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ARTICLE

An Appraisal on the Effect of Unitization of Oil and Gas Fields in Nigeria

Rufus Adeoluwa Olodude*

Abstract

Unitization or pooling in oil and gas is both a statutory and regulatory response to the hardship or mischief hitherto posed by the English Common law Capture Rule in the exploration, exploitation and production of oil and gas mineral resources. Unitization of oil and gas therefore deals with issues relating to pooling together of different (units) oil fields within the constituent of a whole oil block under one or more Oil Mining leases (OMLs), licenses or contracts. It is the purport of this paper to examine the effect of unitization in the oil and gas field with particular reference to the Nigeria experience. It is of note that the paper found out that unitization agreement can only be beneficial to the contracting parties if all possible unforeseen circumstances are sufficiently provided for in the terms of agreement. It is important to state that if thorough findings are not carried out in the preliminary stage as regarding the oil field this might lead to redetermination of interest. Thus, this makes the process more cumbersome and more expensive in implementing. Thus the paper recommends that a detailed framework be spelt out as to the content of Unitization Agreement in Nigeria.

Keywords: Unitization, Oil and Gas, Pooling

Introduction

It is important to examine the difference between pooling and unitization of oil and gas fields before proceeding in this discourse. As noted by Andrew Derman and Ryle Vollus in their paper[1], that the legal consequence might be quite similar but the physical effect are not always the same. It is important to note that quite a number of authors have interchangeably used pooling and unitization without bearing this in mind the seeming difference. Pooling has been noted by Derman and Vollus as the outcome of multiple tracts joined together in a single lease by their owners, or, a voluntary consideration among participating interests or royalty interest, or both, or a compulsory joining of all interest in a drilling and spacing unit entitled to only one well location which unrelated to the oil pool as a natural physical entity.[2] It was noted further that pooling reduces the number of competitive properties within a pool, although which still gives room for competition among the enlarge units to the extent permitted by the conservative laws.[3]

Unitization on the other hand, has been described as a deliberate effort to consolidate all, or a sufficiently high percentage of the royalty and participating interest in a pool as will permit reservoir engineers to plan operation of the pool as the natural energy mechanism unit which it is.[4] This in essence means taking production at the location and rates. It is most efficient to take it, without disruption of the scheme by the legal inhering in competiting properties. In the case of secondary recovery and maintenance units, it means injecting gas and fluids where these will most efficiently aid in expelling reservoir contents, again without the scheme being disrupted by property lines or the withdrawal by a competing producer of the gases and fluids injected at a great expense.[5] As can be deduced, it is pertinent to state that pooling can be viewed as a small scale arrangement of lease owners from the oil wells coming together to relinquish their drilling interest in order to have one joint well for drilling purposes. While, Unitization is a highly regularized arrangement, which brings together all interest in the pooling reservoir by all owners of rights in separate tracts, leaving no room for

*** Rufus Adeoluwa Olodude is currently a PhD Candidate at the Faculty of Law, University of Abuja, Nigeria.**

[1] Andrew Derman and Ryle Vollus, 'Unitization' (Advisor, Association of International Petroleum Negotiators, 2019) <https://media.tklaw.com/wpcontent/uploads/2019/02/25130223/Unitization-Derman-A.pdf> accessed on 25 October, 2019 5

[2] ibid

[3] ibid

[4] ibid

[5] ibid

competitive interest within the pooling environment. The concept of Unitization or Pooling (as the case may be) in oil and gas is both a statutory and regulatory response to the hardship or mischief hitherto posed by the English Common law Capture Rule in the exploration, exploitation and production of oil and gas mineral resources.[6]

Unitization of oil and gas fields is commonplace in the United States where private ownership of minerals has often resulted in fractionalized ownership of the oil and gas in a common reservoir, such that tens, hundreds, and even thousands, of private landowners (who have leased their tracts in exchange for royalty interests) and their lessees (working-interest owners) have interests in the same reservoir.[7] Without unitized operation of the reservoir, the common law "rule of capture" results in competitive drilling and production with consequent economic and physical waste, as each separate owner attempts to secure his or her "fair share" of the underground resource by drilling more and pumping faster than his neighbor. To conserve its petroleum resources, the United States became the "unitization capital" of the world as measured by the enactment and use of domestic (in international terms "municipal") unitization laws.[8]

