THE PETROLEUM INDUSTRY IN UNITY STATE OF SOUTH SUDAN: AN EXAMINATION OF THE LEGAL REGIME

BY

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JUNE, 2012

DECLARATION

I declare that this thesis is the work of **Kai Gatluok Jech Piwit** alone, except where due acknowledgement is made in the text. It does not include materials for which any other University degree or Diploma has been awarded.

Sign:.....K.a.i.:.G.:.J.:.P.:.....

Date:.....29:06:12.....

APPROVAL BY SUPERVISOR

I certify that I have supervised and read this study and that in my opinion, it conforms to the acceptable standards of scholarly presentation and is fully adequate in scope and quality as a dissertation proposal in partial fulfillment for the award of Degree of Bachelor of Law of Kampala International University.

Mr Tajudeen Sanni

Signature.....

Date.....29- 6- 12

DEDICATION

This research work is dedicated to my late father Joseph Gatluok Jech Piwit, my mother Mary Chol Riak Kulang, my wife Nyanuer Gattot Ngundeng, my daughter Meer Kai, my son Bigoa Kai Gatluok, my sister Police Kai Gatluok and Nyabear Puot, for all their support.

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LIST OF ACCRONYMS / ABBREVIATIONS

CNPC	-	China National Petroleum Company
CPA	-	Comprehensive Peace Agreement
GoSS	-	Government of South Sudan
GOS	-	Government of Sudan
GDP	-	Gross Domestic Product
NGOs	-	Non Governmental Organizations
NOC	-	National Oil Company
NPC	-	National Petroleum Commission
PSAs	-	Production Sharing Agreements
SPE	-	Society of Petroleum Engineers
SSLA	-	South Sudan Legislative Assembly
TEOR	-	Thermally enhanced oil recovery methods
USA	-	United States of America

STATUTES

The laws of the Republic of South Sudan, the Transitional Constitution, 2011 – ministry of justice, Juba.

Ministry of Legal affairs and Constitutional Development (2009), The Laws of South Sudan: The Land Act, 2009. GOSS

Ministry of Legal affairs and Constitutional Development (2009), The Laws of South Sudan: The Local Government Act, 2009. GOSS

Ministry of Justice, (2011) The Laws of the Republic of South Sudan, The Petroleum Bill, 2011 – Juba.

South Sudan – Petroleum policy, November 2011

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ABSTRACT

This dissertation is entitled "The petroleum industry in Unity state, South Sudan". The study was carried out based on three objectives, that is; to examine the current laws relating to the regulation of the petroleum industry in Unity state, south Sudan; to analyze the effectiveness and applicability of the current legal framework for the management of the petroleum industry in Unity state, south Sudan; and to examine the critique and feedback from civil society, NGOs and other stakeholders on the current laws and draft bills in the management of the petroleum industry in Unity state, south Sudan.

The study was in form of a case study, to make a survey that can be representative of the entire country. The study sample comprised of 140 respondents, among which were legislators, ministry officials, members of the civil society and local leaders in Unity state, South Sudan, chosen using Purposive sampling method. Questionnaires and interviews were used in collecting data. The collected data was analyzed qualitatively.

The findings showed that there was a strong legal regime for governing the petroleum industry in Unity state vested in the South Sudan Transitional constitution – 2011. However, the provisions of the Transitional constitution do not however, fully address all the contingencies in the petroleum industry. Thus the

South Sudan Legislative Assembly is pushing for the enactment of the petroleum law to cover all legal aspects in the industry.

The researcher concluded that the current legal regime for the management of the petroleum industry in South Sudan is insufficient and requires a speedy process to enact the Petroleum law, whose provisions can adequately cover the industry in the legal sense.

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Introduction

This chapter gives a presentation of the background to the study, statement of the problem, purpose of the study, study objectives, research questions, scope and significance of the study. It will also show the methodology to the study. The study is concerned with making a legal analysis of the petroleum industry in Unity state, in South Sudan. The study will examine the legal framework for the management of the petroleum industry in the state and country at large.

1.1 Background to the study

The Republic of South Sudan, born on July 9, 2011, has two almost entirely separate economies. The informal sector, in which a large majority of South Sudan's 8 million to 9 million citizens live, is dominated by subsistence agriculture.[1] According to a 2009 household survey, almost 50 percent of households had not used money at all in the previous week.[2] The formal economy, which

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[1] Jill Shankleman, 2011, 'Oil and state buidling in South Sudan: New country, Old industry, United States Institute of Peace, Special report 282, Washington DC

[2] National Baseline Household Survey 2009, quoted in Southern Sudan Center for Census, Statistics, and Evaluation (SSCCSE), 'Key Indicators for Southern Sudan,' Government of Southern Sudan, Juba, December 14, 2010, http://siteresources.worldbank.org/INTSUDAN/Resources/Key-Indicators-SS.pdf.

provides almost all the income of the Government of South Sudan (GoSS) as well as a small amount of employment for South Sudanese, is dominated by production and export of crude oil and, to a lesser extent, by multilateral, bilateral, and nongovernmental organization (NGO) aid. There is need to set out the key immediate opportunities and challenges for the new Republic of South Sudan in managing its oil sector and using its oil wealth to bridge the gap between its informal and formal economies, consistent with South Sudan's objective to 'strengthen the management of petroleum resources in a way that contributes fully to economic prosperity and economic development.'[3]

Oil issues were prominent in the negotiations between north and south both before and after the referendum of January 2011. The key questions concerned who owned the oil fields straddling the (not yet fully demarcated) north-south border; whether a revenue-sharing formula would be retained, and, if not, what price the south would pay to access export pipelines and ports in the north; and how state-owned oil assets, including those held by the state oil company Sudapet, would be distributed after southern secession. These issues were unresolved between the parties at the time of the January

[3] Government of South Sudan, Draft Petroleum Policy, December 2010, unpublished paper

referendum, although agreements were made about security arrangements in order to ensure that oil would keep flowing.[4]

At the time of the referendum in January, articles in the Wealth Sharing Agreement[5] within the CPA that addressed identifying and compensating for any social or environmental weaknesses in existing oil contracts, and compensating any people whose rights had been violated, had not been implemented. Nevertheless, the finances of South Sudan are sure to gain a boost with independence because the south gained an expected larger share of oil revenues and because global oil prices likely will be higher if the trends in 2011 to date are maintained. The South Sudan budget for 2011 produced before the referendum and the rise in oil prices suggest that oil revenues provided 98% of the new country's $2.3 billion budget.[6]

The Republic of South Sudan does not have a blank slate on which to determine how to manage its oil industry. Long-term contracts have been made with oil companies, infrastructure has been laid down, and patterns of oil revenue management and budgeting were established

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[4] "Sudan Factions Agree to Preserve Oil Fields," *Commodity Online,* December 9, 2010, http://www.commodityonline.com/ news/Sudan-factions-agree-to-preserve-oil-fields-34347-3-1.html.

[5] Comprehensive Peace Agreement, Wealth Sharing Agreement, articles 4.5 and 4.3, http://www.usip.org/publications/peace-agreements-sudan.

[6] H.E. David Deng Athorbei, 'Government of Southern Sudan 2010 Budget Speech,' Ministry of Finance and Economic Planning, Juba, December 14, 2009, http://www.goss-online.org/magnoliaPublic/en/ministries/Finance/AnnualBudgets/mainColumnParagraphs/0/content_files/file0/2010%Budget%20Speech.pdf.

during the period of semi-autonomy under the CPA. The challenge for the new state is to determine the need for and scope to make changes in these initial conditions in order to realize the development and diversification it needs.22 This section describes the initial conditions for the oil industry of the new republic as a prelude to recommending policy priorities for the GoSS in its constrained situation.

Much of the area of South Sudan already has been let for oil exploration, and there is potential for further exploration within the blocks that are under production. The only areas not yet marked out are in the far south. However, no significant exploration is currently underway. The largest exploration block in South Sudan is Block B, licensed to Total, which has undertaken minimal exploration to date.[7] The smaller Block 5B is held by the Moldovan company Ascom, which has rights until the end of 2012 and has undertaken seismic surveys and some drilling, with as yet no success in finding oil, and is reported to have ceased active exploration.[8] Block Ea is large but not wholly in South Sudan. It was leased in August 2010 to Star Petroleum. No information is available on what exploration activity, if any, Star is undertaking.

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[7] European Coalition for Oil in Sudan (ECOS), *Sudan's Oil Industry on the Eve of the Referendum* (Utrecht: ECOS,
2010), 10, http://www.ecosonline.org/reports/.

[8] European Coalition for Oil in Sudan (ECOS), *Sudan's Oil Industry on the Eve of the Referendum* (Utrecht: ECOS,
2010), 10, http://www.ecosonline.org/reports/.

Exportation of oil produced in South Sudan is via two main pipelines that run through the north to the export terminal at Port Sudan, on the Red Sea. Before the referendum, there was much discussion about the prospects for constructing an alternative pipeline that would take oil from South Sudan to export through Kenya. However, this would take at least three years to design and build, probably much longer, and there are as yet no clear proposals for how to finance it. In the history of international oil and gas pipelines, far more are mooted than built, and political will alone cannot create them; there needs to be the oil to put in them and a compelling commercial case for investment.

The existing export pipelines from Sudan were financed and built by the consortia of oil companies producing oil in Sudan. There is little economic incentive for these companies or anyone else to finance a multibillion-dollar pipeline unless there is additional oil to export through it. If South Sudan cannot get reliable access to the existing export network, then a southern pipeline will be essential. However, this would sharply cut into the government's oil revenue, whether the state finances the pipeline itself or offsets construction costs as part of oil company costs.

1.2 Statement of the Problem

After more than two decades of conflict, the new country of South Sudan faces the challenges of turning a war ravaged and severely impoverished region into a prosperous independent country. The country depends almost entirely on oil revenue, which finances 98% of the national budget.[9] With this magnitude of dependence, the government of South Sudan cannot afford to go wrong in as far as the management of the petroleum industry is concerned. While the constitution provides the general framework, the specific framework is in the making.

As the new country struggles to establish institutions to effectively run the country, the petroleum industry needs to be put top of the priority list at least in the foreseeable future. Drafting and passing appropriate laws on the licensing, production, sharing and management of revenues from the petroleum industry will be the most crucial determinant of the effectiveness of the government of South Sudan in the short to minimum term.

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[9] H.E. David Deng Athorbei, 'Government of Southern Sudan 2010 Budget Speech,' Ministry of Finance and Economic Planning, Juba, December 14, 2009, http://www.goss-online.org/magnoliaPublic/en/ministries/Finance/Annual-Budgets/mainColumnParagraphs/0/content_files/file0/2010%20Budget%20Speech.pdf.

1.3 Purpose of the study

The purpose of the study was to make a critical examination of the legal framework for the management of petroleum revenues in Unity state, in South Sudan.

1.4 Specific objectives

The study was aimed at achieving the following specific objectives;

i. To examine the current laws relating to the regulation of the petroleum industry in Unity State, South Sudan.
ii. To analyze the effectiveness and applicability of the current legal framework for the management of the petroleum industry in Unity State, South Sudan.
iii. To examine and critique the current laws and draft bills in the management of the petroleum industry in Unity State, South Sudan.

1.5 Research Questions

The study attempted to find answers to the following questions;

i. What are the current laws relating to the regulation of the petroleum industry in Unity State, South Sudan?
ii. What is the effectiveness and applicability of the current legal framework for the management of the petroleum industry in Unity State, South Sudan?
iii. What is the critique on the current laws and draft bills in the management of the petroleum industry in Unity State, South Sudan?

1.6 Scope of the Study

1.6.1 Conceptual scope

The study was aimed at analyzing the various laws as they relate to the regulation and management of the petroleum industry in Unity State, South Sudan. The aim of this was to determine the compliance with the provisions of the national and state Constitutions and other legislative instruments regarding the management of petroleum resources.

1.6.2 Geographical scope

The study was carried out at the State ministry of legal affairs and constitutional development, and the Oil and Minerals Secretariat, located in the state capital of Bentiu in Unity State, South Sudan. This area was chosen because it is the main body concerned with the management of petroleum resources in the State, therefore the people in this organization were in position to provide information that was relevant for the study.

