:

- (a) Utilities and auxiliaries - workshops, power and water facilities, warehouses, field roads, crude oil jetties and anchorages, treating plants and equipment, secondary recovery systems, Natural Gas plants and steam systems;
- (b) Production facilities - wellhead equipment, subsurface lifting equipment, production tubing, sucker rods, surface pumps, flow lines, gathering equipment, delivery lines and storage facilities;
- (c) Movable - surface and subsurface drilling and production tools, equipment and instruments, barges, floating craft, automotive equipment, aircraft, construction equipment, furniture and office equipment and miscellaneous equipment;
- (d) Development and production drilling - labor, materials and services use in drilling wells with the object of penetrating a proven reservoir, including the drilling of delineation wells as well

as re-drilling, deepening or re-completing wells, and access roads, if any, leading directly to wells;

- (e) Exploration drilling - labor, materials and services used in the drilling of wells with the object of finding unproven reservoirs of Crude Oil and Natural Gas, and access roads, if any, leading directly to wells;
- (f) Surveys - labor, materials and services used in aerial, geological, topographical, geophysical and seismic surveys, and core hole drilling and
- (g) Interpretation - laboratory analysis, drafting, geophysical and geological interpretation, engineering and related data processing.

4.5.2 The costs included in Petroleum Operations Costs shall be:

- (a) In the case of technical services performed by third parties directly subcontracted, including outside consultants, contractors and utilities, the price paid by the Operator, provided that such prices are no higher than the prices charged by other suppliers for comparable work and services;
- (b) In the case of technical services performed by the Parties, prices which are no higher than the most favorable prices charged to or by third parties for comparable services
- (c) In the case of equipment and facilities being furnished by a Party the rates charged shall be commensurate with the cost of ownership, or rental, and the cost of operation thereof, but such rates shall not exceed those currently prevailing in the general vicinity of the Contract Area.

4.6 Insurance

4.6.1. Premiums for insurance required by the Parties and actual expenditures incurred in the settlement of all losses, claims, damages, judgments, and other expenses for the benefit of the Petroleum Operations.

4.6.2. Credits for settlements received from insurance companies in connection with the insurance required by the Parties.

4.7 Legal Expenses

All costs or expenses of litigation or legal services otherwise necessary or expedient for the protection of the Petroleum Operations or other interest of the Parties under this Agreement, including but not limited to the fees of legal representatives, court costs, costs of investigation or procuring evidence and amounts paid in settlement or satisfaction of any such litigation, or claims, but excluding any costs incurred in arbitration or litigation between the Parties on the terms of this Agreement.

4.8 Other Goods and Services

4.8.1 The cost of all services and goods (other than materials in stock) purchased for proper use in Petroleum Operations shall be charged directly to Petroleum Operations Costs.

4.8.2 Such purchases may include, inter alia, the costs of establishing, maintaining and operating any offices, sub-offices, camps, warehouses, shore bases, water power and Communications systems, roads, bridges, housing, recreational and other facilities directly serving the Petroleum Operations

and where such facilities also serve other operations the costs shall be allocated to the operations served on an equitable basis.

4.9 General and administrative expenses

General and administrative expenses of the Contractor attributable to the Petroleum Operations under this Agreement shall be recoverable Petroleum Operation Costs, subject to the limitations set forth in the Petroleum Operations Income Tax Proclamation.

General and administrative expenses incurred outside Ethiopia in respect of the Petroleum Operations under this Agreement shall not exceed an amount determined by applying the following percentage rates to the Petroleum Operations Costs in each Calendar Quarter:

<u>Petroleum Operations Costs</u>	<u>Percentage rate</u>
First US\$ 1 million	-
Next US\$ 4 million	-
Next US\$ 5 million	-
Above US\$ 10 million	-

4.10 Interest payments

Interest payments on loans raised by the Contractor for the purpose of conducting Petroleum Operations under this Agreement other than exploration shall be recoverable Petroleum Operations Costs, subject to the limitations set forth in the Petroleum Operations Income Tax Proclamation.

4.11 Payments to the Government of Ethiopia

4.11.1 Contract, license or permit payments necessary to acquire and maintain rights to the Contract Area shall be recoverable Petroleum Operations Costs.

4.11.2 All duties, taxes, fees and government assessments, but excluding income tax, production bonuses, royalties and Government's share of Profit Oil, shall be recoverable Petroleum Operations Costs.

4.12 Training Costs

All costs and expenses incurred by the Contractor in training of its employees engaged in the Petroleum Operations and such other training as required under section 3.6.2 of the Agreement.

4.13 Abandonment Costs

All costs incurred in the abandonment and disposal of assets pursuant to Section 3.3 of the Agreement.

4.14 Ecological and Environmental Protection

All costs incurred for ecological and environmental protection including costs incurred as a result of governmental or regulatory requirements to satisfy environmental considerations applicable to the Petroleum Operations.

4.15 Miscellaneous transactions

- 4.15.1 All costs or expenses necessary for the repair or replacement of the property used in Petroleum Operations resulting from uninsured damages or losses incurred by fire, flood, storm, accident, or any other cause.
- 4.15.2 Any gain or loss in the currency of account caused by the holding of balances of foreign exchange shall be entered to Petroleum Operations Costs although excessive such balances shall not be maintained.

4.16 Credits to the Account

The net proceeds of the following transactions shall be credited to Petroleum Operations Costs:

- (a) The net proceeds of any insurance or claim in connection with the Petroleum Operations or any assets charged to Petroleum Operations Costs;
- (b) Revenue received from other persons for the use of property or assets charged to Petroleum Operations Costs;
- (c) Proceeds from all sales of material or assets charged to Petroleum Operations Costs;
- (d) Any rentals, refunds, adjustments or other credits received by the Contractor which apply to any charge which has been made to Petroleum Operations Costs.

4.17 Recoverability and deductibility of Petroleum Operations Costs

- 4.17.1 The determination of whether the costs and expenses set forth herein are recoverable Petroleum Operations Costs shall apply only to the purpose of cost recovery under this Agreement, and shall not be interpreted to preclude the Contractor from deducting said amounts in computing its taxable income under the applicable laws of Ethiopia.
- 4.17.2 For the purpose of cost recovery under this Agreement, no depreciation shall apply to recoverable Petroleum Operations Costs, as such Costs are, subject to the maximum percentage limit specified in Section 17.1 of the Agreement, recoverable either in the Calendar Quarter in which these Costs are incurred or the Calendar Quarter of the Commencement of Regular Production, whichever is the later.
- 4.17.3 Other costs and expenses not covered or dealt with in the provisions of this Section IV and which are incurred by the Contractor for the necessary and proper conduct of the Petroleum Operations are recoverable.

Section V:**Revision of Accounting Procedures**

The provision of this Accounting Procedure may be amended by agreement between the Minister and the Contractor from time to time. The amendments shall be made in writing and shall state the date upon which the amendments shall become effective.

ANNEX A