Unitization has not been prevalent outside of the United States due to the fact that, oil and gas resources in most countries are still owned and managed by the country, not by private individuals or entities.[9] It is usually the practice whenever a country happens to be the single lessor or licensor that they usually issue licenses or enters into production sharing agreements or similar contracts with enterprises to develop these resources,[10] and most time the contracts awarded to this private individual or entities often cover large areas comprised of many thousands of acres.[11] In most instances the government agencies usually have used seismic surveys to delineate the license area to cover in an entire geological structure, thus reducing the enormity of competitive drilling by rival licensees awarded adjacent acreage

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[6] David Asmus and Jacqueline Weaver, 'Unitizing Oil and Gas Fields Around the World: A Comparative Analysis of national Laws and Private Contracts' (2006) 28(3) Houston Journal of International Law

[7] ibid

[8] ibid

[9]The term "country" is used in preference to "state" or "nation" throughout this Article, in part to avoid confusion with references to the individual states within the United States of America.

[10]In the United States, development rights are granted by an oil and gas lease, and the oil company, or grantee, is commonly called the lessee. Outside of the United States, the company granted contractual development rights by host governments is typically called the licensee, contractor, or concessionaire

[11]For example, the Turkish petroleum code authorized licenses of 123,500 acres, or 50,000 hectares. Ernest E. Smith, Ownership of Mineral Rights, in International Petroleum Transactions 262 (Rocky Mountain Mineral Law Foundation 2d ed. 2000).

over a common reservoir.[12] However, over the past three decades, interest in unitization outside of the United States has been growing for several reasons. Amongst which are as follows:

a. The 1973 OPEC oil embargo imposed by Mid-eastern producing nations against quite a number of the industrialized, oil-importing countries, led to a rapid increase in the price of oil. Thus, western nations and their multinational oil companies sought to diversify their sources of oil imports.[13]
b. Another reason is that over the years, exploration blocks offered by host governments have become smaller as host governments have sought to maximize revenue through a greater number of signing bonuses and more rapid development of reservoirs (more likely if there are fewer reservoirs per block).[14]
c. A lot of relinquished areas from existing blocks have also increased the number of smaller blocks available.[15] As a result of the above stated factors, there has been increased numbers of reservoirs that lying fallow in locations outside the United States that underlie several license areas with different licensees on each area.[16]

The English Common Law Capture Rule

It is imperative to examine the concept of the common law rule of capture to appreciate the effect of unitization. The capture Rule is a product of the English Common Law, which was premised in relation to the ownership and capture of wild animals. It was believed that the exploitation (capture) of oil and gas mineral resources are wild or fugacious in nature, with as much tendencies to wander or straddle far and near like wild animals. Thus, they are regarded as simply untamable. In other words, by its geological character, oil and even strongly natural gas, are fugacious, meaning that they have largely untamable capacities to move from one reserve to

[12]Al Hudoc and Van Penick, British Columbia Offshore Oil and Gas Law, (2003) 41 Alberta Law Review 101, 102
[13] David Asmus and Jacqueline Weaver, 'Unitizing Oil and Gas Fields Around the World: A Comparative Analysis of national Laws and Private Contracts' (2006) University of Houston Public Law and Legal Theory Series 2006-A-05 7
[14] ibid
[15] Brazil's new regulations dictate smaller block sizes and have created "great expectations" that unitization may occur in Brazil in the near future.
[16] David Asmus and Jacqueline Weaver, 'Unitizing Oil and Gas Fields Around the World: A Comparative Analysis of national Laws and Private Contracts' (2006) University of Houston Public Law and Legal Theory Series 2006-A-05 7

another.[17] Consequently, they are of the view that their fugitive nature will naturally spark off competitive contests for their extractions by different stakeholders.[18]

Thus, it has been noted that, a landowner has property rights to the oil and gas under her land. It is believed that if a landowner drills a well on her land and extracts oil and gas, it may drain oil and gas from under her neighbors' land, too.[19]The adjoining tenant may protest that the person has taken over their property right in the oil and gas. The traditional rule, however, is that an adjoining tenant has no claim against a person who has drilled a well and drained oil and gas from under her land. Thus, this created the need that made the courts and state legislatures to modify this traditional rule to protect the interests of landowners in capturing oil and gas from underneath their surface.[20] The common law tradition posits that the owner of land owns everything under the surface of her land to the center of the Earth. And this principle was given lauded credence to cover oil and gas under her surface.[21]