1.6.3 Time scope

The study examined the various legal undertakings which have taken place in Unity state over the last five years from 2007 to 2011. The study was carried out in two months (sixty working days).

1.7 The Significance of the Study

The findings of the study are expected to be useful or important in many different ways and to many different persons or groups of people as follows;

- To the Government of South Sudan, the study will act as a yardstick for measuring the achievements in as far as legal regulation and management in the Petroleum industry is concerned, by making a critical analysis of the existing laws and regulations.

- T o the policy makers, the findings of the study may be useful in assessing the applicability of the laws as laid out in the Constitution of Unity state and that of the Republic of South Sudan.

- To civil society organizations, NGOs and other stakeholders, the findings of the study will provide them with an opportunity to voice their approval, criticisms and recommendations on how the laws governing the petroleum industry should be drawn.

- To the oil companies, the study will examine current laws, identify flaws and recommend appropriate mechanisms of addressing them in order to streamline the petroleum industry in South Sudan.

1.8 Literature Review

The economy of South Sudan depends almost entirely on petroleum revenue,[10] much of the already developed fields were inherited from the former management by the Sudan (Khartoum) government.[11] This in effect means that there are oil companies which already have contracts and licenses entered with the Khartoum government[12] over these oil fields. The independence of South Sudan requires the harmonization of laws to address the shift and conform with the Constitutional requirements of the Republic of South Sudan.

1.8.1 Pre and Post-independence institutions and Policies in South Sudan

Under the CPA, the oil sector was managed by the National Petroleum Commission (NPC), in which both North and South were represented and which was intended to provide for full sharing of information and decision making. In practice, the NPC did not function well. Thus, South Sudan began its independence with limited detailed knowledge of the industry, the companies involved, the geology, or the minutiae

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[10] H.E. David Deng Athorbei, 'Government of Southern Sudan 2010 Budget Speech,' Ministry of Finance and Economic Planning, Juba, December 14, 2009, http://www.goss-online.org/magnoliaPublic/en/ministries/Finance/Annual-Budgets/mainColumnParagraphs/0/content_files/file0/2010%20Budget%20Speech.pdf.

[11] Jill Shankleman, 2011, 'Oil and state buidling in South Sudan: New country, Old industry, United States Institute of Peace, Special report 282, Washington DC

[12] The Government of Sudan

of the concession contracts wherein lie the opportunities for increasing or reducing the state's share of oil profits.[13]

The transitional constitution of South Sudan sets out at a high level the proposed arrangements for managing the petroleum sector in the new country.[14] It provides for three bodies: a national petroleum council with overall responsibility for policymaking that approves contracts with oil companies; a ministry responsible for policy implementation that represents the government in oil contracts; and a national petroleum and gas corporation to be a state company and shareholder in oil and gas contracts.

The transitional constitution includes commitments to a number of principles, including 'using oil revenues to develop other sectors of the economy,' 'ensuring transparency and accountability,' accountability for human rights violations and environmental degradation caused by petroleum operations, and 'creating a secure and healthy investment environment.' As outlined, the arrangements are consistent with effective governance of the oil industry, but to be effective in practice, much more is needed: The institutions must be built; the detailed implementing laws, regulations, and rules agreed; and key omissions addressed, notably whether and how revenues are to be shared with producing states and areas.

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[13] Jill Shankleman, 2011, 'Oil and state buidling in South Sudan: New country, Old industry, United States Institute of Peace, Special report 282, Washington DC

[14] The laws of the Republic of South Sudan, the Transitional Constitution, 2011 (Part 12 Chapter 111)

The oil industry in South Sudan, as is the case for many countries, is based on the production- sharing agreements (PSAs) model. PSAs are long-term legal contracts, that is, lasting from twenty to thirty years, between a government and an oil company or consortium of oil companies. Under a PSA regime, companies are responsible for financing oil exploration and field development; if such exploration discovers commercially viable amounts of oil, then the company and the government share the profits of oil sales under a predetermined formula after all the company's exploration and development costs have been recovered over an agreed cost-recovery period.[15] Parallel agreements define how company shares are divided among shareholders and government revenues are allocated sub-nationally.

Under PSAs, governments and companies share responsibility for overall planning of oil exploration and production through a series of annual work programs that the company proposes and the government evaluates. A key factor driving work plans is the extent of reserves in a field; estimates change as a field is operated and additional information becomes available. Reserves are a function of geology (oil in place), engineering (feasibility and costs of extraction), and economics (whether it makes commercial sense to spend on exploiting these resources). The structure of PSAs means that

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[15] Mabro, Robert; Organization of Petroleum Exporting Countries (2006). Oil in the 21st century: Issues, Challenges and Opportunities. Oxford Press. ISBN 0-19-920738-0, 9780199207381. pg. 104

companies seek to optimize their returns, such as by maximizing recoverable costs and limiting additional investment to circumstances that bring them increased returns. The work plans companies propose are to reflect corporate priorities, which are not necessarily the same as those of the government.

Company and government interests are not necessarily aligned, for example, over the timing of exploration work and production trade-offs between short-term production and longer-term management of the oil reservoir. A government party to a PSA always needs to have its own independent source of deep technical expertise on which to evaluate company work plans and cost claims as well as manage the relationship with companies to allow for effective negotiation, leading to joint decision making.

South Sudan had limited exposure to managing the government side of PSAs and little contact with oil companies; foreign oil companies' primary relationships have been with Khartoum. Until late 2010, when the China National Petroleum company (CNPC) opened an office, only Total and Ascom had offices in Juba. Before and after the referendum, the government of South Sudan started establishing direct links with the oil companies and announced its intention to enter into agreements with all oil companies operating in the region before the country's independence. This was an important first step in preparing to take over as the government party to PSAs.

1.8.2 Oil revenues and government spending in South Sudan

Under the CPA, the GoSS received 50 percent of revenues from oil produced in the south, which accounted for almost all the government's revenue excepting donor aid. Turbulent oil prices meant that GoSS revenues have fluctuated greatly, most notably when they soared in 2008, then dropped back sharply in 2009.[16] In 2009, the GoSS had to operate on a budget reduced by one-third from the previous year.[17] South Sudan is a post-conflict country that requires construction rather than reconstruction, and the GoSS faces huge demands to spend on building the social and economic infrastructure such as schools, hospitals, roads, that the country lacks. Through the CPA period, South Sudan was also spending heavily on defense and security.

In the three-year spending plan for 2008–11 that the Ministry of Finance and Economic Development presented to donors, the government argued that it planned to spend 31 percent of its budget on security and rule of law, followed by infrastructure at 23 percent (mostly roads), education at 9 percent, transfers to the states at 9 percent, and health at 8 percent. The GoSS expected oil revenues to cover 77 percent of its spending, and was looking to donors to fill the

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[16] GoSS Ministry of Finance and Economic Planning, Petroleum Unit, "Summary of GoSS + Southern States Including ORSA," http://www.petrolgoss.net/summary.html.

[17] ECOS, "Getting Sudan's Oil Deal Right is Key to Peace," press release, February 28, 2011, http://www.ecosonline.
org/news/2011/PR_Getting_Sudans_Oil_Deal_Right/.

gap.[18] Over the CPA period, salaries took up a progressively larger share of government spending.

Available literature informs that customary law has governed the use of land in Southern Sudan for centuries, with each ethnic group applying its own laws relating to land and land rights within its own geographical setting.[19] In the post-independence period, the Unregistered Land Act of 1970 provided that any land not registered in accordance with 1925 Land Settlement and Registration Ordinance was considered to belong to the Government of Sudan (GOS).

In the North, the law gave the government the right to selectively sell land in the Nuba Mountains and the Funj region of Central and Southeastern Sudan, resulting in the displacement of entire communities from their ancestral lands. Although the law was opposed and challenged by most communities in Southern Sudan, the government used it for the diversion of water through the construction of the Jonglei Canal and oil prospecting projects. It was this unilateral decision to exploit the natural resources of the South without any

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[18] Aggrey Tisa Sabuni, Under Secretary Planning, Ministry of Finance and Economic Planning, Government of South
Sudan, "Southern Sudan: Financing Requirements & Fiscal Issues," presentation, http://search.worldbank.org/ all?qterm=Sudan%20financing.

[19] Bior et al. Land tenure Study in Southern Sudan, Summary Report. Nairobi. February 2006. pg. 21

regard for human security, land rights, and livelihoods that contributed to the outbreak of conflicts in 1983.[20]

1.9 Methodology

The research took a form of a case study, and the reason for this is because the entire country (South Sudan) depends on the petroleum industry to finance its budget. The study of one oil producing state, the Unity state was intended to provide information that would be treated as representative of the entire country. The target population in this study comprised of legislators, ministry officials, members of the civil society and local leaders in Unity state, South Sudan. A sample was drawn consisting of 140 respondents who represented the entire study population. Purposive and simple random sampling were used in selecting the study sample.

The data collection methods will include questionnaires, interviews and literature search, all of which will be pre-tested by the supervisor first before being applied in the field. The information obtained from the field will be put together and measured to determine its correctness and accuracy to ensure consistency of the data. The researcher also will seek the permission of authorities and consent of respondents. The researcher anticipates various limitations such as mistrust with official documents, financial constraints as well as time

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[20] Shanmugaratnam, N. Post-War Development and the Land Question in Southern Sudan. Paper presented at the International symposium on Resources Under Stress, Afrasian Centre for Peace and Development, Ryukoku University, Kyoto Japan, 23–24 February 2008. pg 4

limitations. However, the researcher believes that these limitations will not compromise the findings of the study and that these findings will be useful in filling the knowledge gap that the study has set out to.

CHAPTER TWO

CONCEPTS AND TERMINOLOGIES AND THEORIES

2.0 Introduction

This chapter provides a description of the various concepts, terminologies used in this study, as well as the theories that inform the concept of the petroleum industry.

2.1 Concepts and Terminologies

Petroleum

Petroleum is a naturally occurring, flammable liquid consisting of a complex mixture of hydrocarbons of various molecular weights and other liquid organic compounds, that are found in geologic formations beneath the Earth's surface. Petroleum is recovered mostly through oil drilling after the studies of structural geology, sedimentary basin analysis, reservoir characterization.[21] It is refined and separated, most easily by boiling point, into a large number of consumer products, from petrol, diesel and kerosene to asphalt and chemical reagents used to make plastics and pharmaceuticals. Petroleum is used in manufacturing a wide variety of materials, and it is estimated that as

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[21] E. Tzimas, (2005). Enhanced Oil Recovery using Carbon Dioxide in the European Energy System. European Commission Joint Research Center.
http://ie.jrc.ec.europa.eu/publications/scientific_publications/2005.Retrieved 2008-08-23.

of October 2011, the world consumes about 88 million barrels each day.[22]

In its strictest sense, petroleum includes only crude oil, but in common usage it includes all liquid, gaseous, and solid hydrocarbons. Under surface pressure and temperature conditions, lighter hydrocarbons methane, ethane, propane and butane occur as gases, while pentane and heavier ones are in the form of liquids or solids. However, in an underground oil reservoir the proportions of gas, liquid, and solid depend on subsurface conditions and on the phase diagram of the petroleum mixture.

In the late 19 and early 20th century development rights in petroleum in countries such as Mexico, Russia and throughout the Middle East were awarded by means of concessions, which authorized foreign companies to explore, develop and market minerals for a specified period[23] For developing countries with sufficient resources to permit their export, development means an additional source of income from world market[24]

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[22] Hyne, Norman J. (2001). 'Nontechnical Guide to Petroleum Geology, Exploration, Drilling, and Production.' PennWell Corporation. ISBN 0-87814-823-X. pg.77

[23] Ernest E. Smith, Owen L. Anderson, John S Lowe, Bruce M. Kram, John S. Dzienkowski, Jacqueline L. Weaver, (2010), International Petroleum transactions 3rd Edition. Rocky Mountain mineral Law Foundation, Colorado-2010, pg 31

[24] Ernest E. Smith, Owen L. Anderson, John S Lowe, Bruce M. Kram, John S. Dzienkowski, Jacqueline L. Weaver, (2010), International Petroleum transactions 3rd Edition. Rocky Mountain mineral Law Foundation, Colorado-2010, pg 40

The intense business activity involved in any major mining operation offers important opportunities for developing countries to increase employment acquire technology and expertise and obtain access to market[25] Like most other mining projects, petroleum projects are highly capital intensive and require a significant up-front investment[26] Foreign involvement and responsibility for oil and gas projects are not limited to oil and gas development itself. They can include major construction projects like offshore drilling, platforms[27]

Many oil, gas and mining projects ore financed through 'project financing' this refer to financing projects, including developmental drilling, erecting offshore oil production platforms, constructing pipelines etc under an agreement whereby the lenders will look only to the cash flow from the project for repayment[28] Even if nations do not have a federalize system of internal sovereigns, they may have indigenous peoples that claims rights to land and resources. These claims are increasingly recognized under international law and

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[25] Ernest E. Smith, Owen L. Anderson, John S Lowe, Bruce M. Kram, John S. Dzienkowski, Jacqueline L. Weaver, (2010), International Petroleum transactions 3rd Edition. Rocky Mountain mineral Law Foundation, Colorado-2010, pg 40

[26] Ernest E. Smith, Owen L. Anderson, John S Lowe, Bruce M. Kram, John S. Dzienkowski, Jacqueline L. Weaver, (2010), International Petroleum transactions 3rd Edition. Rocky Mountain mineral Law Foundation, Colorado-2010, pg 55

[27] Ernest E. Smith, Owen L. Anderson, John S Lowe, Bruce M. Kram, John S. Dzienkowski, Jacqueline L. Weaver, (2010), International Petroleum transactions 3rd Edition. Rocky Mountain mineral Law Foundation, Colorado-2010, pg 59

[28] Ernest E. Smith, Owen L. Anderson, John S Lowe, Bruce M. Kram, John S. Dzienkowski, Jacqueline L. Weaver, (2010), International Petroleum transactions 3rd Edition. Rocky Mountain mineral Law Foundation, Colorado-2010, pg 70

national laws as powerful international constraints on a nation's resource policies indigenous rights are treated fully[29]

Petroleum is used mostly, by volume, for producing fuel oil and petrol, both important primary energy sources.[30] 84% by volume of the hydrocarbons present in petroleum is converted into energy-rich fuels (petroleum-based fuels), including petrol, diesel, jet, heating, and other fuel oils, and liquefied petroleum gas.[31] The lighter grades of crude oil produce the best yields of these products, but as the world's reserves of light and medium oil are depleted, oil refineries increasingly have to process heavy oil and bitumen, and use more complex and expensive methods to produce the products required.[32]

There are several major oil producing regions around the globe. The Kuwait and Saudi Arabia's crude oil fields are the largest, although Middle East oil from other countries in the region such as Iran and Iraq also make up a significant part of world production figures. Other major producers include Russia, USA, China, Canada, Norway Mexico, and Venezuela. In Africa, the major producers are Nigeria,

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[29] Ernest E. Smith, Owen L. Anderson, John S Lowe, Bruce M. Kram, John S. Dzienkowski, Jacqueline L. Weaver, (2010), International Petroleum transactions 3rd Edition. Rocky Mountain mineral Law Foundation, Colorado-2010, pg 201

[30] Mabro, Robert; Organization of Petroleum Exporting Countries (2006). Oil in the 21st century: issues, challenges and opportunities. Oxford Press. ISBN 0-19-920738-0, 9780199207381. pg. 104

[31] Broad, William J. (August 2, 2010). 'Tracing Oil Reserves to Their Tiny Origins'. The New York Times. http://www.nytimes.com/2010/08/03/science/03oil.html. Retrieved August 2, 2010.

[32] Speight, James G. (1999). The Chemistry and Technology of Petroleum. Marcel Dekker. ISBN 0-8247-0217-4. pg. 46

Angola, Algeria, Libya and Sudan. South Sudan is the world's newest country with significantly high oil reserves, both proven and potential new discoveries.[33]

Petroleum exploration

Oil exploration is the search by petroleum geologists and geophysicists for hydrocarbon deposits beneath the Earth's surface, such as oil and natural gas. Oil exploration is grouped under the science of petroleum geology. Visible surface features such as oil seeps, natural gas seeps, provide basic evidence of hydrocarbon generation, whether shallow or deep in the earth. However, most exploration depends on highly sophisticated technology to detect and determine the extent of these deposits using exploration geophysics. Areas thought to contain hydrocarbons are initially subjected to a gravity survey, magnetic survey, passive seismic or regional seismic reflection surveys to detect large scale features of the sub-surface geology.

Many developing countries lack the financial resource and technology required to exploitation, drilling production and transportation of oil[34] Virtually all countries require that an international oil company operating in its territory function through a subsidiary created under the laws of that country Nonetheless, disputes may arise in a Varity

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[33] Jill Shankleman, 2011, 'Oil and state buidling in South Sudan: New country, Old industry, United States Institute of Peace, Special report 282, Washington DC

[34] Ernest E. Smith, Owen L. Anderson, John S Lowe, Bruce M. Kram, John S. Dzienkowski, Jacqueline L. Weaver, (2010), International Petroleum transactions 3rd Edition. Rocky Mountain mineral Law Foundation, Colorado-2010, pg 219

contexts and locations and the law applied may vary accordingly.[35] Like most international business transactions in petroleum are governed primarily by domestic laws[36]

In order to explore for oil, it is necessary to have access to lands which are not usually owned by the company conducting the exploration. Even that it has all necessary and relevant permits and authorities to enable of to do so.[37] A license will grant the operator a right to exploit a feel/or royalty and after also work programme commitment.[38] The political intent to license average for petroleum activities in the national territory will often occasion controversy. This is particularly true where all petroleum acreage was previously held by a state oil company.[39]

Features of interest, known as leads, are subjected to more detailed seismic surveys which work on the principle of the time it takes for reflected sound waves to travel through matter (rock) of varying densities and using the process of depth conversion to create a profile of the substructure. Finally, when a prospect has been identified and evaluated and passes the oil company's selection criteria, an

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35 Ernest E. Smith, Owen L. Anderson, John S Lowe, Bruce M. Kram, John S. Dzienkowski, Jacqueline L. Weaver, (2010), International Petroleum transactions 3rd Edition. Rocky Mountain mineral Law Foundation, Colorado-2010, pg 216

36 Ernest E. Smith, Owen L. Anderson, John S Lowe, Bruce M. Kram, John S. Dzienkowski, Jacqueline L. Weaver, (2010), International Petroleum transactions 3rd Edition. Rocky Mountain mineral Law Foundation, Colorado-2010, pg 216

37 Anthony Jennings (2008), Oil and Gas Exploration contracts, Thomson Reuters (Legal) Ltd, pg 1

38 Anthony Jennings (2008), Oil and Gas Exploration contracts, Thomson Reuters (Legal) Ltd, pg 2

39 Michael A.G Bunter (2002), The promotion and licencesing of petroleum prospective Acreage, Kluwer Law international, Massachusetts -USA, pg 189

exploration well is drilled in an attempt to conclusively determine the presence or absence of oil or gas. Oil exploration is an expensive, high-risk operation. Offshore and remote area exploration is generally only undertaken by very large corporations or national governments.

A prospect is a potential trap which geologists believe may contain hydrocarbons. A significant amount of geological, structural and seismic investigation must first be completed in order to redefine the potential hydrocarbon drill location from a lead to a prospect. Five geological factors have to be present for a prospect to work and if any of them fail neither oil nor gas will be present;

A source rock - When organic-rich rock such as oil shale or coal is subjected to high pressure and temperature over an extended period of time, hydrocarbons form.

Migration - The hydrocarbons are expelled from source rock by three density-related mechanisms; the newly-matured hydrocarbons are less dense than their precursors, which causes overpressure; the hydrocarbons are lighter medium, and so migrate upwards due to buoyancy, and the fluids expand as further burial causes increased heating. Most hydrocarbons migrate to the surface as oil seeps, but some will get trapped.

Trap - The hydrocarbons are buoyant and have to be trapped within a structural (e.g. Anticline, fault block) or stratigraphic trap.

Seal or cap rock - The hydrocarbon trap has to be covered by an impermeable rock known as a seal or cap-rock in order to prevent hydrocarbons escaping to the surface.

Reservoir - The hydrocarbons are contained in a reservoir rock. This is a porous sandstone or limestone. The oil collects in the pores within the rock. The reservoir must also be permeable so that the hydrocarbons will flow to surface during production.

Hydrocarbon exploration is a high risk investment and risk assessment is paramount for successful exploration portfolio management. Exploration risk is a difficult concept and is usually defined by assigning confidence to the presence of five imperative geological factors above. This confidence is based on data and/or models and is usually mapped on Common Risk Segment Maps (CRS Maps). High confidence in the presence of imperative geological factors is usually colored green and low confidence colored red.[40] Therefore these maps are also called Traffic Light Maps, while the full procedure is often referred to as Play Fairway Analysis.[41] The aim of such procedures is to force the geologist to objectively assess all different geological factors. Furthermore it results in simple maps that can be

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[40] Exploration Risk on E&P Geology http://www.epgeology.com/general-discussion-f28/assigning-exploration-risks-t157.html

[41] CRS Mapping and Play Fairway Analysis, http://www.ccop.or.th/projects/Case.Study.Phillipines.files%5CP12

understood by non-geologists and managers to base exploration decisions on.

Extraction of Petroleum

The extraction of petroleum is the process by which usable petroleum is extracted and removed from the earth. Geologists use seismic surveys to search for geological structures that may form oil reservoirs. The classic method includes making an underground explosion nearby and observing the seismic response that provides information about the geological structures under the ground.[42]

Other instruments such as gravimeters and magnetometers are also sometimes used in the search for petroleum. Extracting crude oil normally starts with drilling wells into the underground reservoir. Often many wells (multilateral wells) are drilled into the same reservoir, to ensure that the extraction rate will be economically viable. Also, some wells (secondary wells) may be used to pump water, steam, acids or various gas mixtures into the reservoir to raise or maintain the reservoir pressure, and so maintain an economic extraction rate.

The oil well is created by drilling a hole into the earth with an oil rig. A steel pipe (casing) is placed in the hole, to provide structural integrity to the newly drilled wellbore. Holes are then made in the base of the

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[42] E. Tzimas, (2005). Enhanced Oil Recovery using Carbon Dioxide in the European Energy System. European Commission Joint Research Center.http://ie.jrc.ec.europa.eu/publications/scientific_publications/2005/Retrieved 2008-08-23.

well to enable oil to pass into the bore. Finally a collection of valves is fitted to the top, the valves regulating pressures and controlling flows. Oil extraction and recovery includes the following stages;

Primary recovery; During the primary recovery stage, reservoir drive comes from a number of natural mechanisms. These include: natural water displacing oil downward into the well, expansion of the natural gas at the top of the reservoir, expansion of gas initially dissolved in the crude oil, and gravity drainage resulting from the movement of oil within the reservoir from the upper to the lower parts where the wells are located. Recovery factor during the primary recovery stage is typically 5-15%.[43] While the underground pressure in the oil reservoir is sufficient to force the oil to the surface, all that is necessary is to place a complex arrangement of valves (the Christmas tree) on the well head to connect the well to a pipeline network for storage and processing.

Secondary recovery; Over the lifetime of the well the pressure will fall, and at some point there will be insufficient underground pressure to force the oil to the surface. After natural reservoir drive diminishes, secondary recovery methods are applied. They rely on the supply of external energy into the reservoir in the form of injecting fluids to

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[43] E. Tzimas, (2005). Enhanced Oil Recovery using Carbon Dioxide in the European Energy System. European Commission Joint Research Center.http://ie.jrc.ec.europa.eu/publications/scientific_publications/2005/Retrieved 2008-08-23.

increase reservoir pressure, hence replacing or increasing the natural reservoir drive with an artificial drive. Sometimes pumps, such as beam pumps and electrical submersible pumps (ESPs), are used to bring the oil to the surface.