So the common law recognized that fact by applying the rule of capture to allow every owner of land to freely drill down from the surface of her land and take whatever oil and gas she could get from the well, regardless of whether it came from under her surface or someone else's surface.[22] If a landowner didn't want to lose the oil and gas under her surface, the answer was to "go and do likewise": Drill your own well and capture whatever you can get from it. In the case of *Westmoreland & Cambria Natural Gas Co. v. Dewitt (1889),* essentially captures the essence of the capture rule in its true sense. Basically, the capture rule as adapted to the exploitation of oil and gas minerals resources states that if Party A digs for resources on his own land and captures oil or natural gas that have migrated from Party B's lands, Party A will be entitled to reap the fruit of his efforts as the inconvenience to the neighbor cannot support a cause of action against him.

Furthermore, the capture rule in essence encourages maximum exploitation of oil and gas minerals resources with little or no consideration for impact of such activities on the environment (environmental conservation). The capture rule states also in essence that one may extract as much as one desires from an oil field even to the extent of draining one's neighboring owner of another

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[17] P H Frankel, *Essentials of Petroleum: Key to Oil Economics* (United Kingdom, London: Frank Cass 1968) 4
[18] ibid
[19]Alan R. Romero, 'The Rule of Capture: Extracting Oil and Gas from Underground' (Dummies) <http://www.dummies.com/education/law/the-rule-of-capture-extracting-oil-and-gas-from-underground/> accessed 12 November, 2019
[20] ibid
[21] ibid
[22] ibid

oil field without liability. No doubt, this capture rule causes waste as companies, in a bid to surpass other companies within range of the bloc in extracting oil, recklessly undertake horizontal drilling without paying attention to environmental conservation.[23]

Rationale for Unitization or Pooling

The English common law rule of capture which was adapted towards the exploitation and production of oil and gas mineral resources was not capable for equitable drilling, due to the fact it created a lot of hardship or mischief both to the environment and capital resources. There usually arise a lot of competitive exploitation and production which often lead to rampant wasteful drilling which will in effect lead to damage to reservoirs and precipitous drops. Thus, the need for balance for these competing and often conflicting interest forms the basis for unitization or pooling. In other words, due to the large amount of economic and physical waste created by the race to drill numerous wells in order to capture resources as quickly as possible, modern legislations have sort of modified the traditional English common law rule of capture by creating correlative rights in such resources irrespective of whose land they are found. These correlative rights create a more equitable solution to allow each owner opportunity to share in oil and gas from a single pool extending under their properties. Thus, individual holders of contracts, licenses or other instruments (OMLs) in relation to oil fields will pool together resources for joint exploitation and production of oil and gas mineral resources from a single unit. In sum the basic rationales for unitization or pooling can therefore be summarized into three:

1. Removal of waste arising from reckless competitive drilling (especially horizontal drilling)
2. Reduction of cost
3. Increase in recovery factor

The Unitization Agreement

When does Unitization Agreement come into play?

It comes into play when more than one company holds rights in the same host-government contract granting exploration, development, or production rights, the parties typically enter into an operating agreement to address their respective rights and obligations regarding exploration, development, and production and to appoint a single operator to carry out these activities on behalf of all of them.

[23] ibid

Types of Unitization

Sole-Country Unitization: Unitization which takes place wholly within one country; the reservoir does not extend beneath state borders, but it does extend underneath the boundaries of different license areas, usually with different licensees.[24] This unitization will be governed by the laws and regulations or contract provisions (if any) of the country where the reservoir is located.[25] Cross-Border Unitization**:** Unitization which takes place for a reservoir underlying two or more countries that have a delimited border between them. Such unitization will typically involve two or more different licensees.[26]

What the Unitization Agreement Must Contain

According to David Asmus & Jacqueline Waver in their paper[27], they noted that two countries' that has made a provision for the specifics as to the list of items that a unitization agreement must contain, they are Brazil and Ecuador. Below are the provisions as contained in the two countries respectively.

Brazil *(2003 Model Concession Agreement)*: The agreement must contain the following:

a. Equitably contemplate the rights and obligations of parties;
b. Define the unit area;
c. Name the operator;
d. Define the participation of each contractor;
e. Define the development plan and deadline to present the plan to ANP (the National Petroleum Agency);

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[24] See, e.g., Bruce M. Kramer and Gary B. Conine, Joint Development and Operations, in International Petroleum Transactions 640–41 (2nd edn Rocky Mountain Mineral Law Foundation. 2000) (discussing the differences between reservoirs that lie wholly within one country and those that cross a boundary between two countries).