Other secondary recovery techniques increase the reservoir's pressure by water injection, natural gas reinjection and gas lift, which injects air, carbon dioxide or some other gas into the bottom of an active well, reducing the overall density of fluid in the wellbore. Typical recovery factor from water-flood operations is about 30%, depending on the properties of oil and the characteristics of the reservoir rock. On average, the recovery factor after primary and secondary oil recovery operations is between 35 and 45%.[44]

Tertiary recovery; Steam is injected into many oil fields where the oil is thicker and heavier than normal crude oil. Tertiary, or enhanced oil recovery methods increase the mobility of the oil in order to increase extraction. Thermally enhanced oil recovery methods (TEOR) are tertiary recovery techniques that heat the oil, thus reducing its viscosity and making it easier to extract. Steam injection is the most common form of TEOR, and is often done with a cogeneration plant.

In this type of cogeneration plant, a gas turbine is used to generate electricity and the waste heat is used to produce steam, which is then

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[44] E. Tzimas, (2005). Enhanced Oil Recovery using Carbon Dioxide in the European Energy System. European Commission Joint Research Center.
http://ie.jrc.ec.europa.eu/publications/scientific_publications/2005/Retrieved 2008-08-23.

injected into the reservoir. This form of recovery is used extensively to increase oil extraction in the San Joaquin Valley, which has very heavy oil, yet accounts for 10% of the United States' oil extraction. In-situ burning is another form of TEOR, but instead of steam, some of the oil is burned to heat the surrounding oil. Occasionally, surfactants (detergents) are injected to alter the surface tension between the water and oil in the reservoir, mobilizing oil which would otherwise remain in the reservoir as residual oil.[45]

Petroleum contracting and licensing

Production sharing contracts were adopted by the Indonesian government in replacement of the exclusive licenses that had been terminated by virtue of government decree No. 44 of oct 1960.[46] Initially the production sharing contracts were seen as income tax replacing agreements. The contractors were liable to pay income tax but contractors income taxes were considered to be part of the government's share of profits.[47]

In most nations the government issues licenses to explore, develop and produce its oil and gas resources, which are typically

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45 E. Tzimas, (2005). Enhanced Oil Recovery using Carbon Dioxide in the European Energy System. European Commission Joint Research Center.

http://ie.jrc.ec.europa.eu/publications/scientific_publications/2005/Retrieved 2008-08-23.

46 Bernard Taverne (2008), Petroleum, industry and government's: A study of the involvement of industry and government in the productive and use of petroleum 2nd Edition, Kluwer law international, pg 255

47 Bernard Taverne (2008), Petroleum, industry and government's: A study of the involvement of industry and government in the productive and use of petroleum 2nd Edition, Kluwer law international, pg 256

administered by the oil ministry. There are several different types of license. Typically oil companies operate in joint ventures to spread the risk, one of the companies in the partnership is designated the operator who actually supervises the work.[48]

Tax and Royalty - Companies would pay a royalty on any oil produced, together with a profits tax (which can have expenditure offset against it). In some cases there are also various bonuses and ground rents (license fees) payable to the government - for example a signature bonus payable at the start of the license. Licenses are awarded in competitive bid rounds on the basis of either the size of the work programme (number of wells, seismic etc.) or size of the signature bonus.

Production Sharing contract (PSA) - A PSA is more complex than a Tax/Royalty system - The companies bid on the percentage of the production that the host government receives (this may be variable with the oil price), There is often also participation by the Government owned National Oil Company (NOC). There are also various bonuses to be paid. Development expenditure is offset against production revenue.

Service contract - This is when an oil company acts as a contractor for the host government, being paid to produce the hydrocarbons.

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[48] Exploration Risk on E&P Geology http://www.epgeology.com/general-discussion-f28/assigning-exploration-risks-t157.html

Resources are hydrocarbons which may or may not be produced in the future. A resource number may be assigned to an undrilled prospect or an unappraised discovery. Appraisal by drilling additional delineation wells or acquiring extra seismic data will confirm the size of the field and lead to project sanction. At this point the relevant government body gives the oil company a production license which enables the field to be developed. This is also the point at which oil reserves can be formally booked.[49]

Oil and gas reserves are the main asset of an oil company - booking is the process by which they are added to the Balance sheet. This is done according to a set of rules developed by the Society of Petroleum Engineers (SPE). Thus, official estimates of proven reserves will always be understated compared to what oil companies think actually exists. For practical purposes companies will use proven plus probable estimate (2P), and for long term planning they will be looking primarily at possible reserves.[50]

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[49] Exploration Risk on E&P Geology http://www.epgeology.com/general-discussion-f28/assigning-exploration-risks-t157.html

[50] Exploration Risk on E&P Geology http://www.epgeology.com/general-discussion-f28/assigning-exploration-risks-t157.html

2.2 Theories of Petroleum

The concept of petroleum, its regulation and the factors that influence its management, are all informed by various theories, among which include the following;

The resource curse theory

Oil wealth, if managed well, provides the capacity for social and economic transformation. However, many studies have shown that most oil-producing states, particularly those in the developing world, are characterized by high level of abject poverty, political corruption and instability as well as social upheaval.[51] One of the theoretical models used to explain the above phenomenon is the resource curse theory.[52] This states that developing countries which obtain a substantial proportion of their national revenue from specific natural resources (e.g., oil, rubber, diamond and minerals) are more likely to have negative economic growth and development in general.

Despite occasional economic boom, such resource-rich states have lower economic growth than resource-poor countries.[53] In essence, resource-deficient developing countries are compelled by the scarce

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[51] Auty, R.M (2004), 'Natural Resource and Civil Strife: A two-stage process,' *Geopolitics Journal*, Vol. 9, No. 1; pg. 29-49.

[52] Karl, T. L (1997): *The Paradox of Plenty, Oil Booms and Petro-States*, Berkeley: University of California Press. Pg. 67-9

[53] Auty, R.M (1993), Sustaining Development in Mineral Economies: the resource curse thesis, New York: Routledge.

resources to maximize productivity by fostering competitive economic growth, which in effect triggers an expansion of labour-intensive manufacturing sector. This ensures efficiency both in political governance and in economic investments. The resource curse thesis maintains that resource-rich countries are not able to use the revenue derived from natural resources such as oil to boost their economies. Rather, dependence on the key resource undermines the competitiveness of other sectors in the economy.[54]

The 'Dutch Disease'[55] model of the resource curse further argues that windfall gains from natural resources, particularly oil, increases a country's average propensity to import, increases its exchange rate, contracts other trade-able sectors thereby causing a crowding-out effect on other sectors of the economy.[56] This results in a negative growth rate for basic economic indicators such as the per capita Gross Domestic Product (GDP).[57] Due to the 'enclave' nature of oil and gas production, income from oil extraction concentrates in few hands without trickling down to every part of the economy.

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54 Harford, T. and M. Klein (2005), 'Aid and the Resource Curse,' The World Bank Group, Private Sector Development Vice Presidency, Note # 291, Washington D.C. pg. 101-07

55 Sachs, J.D & Warner, A.M (2001), 'The curse of natural resources,' *European Economic Review*, 45 (4-6), 827–38.

56 Ross, M. (2003), 'Nigeria's Oil Sector and the Poor,' Paper prepared for the UK Department for International Development "Nigeria: Drivers of Change" program.

57 Hausmann, R and R. Rigobon (2002), 'An Alternative interpretation of the 'Resource curse': theory and policy implications.' National Bureau of Economic Research (NBER) Working Paper 9424. Available at: http://ksghome.harvard.edu/~rhausma/NBER/NBERWP9424. [Accessed on 7 February 2007].

The oil industry employs a handful of highly-skilled and well-paid workers[58] thereby creating and supporting what is called 'a labor aristocracy'[59] for developing countries. Foreign expatriates make up a good measure of the workforce and most of the capital inputs are imported from abroad. Thus, the oil industry in most developing countries is not pro-poor and inward-looking. The local economy does not benefit from the multiplier effect of capital expenditure in oil production.[60]

South Sudan is a young country with vast petroleum resources. With weak or undeveloped government institutions, the petroleum industry in South Sudan is especially vulnerable to manipulations by the powerful oil companies. If this happens, the country is more likely to experience civil strife like that which has characterized Nigeria's Niger delta and Angola. For this reason therefore, the researcher has adopted the resource curse theory as a guiding concept in this study.

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[58] Overseas Development Institute, (2006), 'Meeting the Challenge of the 'Resource Curse': international experiences in managing the risks and realizing the opportunities of non-renewable natural resource revenues,' London: Program on Business and Development Performance, ODI. Pg. 144-51

[59] Human Rights Watch (2004), 'Rivers and Blood: guns, oil and power in Nigeria's rivers state.' A Human Rights Watch Briefing Paper, February 2005. Available at: http://hrw.org/backgrounder/africa/nigeria0205/2.htm#_ftn2 [Accessed on 11 December 2006].

[60] Okonta, I., and O. Douglas, (2001), Where Vultures Feast: Shell, human rights, and oil in the Niger Delta, San Francisco: Sierra Club Books. Pg. 89-93

CHAPTER THREE

THE PETROLEUM INDUSTRY IN SOUTH SUDAN

3.0 Introduction

From an output of only 2,000 barrels per day (bpd) in 1993, Sudan's production reached 490,000 bpd by 2009.[61] Government data show that production was some 3 percent lower in 2010.[62] Sudan, north and south, held 0.5 percent of the world's proven oil reserves and accounted for some 0.6 percent of world production in 2010.[63] In global oil terms it lines up by size with Ecuador and Equatorial Guinea as a minor oil producer. Several Sudanese oilfields lie in the border area dividing Sudan and the new Republic of South Sudan, and in the months leading up to independence, the north and south negotiated the precise division of oil revenue after southern secession. The broad outline of what oil resources lie in South Sudan is clear, but the details of how the fields straddling the border are to be allocated and managed are not.[64]

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61 National Baseline Household Survey 2009, quoted in Southern Sudan Center for Census, Statistics, and Evaluation (SSCCSE), "Key Indicators for Southern Sudan," Government of Southern Sudan, Juba, December 14, 2010, http://siteresources.worldbank.org/INTSUDAN/Resources/Key-Indicators-SS.pdf.

62 Government of South Sudan, Draft Petroleum Policy, December 2010, unpublished paper.

63 Bassam Fattouh and Hakim Darbouche, 'North African Oil and Foreign Investment in Changing Market
Conditions,' *Energy Policy*, vol. 38, no. 2 (2010): 1119–29.

64 Benjamin Leo, 'Sudan Debt Dynamics: Status Quo, Southern Secession, Debt Division, and Oil—A Financial Framework for the Future,' Center for Global Development, Working Paper no. 233, December 2010, 44.

South Sudan has three areas where oil is currently being produced. These areas contain two types of crude oil of differing value, with fields on different production trajectories. The first area, blocks 1, 2, and 4, parts of which fall on both sides of the border and have not yet been definitively allocated between the two countries—yield Nile Blend crude oil and are on a trend of declining output. Nile Blend is a good-quality crude, readily traded in international markets at prices comparable to Minas Blend, a Malaysian crude with similar attributes.[65]

The second area, Block 5A, is wholly within South Sudan. This field also produces Nile Blend crude, but on a much smaller scale. The third main producing area is the concession that contains blocks 3 and 7, which also lie wholly in South Sudan. Output from this area is increasing, but the oil produced is the lower-value Dar Blend: Waxy and acidic,[66] it has a limited market because not all refineries are equipped to handle it and because U.S. sanctions prevent sales to refineries in the United States that can process it. Therefore Dar Blend sells at a substantial discount on the market; during the financial crisis of 2009 this discount reached over 60 percent compared with the benchmark Brent crude. Discounts have been falling since and

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[65] Benjamin Leo, 'Sudan Debt Dynamics: Status Quo, Southern Secession, Debt Division, and Oil—A Financial Framework for the Future,' Center for Global Development, Working Paper no. 233, December 2010, 44.

[66] World Bank Poverty Reduction and Economic Management Unit, *Sudan: The Road toward Sustainable and Broad- Based Growth* (Washington, DC: World Bank, 2009), 58, http://go.worldbank.org/PX5WQB69M0.

could potentially fall further if U.S. and European refineries were to purchase the oil.[67] However, the changes in sanctions rules issued by the U.S. Treasury in April 2011 maintain restrictions on U.S. trade in oil from South Sudan.[68]

3.1 Major players in the South Sudan Petroleum industry

The dominant players in South Sudan's oil production sector; CNPC, Petronas, and ONCG, are wholly or partly state-owned oil companies that have been on a path of very rapid international expansion over the past ten years and are now all major international oil companies.[69] In addition, Total, the French-based international oil company, holds a very large exploration concession in South Sudan, though this is currently not being worked. Sudanese oil production appears to have reached a plateau, at least as far as current fields and production technologies are concerned.[70]

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67 World Bank Poverty Reduction and Economic Management Unit, *Sudan: The Road toward Sustainable and Broad- Based Growth* (Washington, DC: World Bank, 2009), 58, http://go.worldbank.org/PX5WQB69M0.

68 World Bank Poverty Reduction and Economic Management Unit, *Sudan: The Road toward Sustainable and Broad- Based Growth* (Washington, DC: World Bank, 2009), 58, http://go.worldbank.org/PX5WQB69M0.

69 Bassam Fattouh and Hakim Darbouche, 'North African Oil and Foreign Investment in Changing Market
Conditions,' *Energy Policy*, vol. 38, no. 2 (2010): 1119–29.

70 Bassam Fattouh and Hakim Darbouche, 'North African Oil and Foreign Investment in Changing Market
Conditions,' *Energy Policy*, vol. 38, no. 2 (2010): 1119–29.

According to the World Bank, oil output from the north and south is expected to peak in 2012, at around 527,000 bpd, and to decline sharply starting in 2015 unless new discoveries are made or recovery factors are increased.[71] There is little certainty about the likelihood of new finds in South Sudan or the commercial attractiveness of investment in enhanced recovery. The initial results of an assessment sponsored by the government of Norway are that there may be large potential for using enhanced oil recovery methods to increase output from blocks 1, 2, and 4.[72] By contrast, reports of an independent reserves audit for ONGC Videsh-OVL, one of the shareholders in blocks 3, 7, and 5A, suggest that reserves there may be lower than previously estimated.[73]

The Republic of South Sudan does not have a blank slate on which to determine how to manage its oil industry. Long-term contracts have been made with oil companies, infrastructure has been laid down, and patterns of oil revenue management and budgeting were established during the period of semi-autonomy under the CPA. The challenge for the new state is to determine the need for and scope to make changes

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[71] World Bank Poverty Reduction and Economic Management Unit, *Sudan: The Road toward Sustainable and Broad- Based Growth* (Washington, DC: World Bank, 2009), 58, http://go.worldbank.org/PX5WQB69M0.

[72] World Bank Poverty Reduction and Economic Management Unit, *Sudan: The Road toward Sustainable and Broad- Based Growth* (Washington, DC: World Bank, 2009), 58, http://go.worldbank.org/PX5WQB69M0.

[73] World Bank Poverty Reduction and Economic Management Unit, *Sudan: The Road toward Sustainable and Broad- Based Growth* (Washington, DC: World Bank, 2009), 58, http://go.worldbank.org/PX5WQB69M0.

in these initial conditions in order to realize the development and diversification it needs.[74] This section describes the initial conditions for the oil industry of the new republic as a prelude to recommending policy priorities for the GoSS in its constrained situation.

Much of the area of South Sudan already has been let for oil exploration, and there is potential for further exploration within the blocks that are under production. The only areas not yet marked out are in the far south. However, no significant exploration is currently underway. The largest exploration block in South Sudan is Block B, licensed to Total, which has undertaken minimal exploration to date.[75] The smaller Block 5B is held by the Moldovan company Ascom, which has rights until the end of 2012 and has undertaken seismic surveys and some drilling, with as yet no success in finding oil, and is reported to have ceased active exploration.24 Block Ea is large but not wholly in South Sudan. It was leased in August 2010 to Star Petroleum. No information is available on what exploration activity, if any, Star is undertaking.

The only viable export route for oil produced in South Sudan is via two main pipelines that run through the north to the export terminal

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[74] H.E. David Deng Athorbei, 'Government of Southern Sudan 2010 Budget Speech,' Ministry of Finance and Economic Planning, Juba, December 14, 2009, http://www.goss-online.org/magnoliaPublic/en/ministries/ Finance/Annual-Budgets/mainColumnParagraphs/0/content_files/file0/2010%20Budget%20Speech.pdf.

[75] European Coalition for Oil in Sudan (ECOS), Sudan's Oil Industry on the Eve of the Referendum (Utrecht: ECOS,
2010), 10, http://www.ecosonline.org/reports/.

at Port Sudan, on the Red Sea. Ahter the referendum, there was much discussion about the prospects for constructing an alternative pipeline that would take oil from South Sudan to export through Kenya. However, this would take at least three years to design and build, and as of the 2011 budget, there were as yet no clear proposals for how to finance it.[76]

South Sudan has made commitments to honor existing production sharing contracts, so that broadly the same consortia will keep operating. Before secession, Sudapet had a share in each oil concession. These shares are among the assets to be divided between the two states. In the division of assets, Sudapet is most likely to lose its shares in the oil fields that are transferred to South Sudan, to Nilepet, the state oil company South Sudan established during the CPA period.[77]

3.3 Community Concerns in Unity State

Oil exploration in Unity State dates back from the 1970s when Chevron started exploration in Bentiu, Heglig/Panthau, and Adar Yale. The communities were not well informed about the exploration process, how the exploitation would move ahead or how they would be compensated. Chevron closed its operations in 1983, and the people

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[76] ECOS, "Getting Sudan's Oil Deal Right is Key to Peace," press release, February 28, 2011, http://www.ecosonline.org/news/2011/PR_Getting_Sudans_Oil_Deal_Right/.

[77] Julius N. Uma, 'Envoy: S. Sudan to Respect India's Oil Deals after Independence,' Sudan Tribune, May 3, 2011, www.sudantribune.com/Envoy-S-Sudan-to-respect-India-s,38773; Draft Petroleum Policy.

understood well that "oil was one of the reasons of the war."[78] Oil production started during the war. The local people were victims of the industry as the companies came in together with the army, under the protection of Northern security agencies and the area was violently cleared. The companies never helped the people or compensated them properly.

The people of Unity State were abused by the companies. The concept of compensation is a key element of Nuer culture. It enters into all relations, starting with marriage, and is involved in addressing grievances or crimes. The CPA established the right to compensation for any community whose rights have been violated by oil activities, but nothing has been done in terms of compensation. Active oil extraction in the modern-day Republic of South Sudan primarily mostly occurs in fields around Bentiu (Blocks 1 and 5A) in Unity state and Block 3 and 7 in Upper Nile State. The major concerns in Unity state communities are;

- The diversion of water flows by the elevated oil roads, causing permanent damage and affecting livelihoods.
- Labour is imported from abroad, there is little room for local talent.

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[78] Rev. James Koung Ninrew, Sudan's Oil industry after the Referendum, Conference report, pg. 14

- The environmental impact assessments are not well documented and implemented, making the Sudd wetlands vulnerable to environmental degradation.

- The 2% that is supposed to go to the Unity State communities is mismanaged, mainly by the state political elite, right from the CPA interim period.

CHAPTER FOUR

LEGISLATIONS AND LEGAL FRAMEWORK

4.0 Introduction

This chapter gives a presentation of the existing laws and legislations governing the regulation and management of the petroleum industry in South Sudan. Various laws, regulations and guidelines were examined.

4.1 Legal framework for the management of Petroleum industry in Unity State, South Sudan

The legal framework for the management of petroleum resources in unity state is enshrined in the South Sudan Constitution, where it provides that 'The National Government shall promote, support and encourage broad based and balanced and participatory economic development based on the principle of subsidiarity and devolution of governmental functions and powers to the appropriate levels where the people can best manage and direct their own affairs.'[79] The Constitutions states that 'Ownership of petroleum and gas shall be vested in the people of South Sudan and shall be developed and managed by the National Government on behalf of and for the benefit of the people.'[80]

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[79] The laws of the Republic of South Sudan, the Transitional Constitution, 2011, Article 168 (2)

[80] The laws of the Republic of South Sudan, the Transitional Constitution, 2011, Article 172 (1)

It adds that 'National wealth and other resources shall be allocated in a manner that will enable each level of government discharge its legal and constitutional responsibilities and duties and ensure that the quality of life and dignity of all the people are promoted without discrimination on grounds of gender, religion, political affiliation, ethnicity, language or locality;'[81] and that 'the National Government shall fulfill its obligations to provide financial transfers to all levels of government, and shall, except as otherwise provided herein, apportion revenue equitably among the states and local governments.'[82]

By law, all natural resources, including petroleum in Unity state and all other states are under the jurisdiction of the national government as provided for in the National constitution. According to the constitution, 'rights over all subterranean and other natural resources throughout South Sudan, including petroleum and gas resources and solid minerals, shall belong to the National Government and shall be regulated by law.'[83]

The Constitution also provides that the petroleum producing states shall retain 2% of all revenues derived from petroleum in their state.[84] This is meant to encourage development projects at the grassroots in

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[81] The laws of the Republic of South Sudan, the Transitional Constitution, 2011, Article 168 (6)

[82] The laws of the Republic of South Sudan, the Transitional Constitution, 2011, Article 168 (7)

[83] The laws of the Republic of South Sudan, the Transitional Constitution, 2011, Article 170 (4)

[84] The laws of the Republic of South Sudan, the Transitional Constitution, 2011, Article 176 (1)

the oil producing states and offset the environmental costs that may be experienced.

The entire property in and control over petroleum existing in its natural state in the subsoil of the territory of south Sudan is hereby vested in the government, and shall be developed and managed by the government, on behalf and for the benefit of the people of South Sudan.[85]

The petroleum bill establishes the National Petroleum Commission, which is the policy making body in the petroleum industry and reports to the President, the National legislative assembly and the Council of states[86]

The National Petroleum Commission is mandated to; provide general policy direction with respect to petroleum resources; act as a supervisory body in matters related to petroleum resource management; approve all petroleum agreements to ensure that they are consistent with the provisions of the law; and ensure co-ordination among all levels of government and states, promote cooperation among the private sector, non-governmental organizations and other persons, institutions and organizations interested in petroleum activities.[87]

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[85] Laws of South Sudan – The Petroleum bill – 2011 Chapter II, Section 8(1)

[86] Laws of South Sudan – The Petroleum bill – 2011 Chapter III, Section 9(1-2)

[87] Laws of South Sudan – The Petroleum bill – 2011 Chapter III, Section 11

The Ministry of Petroleum and Mining is also mandated in the Petroleum bill to be in charge of the petroleum sector through establishment of the Petroleum Authority (PA), which is tasked to; formulate strategies, plans and programmes for the development and management of the petroleum sector; negotiate petroleum agreements; sign, manage, and if applicable, terminate petroleum agreements on behalf of the government with the approval of the commission; manage petroleum resources on behalf of the government; manage relations between government and the petroleum companies; develop the necessary technical capacity and competencies; ensure that all petroleum projects are subject to environmental and social impact assessments; publish and disclose documents and information pertaining oil contracts, agreements and resources.[88]

The bill also establishes the National petroleum Corporation, which is the government commercial entity mandated to undertake commercial petroleum activities such as exploration, extraction, transportation and sale of petroleum resources on behalf of government, in accordance with the law.[89] The National Petroleum corporation is free of political appointments and enjoys certain special preferential rights in petroleum agreements including cost carrying in the exploration phase.