[25]Note that in some joint development zones (discussed infra p.11), the two countries may establish a joint management body with a single set of petroleum regulations and fiscal terms, and the unitization of a reservoir that crosses a license boundary, but lies wholly within the zone, would then be analogous to a sole-country unitization.

[26] *See, e.g.*, *Venezuela, Trinidad & Tobago to Unitize Joint Gas Fields*, Oil & Gas Journal, Sept. 30, 2002, at 32. In some cases, the licensee of a block in one country may bid the most to secure the award of a license from a bordering country on the block adjacent to its existing license or may be recognized as a preferred bidder by the second country, thus making unitization easier to accomplish. *See ibid.* The latter event is reported in the Loran field straddling Venezuela and Trinidad.

[27] David Asmus and Jacqueline Weaver, 'Unitizing Oil and Gas Fields Around the World: A Comparative Analysis of national Laws and Private Contracts' (2006) University of Houston Public Law and Legal Theory Series 2006-A-05 7

f. Define the payments for government and third-party participation, based on specified amounts in the respective contracts for each contractor;
g. Include any other aspect usually in agreements of this kind, including Oil Industry Best Practice.[28]

Ecuador *(2002 Model Production Sharing Contract)*: Clause 8.8.6 of Ecuador's 2002 Model PSC requires that the unitization operating agreement contain, among other items, the following:

a. Well spacing, production rates, monitoring of pressures and production tests, and estimates of proven reserves;
b. The economic participation of the parties in the development and startup of production;
c. Updating of proven reserves and other operating conditions of the common reservoir;
d. Procedures for adjusting sharing percentages, investments, and costs in accordance with this updating of reserves and conditions;
   Procedure for changing the operator, provided that the change does not negatively affect the continuity of operations with maximum efficiency and economy;
e. Obligations of the operator;
f. Establishment and functions of the Unitized Operating Committee to manage and supervise operations of the common reservoir; this Committee is to consist of representatives of the parties concerned and of Petro Ecuador, as applicable; and obligation of the operator to contract for insurance to protect the assets of the unitized area, to the satisfaction of the non-operators.[29]

As noted by David Asmus & Jacqueline Waver[30], Ecuador happens to be the only country that has promulgated a Model Unitization Agreement (called the "Operating Agreement for the Unified Production of the Common Deposit").[31] They further noted that, the Agreement does not appear to contain some of the required provisions. For example, the Agreement does not have procedures for changing the operator, for adjusting sharing percentages, or for well spacing and production rates. The Agreement does contain many provisions about the Unitized Operating Committee (referred to in the

[28] Infra Appendix I, Model Concession Agreement (5th ANP Round), cl. 12.2 (2003) (Braz.) (PEPS
[29] Infra Appendix I, Model Production Sharing Contract, cl. 8.8.6 (2002) (Ecuador) (PEPS)
[30] David Asmus & Jacqueline Waver, Unitizing Oil and Gas Fields Around the World: A comparative Analysis of national Laws and Private Contracts p.62
[31] See infra Appendix I, Operating Agreement for the Unified Production of a Common Deposit (2003) (Ecuador).

Agreement as the "Shared Management Committee") used to supervise the unit's operations.

The Unitization Agreement and its Legal Effects

As noted earlier, the unitization agreement is a form of collateral contract which operates between oil companies (Contract holders), and also with the host government in between as participants and/or regulators. For example, if a single oil reservoir wanders or straddles across the boundaries of two or more areas in respect of which different contracts, licenses or authorizations exists, instead of the holders or group of companies holding the respective rights or contracts to engage in a competitive drilling, it will be thought strategic and economical by them to integrate their activities into a single unit. Thus, unitization is therefore the often preferred legal framework for such unit development. However, unitization agreement is more or less like a collateral agreement, which is usually a subordinate to the main contracts upon which it is predicated. Thus, the unitization agreement is dependent on the extant rights (OMLs, licenses, concessions, contracts, JVAs, PSC and etcetera) of the competitive oil fields holders. As noted earlier, unitization can be either intra-state or inter-state. An intra-state unitization will often include different oil companies within the territory of one state, say Nigeria. Thus, within the territories of one state, different oil companies to whom the state has granted OMLs or other forms of licenses or contracts may for strategic horizontal alliance or other corporate benefits such as merger unitize their licenses or contracts for the oil and gas exploitations and productions. An intra-state unitization can also be voluntary or mandatory.