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[88] Laws of South Sudan – The Petroleum bill – 2011 Chapter IV, Section 11

[89] Laws of South Sudan – The Petroleum bill – 2011 Chapter V, Section 13

4.2 Major issues in the Petroleum Law and legislations

4.2.1 Opening of areas

The Ministry shall prepare a reference map showing the blocks and make it available at the Ministry, on the Ministry website and by any other appropriate means to inform interested persons.[90] The Council of Ministers may in consultation with the Ministry open an area for petroleum activities after a Strategic Social and Environmental Assessment is carried out and a determination made by the Council of Ministers to open an area for exploration.[91]

After an area is opened for petroleum activities in accordance with section 15, the Ministry may, subject to a social and environmental impact assessment being carried out, published and approved in accordance with section 59(2), decide to announce an open, transparent, non-discriminatory and competitive public tender to grant a reconnaissance license for a defined geographical area to a person with the requisite technical competence, sufficient experience, history of compliance and ethical conduct and financial capacity and any other requirements stipulated by the Ministry to adequately fulfill the requirements of the license.[92]

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[90] The Laws of the Republic of South Sudan, The Petroleum Bill - 2011 Chapter VI (14)(2)

[91] The Laws of the Republic of South Sudan, The Petroleum Bill - 2011 Chapter VI (15)(2)

[92] The Laws of the Republic of South Sudan, The Petroleum Bill - 2011 Chapter VII (17)(1)

4.2.2 Tendering Procedure and Qualification requirements

The Petroleum bill stipulates that petroleum agreements have to be entered into following an open, transparent non-discriminatory and competitive tendering process. The call for tenders shall define the relevant contract area and clearly state the applicable award criteria.[93]

The ministry of Petroleum and mines shall negotiate petroleum agreements in accordance with the law. The area covered by a petroleum agreement has to be specified in the agreement and may comprise one or more blocks or parts or blocks. A petroleum agreement grants the contractor an exclusive right to explore for petroleum and in the event of commercial discovery, to develop and produce petroleum in accordance with the provisions of the law and the terms of the agreement. The petroleum produced under a petroleum agreement shall be shared between the government and the contractor in accordance with the terms of the agreement.[94]

4.2.3 Incorporation and organization requirements

A person entering into a petroleum agreement shall be incorporated and registered as a company in Southern Sudan in accordance with the laws of Southern Sudan and shall be capable of managing petroleum activities at all times. Such company shall be incorporated as a single purpose company exclusively for petroleum activities in

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[93] Laws of South Sudan - The Petroleum bill - 2011 Chapter VIII, Section 18

[94] Laws of South Sudan - The Petroleum bill - 2011 Chapter VIII, Section 19

Southern Sudan. A contractor is required to maintain an office in south Sudan to carry out the petroleum activities and have a representative in charge with full authority to enter into binding commitments on behalf of the contractor. The contractor is also required to open and maintain an account with the Bank of South Sudan.[95]

Any transfer of ownership interests in a contractor which directly or indirectly results in a change of ownership control in the contractor shall be subject to the prior written approval of the Ministry and notice of the transfer shall be announced in the Gazette and made available by any other appropriate means to inform interested persons. For the purpose of this section, direct or indirect ownership of 50 per cent or more of the shares, or a majority voting power, shall be deemed to entail control in the contractor.[96]

4.2.4 Exploration and Production sharing agreements

Petroleum agreements provide for an exploration period not exceeding six years from the effective data of the agreement. The exploration period consists of a first commitment period and to two optional commitment petroleum agreements. The petroleum agreement shall provide for the work obligations with a corresponding estimated expenditure amount to be fulfilled by a contractor during each

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[95] Laws of South Sudan - The Petroleum bill - 2011 Chapter VIII, Section 20

[96] Laws of South Sudan - The Petroleum bill - 2011 Chapter VIII, Section 22(3)

commitment period of the exploration period. Where the contractor has fulfilled the work and expenditure obligations for a commitment period in the manner stipulated in the agreement and has submitted to the ministry a programme for the work obligations to be performed in the consecutive commitment period, the contractor has a right to enter that consecutive commitment period on the terms provided in the petroleum agreement.

Subject to the approval of the commission, the ministry of Petroleum and mines may terminate a petroleum agreement if a contractor fails to fulfill the work obligations within the time period stipulated in the agreement. In such cases, the ministry may require that the contractor pay the government an amount equivalent to the unfulfilled portion of the work programme, as prescribed in the regulations. The ministry of Petroleum and mines may impose by regulation any other requirement relating to the exploration period, including work and expenditure obligations.[97]

The rationale behind the award of petroleum agreements, the beneficial ownership information for the contractor, and documented proof of the requisite technical competence, sufficient experience, history of compliance and ethical conduct and financial capacity of the contractor shall be shall be announced in the Gazette and made

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[97] Laws of South Sudan - The Petroleum bill - 2011 Chapter VIII, Section 26

available by any other appropriate means to inform interested persons.[98]

A petroleum agreement shall grant the contractor an exclusive right to explore for petroleum and, in the event of a commercial discovery as determined by the Ministry, to develop and produce petroleum in accordance with the provisions of this Bill, applicable law and the terms of the agreement.[99]

The key parameters of the petroleum agreement, including cost oil management and reporting, cost stop, the profit oil division, use of excess oil, any bonuses, taxes, royalties, dividends, any exemptions or favorable tax treatment and any stability clauses shall be announced in the gazette and made available by any other appropriate means to inform interested persons.[100]

If the contractor elects to enter into the first optional commitment period under an exploration period, the contract area as of the effective date of the petroleum agreement shall be reduced by at least twenty-five per cent as proposed by the contractor and approved by the Ministry or upon such other terms as set forth in the petroleum agreement.[101]

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[98] The Laws of the Republic of South Sudan, The Petroleum Bill - 2011 Chapter VII (18)

[99] The Laws of the Republic of South Sudan, The Petroleum Bill - 2011 Chapter VIII (19)(3)

[100] The Laws of the Republic of South Sudan, The Petroleum Bill - 2011 Chapter VIII (19)

[101] The Laws of the Republic of South Sudan, The Petroleum Bill - 2011 Chapter IX (27)(1)

If, after giving written notice to the Ministry, the contractor elects to enter into a second optional commitment period under an exploration period, the retained contract area shall be reduced by at least fifty per cent as proposed by the contractor and approved by the Ministry or upon such other terms as set forth in the petroleum agreement.[102]

If a contractor has not submitted a declaration of commerciality for a discovery within a contract area to the Ministry before the expiration of the exploration period, the whole contract area comprised by the exploration activities shall be relinquished.[103]

The contractor shall submit a written report to the Ministry within 90 days of discovery of petroleum, stating whether the discovery merits further appraisal. The part of the contract area comprising a geological structure that does not merit further appraisal as determined by the Ministry shall be relinquished with immediate effect from the date of submission of the written report.[104]

4.2.5 Exploration Drilling

Contractor shall submit an application to the Ministry Petroleum and mines for a permit to undertake exploration drilling. The application shall contain a drilling programme and an environmental impact assessment that has been carried out and approved in accordance with section 59 (2). Exploration drilling shall not commence before the

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[102] The Laws of the Republic of South Sudan, The Petroleum Bill – 2011 Chapter IX (27)(2)

[103] The Laws of the Republic of South Sudan, The Petroleum Bill – 2011 Chapter IX (27)(3)

[104] The Laws of the Republic of South Sudan, The Petroleum Bill – 2011 Chapter IX (29)(2)

contractor has received a drilling permit from the Ministry of Petroleum and mines.[105]

The contractor must immediately notify the Ministry of any discovery of petroleum. The contractor shall submit a written report to the Ministry of any discovery merits further appraisal. The part of the contract area comprising a geological structure that does not merit further appraisal shall be relinquished with immediate effect from the date of submission of the written report. For discoveries that merit further appraisal, the contractor shall prepare an appraisal programme in accordance with best international practices and standards for appraisal by the Ministry. The petroleum agreements shall provide the terms for appraisal, including the appraisal period that shall not exceed 24 months.[106] Upon completion of appraisal activities, contractor shall submit to the Ministry a report of the activities and in the event that the discovery is found to be commercial, a written declaration of commerciality shall be submitted to the Ministry with the report.

4.2.6 Development and Production

Development and production of petroleum has to be carried out in a manner that will ensure maximum recovery of petroleum in place and in accordance with the law. If a declaration of commerciality is made,

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[105] Laws of South Sudan - The Petroleum bill - 2011 Chapter VIII, Section 28

[106] Laws of South Sudan - The Petroleum bill - 2011 Chapter VIII, Section 29

the contractor has to submit to the Ministry a plan for development and operation of the discovery for approval. The plan for development and operation has to contain a description of the development and the production programme and any other requirements, as prescribed in the regulations. The description required comprises detailed information on all relevant issues concerning the proposed development, including information on reserves as well as on economic, technical, operational, safety related, commercial, local content, social and environmental aspects of project.

An environmental and social impact assessment must be carried out and approved before the contractor submits a plan for development and operation. The approved environmental and social impact assessment has to be submitted as part of the plan for development and operation. In evaluating the plan for development and operation, the Ministry must consider safety related aspects, the environmental and social impact assessment and the technical competence, experience, history of compliance and ethical conduct and financial capacity of the contractor. Unless otherwise determined by the Ministry, a contractor can not enter into contracts of significant value or commence construction works until the plan for development and operation has been approved by the Ministry. The Ministry may set a time limit for the submission of a plan for development and operation. If a contractor does not submit the plan within the time limit set by

the Ministry, the area comprised by the declaration of commerciality shall be relinquished.[107]

4.2.7 Production permits

Upon application by the contractor, the Ministry may issue an annual production permit for production and injection of petroleum. The form and content of the production permit have to be as prescribed in regulations. The production permit is based on the production schedule described in the production programme approved pursuant to section 31 and any other relevant information that may require modification in the production schedule. No petroleum can be produced or injected except in accordance with the production permit. The Ministry may direct a contractor to the necessary and practical steps to increase or reduce petroleum production to a rate will enhance optimum recovery of petroleum from the deposit without exceeding the capacity of existing production facilities.

Contractors must plan and construct production facilities so as to avoid any flaring or venting of petroleum under normal operation conditions. Flaring or venting of petroleum is prohibited unless authorized by the Ministry in writing. The authorization can only be granted if necessary in the interest of normal operational safety or in order to comply with a requirement in accordance with the law. In the event of an emergency, a contractor may vent or flare without the

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[107] Laws of South Sudan – The Petroleum bill – 2011 Chapter VIII, Section 30-31

prior written authorization of the Ministry provided that there is insufficient time to request an authorization. The flaring or venting must be kept at the lowest possible level. The contractor must inform the Ministry of the event as soon as practicably possible and submit a full report describing the event and its consequences.[108]

The Ministry may direct that one or more petroleum accumulations that extend beyond a contract area, or accumulations located in different contract area, be developed and produced in a coordinated manner in order to ensure efficient petroleum activities. Following a direction by the Ministry under subsection (1), the contractors concerned need to enter into a unitization agreement for the development and production of the petroleum accumulation or accumulations as single development unit with a single operator. The unitization agreement has to be submitted to the Ministry for approval. In the event that the contractors fail to reach an agreement, the Ministry may direct the contractors to enter into unitization agreement. Where a petroleum accumulation extends beyond the jurisdiction of the Republic of South Sudan, the Government shall endeavour to reach an agreement with the other country with a view to ensure the correct apportionment of the accumulation and the most efficient co-ordination of petroleum activities.[109]

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[108] Laws of South Sudan - The Petroleum bill - 2011 Chapter VIII, Section 33

[109] Laws of South Sudan - The Petroleum bill - 2011 Chapter VIII, Section 34

The Ministry may direct that production facilities owned by a contractor may be used by others if necessary in the interest of efficient operations, provided that the use by others would not unreasonably interfere with that of the contractor or any other person already granted a right of use. Following a direction by the Minister under subsection (1), the contractor and the person seeking access to the facilities have to enter into an agreement for the use of the facilities that are submitted to the Ministry for approval. The Ministry may amend the tariffs and other terms agreed between the parties. If no agreement is reached, the Ministry may stipulate the terms of the agreement having due regard to prudent resource management while allowing the owner a reasonable profit. The Ministry may alter the conditions of an already approved agreement to ensured that implementation of any project covered by the agreement is carried out. In stipulating new conditions, the ministry has due regard to prudent resource management while allowing the owner a reasonable profit.[110]

The Ministry shall direct that measuring or calibrating equipment be tested-or examined by the relevant Government institution at the intervals and by the means prescribed in regulations. A contractor shall measure the petroleum produced from a field by a method customarily used in best international practices and standards. The Ministry shall on a regular basis approve the methods and equipment used. A contractor shall not alter the method of measurement or

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[110] Laws of South Sudan – The Petroleum bill – 2011 Chapter VIII, Section 35

calibration or any equipment used for that purpose without the written consent of the Ministry.[111]

4.3 Community land use legislation in Unity State

According to the Land Act (2009), local people must be consulted from day one and informed about the plans before investment can take place. The Land Act provides for the establishment of land administrative bodies at the county and payam levels, called Authority and Councils respectively. They draw membership from the traditional authority chiefs, civil society groups, and women representation. Before any investment can be made, the partners must meet with the County Land Authority, and civil society can bring issues to this authority.