It is voluntary where the oil companies simply come to the realization of the economic and strategic utility of unitizing their oil fields for exploitation and production, and thereby voluntarily come together with appropriate agreement between themselves- and where the state is usually a nominal party. It is often mandatory where as a result of some regulatory direction of the host state, contractors of boundary areas may be required to unitize if after exploration the reserve on each area is not of commercial quantity but will be commercially viable if both or all are developed as a single unit.[32] A most recent example of an intra-state unitization can be illustrated with the late 2015 conclusion of an agreement between Eni, an Italian Oil Giant, and Anadarko Petroleum, a US Oil and Gas Company, regarding unitization at development areas offshores Mozambique. Both companies had signed the unitization and unit operating agreement covering natural gas resources

[32]B Tarvene *Petroleum Industry and Government. An introduction to petroleum regulation, economics and Government policies* (United Kingdom, London: Kluwer Law) 385

located areas 1 and 4 in Rovuma Basin (Mozambique).[33] The straddling minerals had occurred in the reservoirs beneath eni-operated Area 1 and the Anardarko-Operah united area 4. Although the unitization agreement was still awaiting the authorization of the Mozambique government, the concessionaries agreed to develop the blocks together in a 50/50 joint venture basis. Also in Nigeria, the Agbami oilfield project is Nigeria's largest deepwater development. The field lies in OPL blocks 216 and 217, approximately 220 miles south-east of Lagos and 70 miles offshore Nigeria, in the central Niger Delta. Texaco and Nigerian independent oil company Famfa were granted exploration rights to the 617,000 acre block 216 in late-1996. Agbami was proven in this block by Texaco in 1998 and two years later Statoil's Ekoli-1 well confirmed that the discovery extended into block 217. The field's development was unitized between the two blocks. Chevron Corporation (Chevron) has a 68.15% interest and operates the field via its Nigerian affiliate, Star Deep Water Petroleum. The remaining working interests are held by Statoil (18.85%) and Petrobras (13%). The field is owned by the terms of a deep-water production-sharing contract (PSC) between Chevron and Famfa.[34]

Effect of Unitization

David Asmus & Jacqueline Weaver noted that once a unit is formed, each separately owned tract that participates in the unit will be entitled to an undivided percentage of unitized production obtained in any unit operation, regardless of the tract from which it is produced, and will be liable for that same undivided percentage of costs and liabilities incurred in any unit operation, regardless of the tract to which they relate. That undivided percentage is described as the tract's "tract interest."[35] Thus, unit parties will endeavor to have the allocation of production and costs by tract interest recognized by the host government for purposes of royalty and bonus payment obligations, production sharing and cost recovery, and taxes, and this intent will normally be reflected in the text of the unitization agreement. Existing host-government laws and contracts rarely seem to provide adequate clarity regarding the treatment of these items upon unitization, so host-government approval of the unitization agreement may be the unit

[33] The Oil and Gas year "Eni and Anadarko reach gas unitization deal" available online at <http://www.Theoilandgasyear.com/news//eni-and-anadarko-reach-gas-unitisation-deal> accessed 2 December, 2015

[34] Agbami Oil Field https://www.offshore-technology.com/projects/agbami/ accessed November 12, 2019

[35] David Asmus and Jacqueline Weaver, 'Unitizing Oil and Gas Fields Around the World: A Comparative Analysis of national Laws and Private Contracts' (2006) University of Houston Public Law and Legal Theory Series 2006-A-05 7

parties' best opportunity to obtain that clarity. [36] It was further noted that all materials, equipment, facilities, data, and other assets that are acquired for unit operations after the effective date of the unitization will become the joint property of all unit parties, in proportion to their respective unit interests, except to the extent the host government takes ownership under applicable law and the terms of the host-government contract. Conversely, existing materials, equipment, facilities, data, and other assets generally remain the property of the individual tracts except to the extent the unitization agreement provides for their contribution to the unit.[37] The unitization agreement will generally state that after the effective date of unitization, the unitization agreement will control in place of the existing tract operating agreements with respect to all unit operations. Without such pre-emptive control by the unitization agreement, the benefits of a single, coordinated operation of the unit reservoir would be lost.[38]