The local people have to be included because chiefs cannot just give away land. The agreements over land use have to go through the government since the local people cannot make these choices without the state; this is for the protection of the peoples' rights. Oil revenue should be used for socio-economic development, addressing basic human rights i.e. food, water and shelter-minimum standard. Communities should be consulted, with state oversight and accountability.

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[111] Laws of South Sudan – The Petroleum bill – 2011 Chapter VIII, Section 36

4.4 Environmental issues in the petroleum sector in Unity state

All of the oil in Unity state is in one of the three main wetlands, putting even the Sudd – Africa's largest wetland, at risk. Some of the most serious environmental problems that have emerged in Unity state over the years as the oil industry has developed include;

- The hydrological disturbances and deforestation as a result of road construction.
- Thousands of abandoned drilling pits that have not been cleaned-up or rehabilitated.
- No decent chemical and domestic waste management.
- Inadequate treatment of produced water. More than1x10 barrels of water are produced every day at Heglig CPF alone. Produced water contains a vast array of substances that include: salts; minerals, dissolved and insoluble hydrocarbons, heavy metals such as arsenic, cadmium, mercury, and lead, aromatics, phenols, cyanide and other chemicals.
- They are no Master Plans for socio- economic development of the concession areas.

These concerns can only be addressed by clear legislation. The environmental law in Southern Sudan is currently governed by the Environmental Protection Act 2010, which; deals with all matters concerned with the environment in Southern Sudan; promotes the

wise use, development, conservation and recuperation of its natural & environmental resources, ecosystem services & biological diversity; integrates environmental considerations into development policies, plans, programs, and projects at the community, government & private sector levels; promotes effective, widespread, public participation in the consideration and incorporation of environmental considerations into development activities; contributes to the resolution and management of conflicts related to the use of natural resources & the environment; provides for the establishment & governance of the Southern Sudan Environmental Management Authority.

4.5 Critique of the current legislative process

The current framework is almost entirely enshrined in the National Transitional Constitution, which emphasizes the control of petroleum resources by the central government. The provisions of Article 172(1) of the National Constitution reinforce the fact that the control of petroleum resources is in the hands of the National government, and State governments are relegated to being mere reciepients of a quota percentage, without any managerial, oversight or participatory powers at all.

A major setback for transparency in the Petroleum industry was however encountered when the South Sudan's parliament voted against a bill seeking to make contracts and information about the country's oil industry more transparent by making it available to the

public. The South Sudan Legislative Assembly also voted against the requirement by government to provide justifications for oil contracts with individual companies, as well as publishing production and sales data.[112] This was allegedly in the interests of national security, according to an SPLM member of Parliament Mr. George Bureng, because 'information about oil could be used against the country by her enemies, referring to Khartoum.'

This however, should not be done by neglecting the commitment of the government to transparency, accountability and fighting corruption, a commitment reiterated by the President in his independence speech. Despite the risks that transparency may pose to the country, given the fact that the petroleum industry is the heart of the nation, it would benefit the country in the long run if transparency was upheld. This would be through encouraging foreign investment, attracting financial assistance from international financial agencies as well as controlling corruption, all of which are key in the national development process.[113]

According to James Mafer James Diar of the Unity state Community Organization and Enlightenment Trust, also reinforces this concern saying that the attempt by some members of parliament to limit public access to information about oil resources demonstrated an

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[112] Jacob Malual "South Sudan parliament favours oil industry secrecy over transparency, Sudan Tribune newspaper, 7th April 2012

[113] Hon. Henry Dillah Odwar, Chairperson of the Parliament's energy committee, In an interview with the *Sudan Tribune* on 06th April 2012.

intention to illegally profit from the industry. "The intention of these people is that they want is that to steal oil resources. What else could be another reason? It means that they want to steal public resources because they will only be the one to know how much is being produced. How much is sold and all other data. This is clear corruption".[114]

According to Dana Wilkins, transparency in the way the oil sector is managed in no way threatens national security. The only people that this 'national security' argument will protect are individuals or companies seeking personal enrichment at the expense of the South Sudanese people. She gave African examples of similar transparency, explaining that Ghana's petroleum legislation includes robust transparency requirements; Botswana's diamond wealth management is good regional model, particularly its strong auditing systems; Ghana, the DRC, and Liberia all publish oil contracts.[115] She added that the best worldwide examples include Brazil, which she said is incredibly transparent about all aspects of its oil sector and this has translated into strong economic growth and much greater accountability in government.

Kathelijne Schenkel added that "though the draft Petroleum Bill is quite a strong document, its effectiveness can only be measured by

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[114] James Mafer James Diar of the Unity state Community Organization and Enlightenment Trust, In an interview with the *Sudan Tribune* on 06th April 2012.

[115] Dana Wilkins, Transparency and Independent verification in South Sudan's petroleum, the Global Witness. In an e-mail to the *Sudan Tribune* on 06th April 2012.

the people who are the real owners of South Sudan's petroleum wealth. Transparency therefore is very important, so the people can verify that their Government is indeed managing the oil industry in their best interest."[116] According to Professor Anthony Venables, "All the evidence points to the importance of transparency in successful resource management, policy made in an environment of secrecy and without proper debate and discussion is all too often bad policy."[117]

Management of petroleum funds

The economy of South Sudan depends almost entirely on petroleum revenue,[118] but as the Vice President Dr. Riek Machar, remarked, petroleum resources do not last forever, so the government of South Sudan needs to prepare for a period when petroleum production will decline and eventually cease altogether.[119] Its in this spirit that the Ministry of Finance and Economic Planning has taken the lead working together with the Ministry of Petroleum and Mining, Ministry of Justice, and the Bank of South Sudan to draft the Petroleum Revenue Management Bill, which establishes the Oil Revenue

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116 Kathelijne Schenkel, of the IKV Pax Christi/ECOS (European Coalition on Oil in Sudan). In an interview with the *Sudan Tribune* on 06th April 2012.

117 Anthony Venables, Professor of Economics at Oxford University and the Director of the Oxford Centre for the Analysis of Resource Rich Economies. In an e-mail to the *Sudan Tribune* on 06th April 2012.

118 H.E. David Deng Athorbei, 'Government of Southern Sudan 2010 Budget Speech,' Ministry of Finance and Economic Planning, Juba, December 14, 2009, http://www.goss-online.org/magnoliaPublic/en/ministries/Finance/Annual-Budgets/mainColumnParagraphs/0/content_files/file0/2010%20Budget%20Speech.pdf.

119 Dr. Riek Machar, In a conference on Oil revenue management in Juba, 27th October 2011

Stabilization Account to act as a buffer against volatility in oil prices, the emergency fund and the Future Generation Fund to enable the Government to set aside some funds for emergencies and future generations.[120]

[120] Press release, 'Republic of South Sudan to manage Oil revenue effectively', SSNA, 31st Oct 2011

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter is a presentation of the summary of the findings from the study, the conclusions reached based on the study findings and the recommendations suggested by the researcher.

5.1 Summary of findings

With less than a year of independence, the republic of South Sudan's petroleum industry is still struggling to break from the grip of the structures laid under the jurisdiction of the Republic of Sudan. Petroleum exploration, agreement drilling, extraction, production, transportation and sharing agreements entered into by the government of Sudan are still a major factor, given the power of petroleum companies. The government of South Sudan has made commitments to continue with the existing agreements, and only modify them in accordance with the laws of South Sudan.

The legal system in South Sudan, like the country itself, is still in a transitional period, and as such, much of the legal regime is under construction. However, the Transitional National constitution 2011 and the Petroleum bill 2011, form the basic legal framework for management of petroleum industry in South Sudan. The jurisdiction of Unity State in the management of Petroleum industry is limited to

the state territory, and is mainly observatory, subject to the Constitutional provision which states that 'the National Government shall fulfill its obligations to provide financial transfers to all levels of government, and shall, except as otherwise provided herein, apportion revenue equitably among the states and local governments.'[121]

The findings from the study indicate that there is an effort by the South Sudan Legislative Assembly (SSLA) to pass the necessary laws that will ease and regulate the management of the petroleum industry with utmost transparency, accountability and with the aim of promoting national development in the country.

5.2 Conclusions

Generally, this study investigated the legal framework for the management of the petroleum industry in South Sudan. The study findings established that so far, the Transitional Constitution of the Republic of South Sudan is the principal legislative tool in the management of the petroleum industry. The study findings bring to light the fact that the South Sudan Legislative Assembly is working around the clock to pass the necessary laws to regulate the industry. The Petroleum Bill – 2011, currently on the floor of the house is one of the many initiatives towards establishing a legal regime.

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[121] The laws of the Republic of South Sudan, the Transitional Constitution, 2011, Article 168 (7)

5.3 Recommendations

With reference to the findings of the study the following recommendations are suggested to the stakeholders;

Transparency; Transparency in the management of a nation's most important economic sector is important for any country, and particularly for a new one hugely reliant on oil revenues and facing challenges including a population with huge expectations, limited technical capacity, and problematic internal politics. The Petroleum Law currently being developed will be the first concrete marker for the government of South Sudan's management of natural resource wealth going forward, and as such it must be explicit and detailed in its transparency requirements.

Without institutionalized transparency in the management of the petroleum sector, the citizens of South Sudan, to whom the natural resources rightfully belong, will be unable to ensure that their country's wealth is being managed responsibly and in the best interest of the wider population. This inability would undermine public confidence in the new government, something which will be absolutely critical in easing existing political tensions, managing development expectations, and moving beyond independence.

In Sudan under the Comprehensive Peace Agreement, the absence of transparency in the management of the petroleum sector has fuelled mistrust, corruption, and even violent conflict. By contrast,

institutionalized transparency will greatly increase the chance that South Sudan will escape the 'resource curse' of weak growth, corruption, authoritarian government, and instability that has afflicted and continues to afflict so many oil-rich developing countries.

Full disclosure; The new Petroleum Law must ensure the full public disclosure of petroleum sector contracts and the related agreements which determine the flow of revenue to the state. In particular, all the key parameters of any Production Sharing Agreement must be made public in order to verify the revenues owed to the state. These parameters are defined by the International Monetary Fund as including but not limited to: the cost oil management and reporting, the cost stop, profit oil division, and use of excess oil. Any bonuses, taxes, royalties, and dividends, any exemptions or favourable tax treatment, and stability clauses must also be published.

Confidentiality should be restricted to specific cases where it can be independently demonstrated that the information concerned is proprietary and its disclosure would be damaging enough to outweigh the greater public interest. Information on payments and production should never fall within this category, and the law must define the scope of confidentiality so as not to leave it subject to interpretation later, posing a risk that interpretation could be manipulated to unnecessarily and damagingly protect key information.

The petroleum laws should guarantee that key procedures, regulation, and data such as revenue and daily production figures, should be regularly disseminated to the public in a way that is easy to understand for ordinary citizens. In the case of South Sudan, publishing data on the internet alone will not ensure that it is available to the wider population and so more must be done, and committed to in the new petroleum policy, to disseminate key information.

Accountability; For the oil sector to be sufficiently accountable, it must be independently monitored, which means that there needs to be an office created separately from the Ministry of Petroleum and Mining and the Petroleum Authority whose sole responsibility is to watchdog the petroleum sector. The creation of a Petroleum Monitor would ensure that the institutions and individuals charged with managing and regulating the sector act responsibly.

The scale and complexity of oil sector management provides for a high risk of malpractice, and in many developing countries, including South Sudan, this risk is exacerbated by limited technical capacity. Consequently, it is all the more important that the new Petroleum Law places particular emphasis on independent monitoring, both internal and external.

Government officials in South Sudan have repeatedly stated that all existing contracts will be respected but reviewed; therefore it is critical

that there be specific transparency provisions in place governing any contract review process as well as the future allocation of exploration and extraction rights. Due to the long-term nature of Production Sharing Agreements, it is critical that the terms agreed to be credible and their rationale be understood by the public.

The purpose of transparency in the allocation of contracts is to prevent opportunism and ensure that the country is getting the best deal possible in their relationships with extractive companies. It is incredibly important that the government and citizens understand exactly who the investor they are dealing with is and that the companies have the management, technical, and financial capabilities to fulfill the obligations of the exploration and extraction contracts.

Competitiveness in oil contracting; An additional benefit of transparency in bidding processes is that in cases where the government has less information about the technical details of the project or is less practiced in the complex nature of oil sector negotiations, auctions and competitive bidding can make up for such disadvantages. Because competition between competent and ethical firms is likely to deliver maximum value for the government, though important, it is not necessary for the government to fully understand the true value of a particular oil block in order to secure the best terms.

Participation of other stakeholders; Civil society engagement is critical for the transparent management of extractive resources and to holding governments accountable for the management of revenues earned. The governance of natural resource wealth is significantly strengthened and decision makers can be held to account when there are procedures in place guaranteeing well-informed civil society oversight.

Civil society engagement also helps to build up local knowledge and expertise by sharing information and collaborating on the analysis of data, which will be very important for South Sudan. In-depth knowledge of the oil sector in is rare, a problem exacerbated by southerners being largely excluded from the oil sector management under the current oil deal. Regular engagement with civil society can also provide for better policy debate for the government, which can lead to better regulation and greater procedural oversight.

The Petroleum Bill as well as the Constitution provide for a 2% of the oil production revenue to be remitted to the producing communities. This was intended to provide a fund to offset the negative social, environmental and economic costs that would be experienced in the oil producing areas. However, the 2% remittance, much as the government has endeavored to ensure that its transferred to the

producing states, is not used for the general interest of the communities, but rather used taken over by the state governors.[122]

5.4 Areas for further research

The results from the study point out a number of opportunities for further research into the petroleum industry in South Sudan.

Future research should be carried out to examine the viability of the petroleum industry in long-term sustenance of the South Sudan economy.

[122] Rev. James Koung Ninrew, Sudan's Oil industry after the Referendum, Conference report, pg. 16

REFERENCES;

Akiner, Shirin; Aldis, Anne, ed. (2004). The Caspian: Politics, Energy and Security. New York: Routledge. ISBN 978-0-7007-0501-6.

Anthony Jennings (2008), Oil and Gas Exploration contracts, Thomson Reuters (Legal) Ltd

Auty, R.M (1993), Sustaining Development in Mineral Economies: the resource curse thesis, New York: Routledge.

Auty, R.M (1997), 'Natural Resource Endowment, the State and Development Strategy,' Journal of International Development, Vol. 9. number 4; pp.651–63 .

Auty, R.M (2004), 'Natural Resource and Civil Strife: A two-stage process,' Geopolitics Journal, Vol. 9, No. 1; pg. 29-49.

Bassam Fattouh and Hakim Darbouche, 'North African Oil and Foreign Investment in Changing Market
Conditions,' Energy Policy, vol. 38, no. 2 (2010): 1119–29.

Bauer Georg, Bandy Mark Chance (tr.), Bandy Jean A.(tr.) (1546). De Natura Fossilium. translated 1955

Benjamin Leo, 'Sudan Debt Dynamics: Status Quo, Southern Secession, Debt Division, and Oil—A Financial Framework for the Future,' Center for Global Development, Working Paper no. 233, December 2010, 44.

Bernard Taverne (2008), Petroleum, industry and government's: A study of the involvement of industry and government in the productive and use of petroleum 2nd Edition, Kluwer law international

Broad, William J. (August 2, 2010). 'Tracing Oil Reserves to Their Tiny Origins'. The New York Times. http://www.nytimes.com/2010/08/03/science/03oil.html. Retrieved August 2, 2010.

CRS Mapping and Play Fairway Analysis, http://www.ccop.or.th/projects/Case.Study.Phillipines.files/Second%5CP12

ECOS, "Getting Sudan's Oil Deal Right is Key to Peace," press release, February 28, 2011, http://www.ecosonline.org/news/2011/Sudans_Oil_Deal_Right

Ernest E. Smith, Owen L. Anderson, John S Lowe, Bruce M. Kram, John S. Dzienkowski, Jacqueline L. Weaver, (2010), International Petroleum transactions 3rd Edition. Rocky Mountain mineral Law Foundation, Colorado-2010

European Coalition for Oil in Sudan (ECOS), Sudan's Oil Industry on the Eve of the Referendum (Utrecht: ECOS, 2010), 10, http://www.ecosonline.org/reports/.

E. Tzimas, (2005). Enhanced Oil Recovery using Carbon Dioxide in the European Energy System. European Commission Joint Research Center.
http://ie.jrc.ec.europa.eu/publications/scientific_publications/2005/EUR21895EN.pdf. Retrieved 2008-08-23.

Exploration Risk on E&P Geology http://www.epgeology.com/general-discussion-f28/assigning-exploration-risks-t157.html

Government of South Sudan, Draft Petroleum Policy, December 2010, unpublished paper.

Harford, T. and M. Klein (2005), 'Aid and the Resource Curse,' The World Bank Group, Private Sector Development Vice Presidency, Note # 291, Washington D.C. pg. 101-07

Hausmann, R and R. Rigobon (2002), 'An Alternative interpretation of the 'Resource curse': theory and policy implications.' National Bureau of Economic Research (NBER) Working Paper 9424. Available at: http://ksghome.harvard.edu/~rhausma/NBER/NBERWP9424. [Accessed on 7 February 2007].

Human Rights Watch (2004), 'Rivers and Blood: guns, oil and power in Nigeria's rivers state.' A Human Rights Watch Briefing Paper, February 2005. Available at:

http://hrw.org/backgrounder/africa/nigeria0205/2.htm#_ftn2 [Accessed on 11 December 2006].

Hyne, Norman J. (2001). 'Nontechnical Guide to Petroleum Geology, Exploration, Drilling, and Production.' PennWell Corporation. ISBN 0-87814-823-X. pg.77

Jill Shankleman, 2011, 'Oil and state buidling in South Sudan: New country, Old industry, United States Institute of Peace, Special report 282, Washington DC

John S. Lowe, Owen L. Anderson, Ernest E. Smith, David E. pierce (2002) "Forms Manual to accompany cases and materials on oil and gas law" 5th Edition. Thomson and west publishing Ltd, Minesota-USA.

Julius N. Uma, 'Envoy: S. Sudan to Respect India's Oil Deals after Independence,' Sudan Tribune, May 3, 2011, www.sudantribune.com/Envoy-S-Sudan-to-respect-India-s,38773; Draft Petroleum Policy.

Karl, T. L (1997): The Paradox of Plenty – Oil Booms and Petro-States, Berkeley: University of California Press. Pg. 67-9

Mabro, Robert; Organization of Petroleum Exporting Countries (2006). 'Oil in the 21st century: issues, challenges and opportunities.' Oxford Press. ISBN 0-19-920738-0, 9780199207381. pg. 104

Maugeri, Leonardo (2005). The Age of Oil: What They Don't Want You to Know About the World's Most Controversial Resource. Guilford, CT: Globe Pequot. p. 15. http://books.google.com/?id=mzHt5hYeXlIC

Michael A.G Bunter (2002), the promotion and licencesing of petroleum prospective Acreage, Kluwer Law international, Massachusetts –USA

National Baseline Household Survey 2009, quoted in Southern Sudan Center for Census, Statistics, and Evaluation (SSCCSE), "Key Indicators for Southern Sudan," Government of Southern Sudan, Juba, December 14, 2010, http://siteresources.worldbank.org/INTSUDAN/Resources/

Overseas Development Institute, (2006), 'Meeting the Challenge of the 'Resource Curse': international experiences in managing the risks and realizing the opportunities of non-renewable natural resource revenues,' London: Program on Business and Development Performance, ODI. Pg. 144-51

Rev. James Koung Ninrew, (2011), Sudan's Oil industry after the Referendum, Conference report, Juba.

Ross, M. (2003), 'Nigeria's Oil Sector and the Poor,' Paper prepared for the UK Department for International Development "Nigeria: Drivers of Change" program.

Sachs, J.D & Warner, A.M (2001), 'The curse of natural resources,' European Economic Review, 45 (4-6), 827–38.

Speight, James G. (1999). The Chemistry and Technology of Petroleum. Marcel Dekker. ISBN 0-8247-0217-4. pg. 46

Okonta, I., and O. Douglas, (2001), Where Vultures Feast: Shell, human rights, and oil in the Niger Delta, San Francisco: Sierra Club Books. Pg. 89-93

The laws of the Republic of South Sudan, the Transitional Constitution, 2011 – ministry of justice, Juba.

UN Mission in Sudan, An introduction to the Comprehensive Peace Agreement, UNMIS Public Information Office, 2005

Worgu, S, O. (2000), 'Hydrocarbon Exploitation, Environmental Degradation and Poverty in the Niger Delta Region of Nigeria' Lund, Lund University Sweden, January.

World Bank Poverty Reduction and Economic Management Unit, Sudan: The Road toward Sustainable and Broad- Based Growth (Washington, DC: World Bank, 2009), 58, http://go.worldbank.org/PX5WQB69M0.

APPENDICES

APPENDIX I

Questionnaires for selected respondents

Dear Respondent

This questionnaire is designed to seek information from you in a research on ***"The Petroleum industry in Unity state, South Sudan: a legal examination".*** It is carried as a partial fulfillment of the requirements for the award of a Bachelor of Law of Kampala International University. Your contribution, opinions and experience will be highly appreciated.

Thanks very much for your cooperation.

Please tick ( ) in the bracket in front of the most appropriate response and where explanation is required, use the space provided.

1. Gender:

[ ] Male

[ ] Female

2. Age: [ ] 18 – 28

[ ] 29 – 38

[ ] 39 – 48

[ ] 49 and above

3. Education level:

[ ] Masters degree level

[ ] Bachelors degree level

[ ] Diploma

[ ] Certificate

[ ] Any other (please specify)_____

4. How long have you been working in this organization?

[ ] Less than one year

[ ] 1 – 3 years

[ ] 3 – 5 years

[ ] 5 – 10 years

[ ] More than 10 years

5. What position of responsibility do you hold in this organization?

[ ] Departmental director

[ ] Sector manager

[ ] Accountant

[ ] Legal officer

[ ] Other, please specify_____

6. What is the role of your organization in the management of the petroleum industry in this state?

[ ] Supervisory

[ ] Legislation

[ ] Monitoring and evaluation

[ ] Developing infrastructures

[ ] All of the above

[ ] Other, please specify _____

78. What is the current oil production in Your state?

[ ] Less than 10,000bpd

[ ] 30,000 – 50,000bpd

[ ] 50,000 – 100,000bpd

[ ] More than 200,000bpd

8. Do you have legislations to regulate the management of the industry in your state?

[ ] Yes

[ ] No

9. If yes, what are these laws?

[ ] The petroleum policy

[ ] The national (South Sudan) constitution

[ ] The state constitution

[ ] Other, please specify .....

10. Are these laws effective in the regulation and management of the petroleum industry in your country?

[ ] Yes

[ ] No

11. If no, what should be done to improve them?

[ ] Increased transparency

APPENDIX IV

Time Frame/Work plan

TIME FRAME FOR RESEARCH REPORT	
DURATION	**ACTIVITY**
Two weeks	Proposal
Four weeks	Data collection
Three weeks	Data editing and coding
Three weeks	Data analysis and presentation
Two weeks	Report writing and compiling
FIFTEEN WEEKS	**TOTAL TIME PERIOD**