It is important to note that the non-unit Operations, the tract operating agreements will remain in effect, except to the extent expressly modified by the unitization agreement. In addition, the tract operating agreements will often have subsidiary application for matters that must be handled on a tract basis, such as submission of budgets to the host government, or that the unit parties desire to handle on a tract basis, such as assignment approvals, preferential rights to purchase, withdrawal, and default. The principal reason for handling the latter items on a tract-by-tract basis is to avoid providing one tract with a right to acquire interests in the other, which might alter carefully negotiated voting rights and alignments of interest. In the case of responsibility for defaults, each tract may also wish to avoid taking the credit risk of the participants brought to the unit by the other tract. One subject that is sometimes overlooked in unitization agreements is the transition from ongoing operations under the existing tract operating agreements to operations under the unitization agreement. Some previously approved budget items and authorizations for expenditure may need to be transferred from the tract operating agreements to the unitization agreement, particularly those representing work in progress on the unit area. Similarly, existing contracts entered into under the tract operating agreements that relate to operations that will become unit operations may need to be novated from the tract operator to the unit operator.[39] Finally, any assets and contracts acquired for the joint benefit of all unit parties pursuant to a pre-unitization agreement may need to be novated to the unit operator, if the unit operator was not acting as such during the pre-unitization period or

[36] ibid
[37] ibid
[38] ibid
[39] ibid

if such assets and contracts were not clearly acquired for the benefit of all unit parties.[40]

Legal and Regulatory Frameworks for Unitization/Pooling in Nigeria

The statutory basis for unitization in Nigeria is rooted in the provision of Section 48 of Petroleum Regulations (Drilling and Production- 1969) which was a subsidiary legislation (otherwise known also as Regulation 48). The said 1969 Petroleum Regulations provides for unitization, if it is in the national interest for the grantee, licensee, or lessee to secure the maximum ultimate recovery of petroleum. It is important to reproduce the said Regulation 48 for proper examination.

(1) If at any time during the term of a license or lease-

a) The minister, after consultation with the licensee or lessee (referred to in this regulation as "the grantee"), is satisfied that the relevant area or any part thereof forms part of a single geological petroleum reservoir (referred to in this regulation as "the oilfield") in respect of other parts of which any other license or lease is in force, and that the field is susceptible of being developed as a unit in accordance with good oilfield practice; and

b) The minister considers that it is in the interest of Nigeria, the grantee and the licensees or leases of any other part of the oilfields (those licensees or leases being referred to in this regulation as "the other parties") in order to secure the maximum ultimate recovery of petroleum that the oilfield should be worked and developed as a unit in co-operation by all those who hold a lease or license over any part thereof, paragraph (2) , (3) and (4) of this regulation shall apply.

(2) The grantee shall, upon being so required by the minister by a notice in writing specifying the other parties, co-operate with the other parties in the preparation of a scheme (referred to in this regulation as "the development scheme") for the working and development of the oilfield as a unit by the grantee and the other parties in cooperation, and shall jointly with the other parties submit the development scheme for the approval of the Minister.

(3) The said notice shall contain a description, by reference to a map, of the area in respect of which the Minister requires the development scheme to be submitted for his approval, and shall state the period within which the development scheme is required to be submitted.

(4) If the development scheme is not submitted to the Minister within the period limited in that behalf by the said notice, or if the development scheme on being submitted in pursuance of paragraph (3) of this

[40] ibid

regulation is not approved by the Minister, the minister shall himself prepare the development scheme in a manner which in his opinion is fair and equitable to the grantee and the other parties.

(5) When the development scheme has been-

a) Submitted under paragraph (3) of this regulation and duly approved; or

b) Prepared by the Minister under paragraph (4) of this regulation, the grantee and the other parties shall perform and observe all the terms and conditions thereof.

From the above, it could be inferred that it is only the minister that has the prerogative power to approve the unitization arrangement after consultation with the licensee or lessee (referred to in this regulation as "the grantee"). This is quite similar to the UK legal regime which is known as Petroleum Licensing (Exploration and Production) (Seaward and landward Areas) Regulations 2004. Clause 13 of the regulation 3(5), schedule 4 provides generally that a licensee shall not carry on any development work without approval from the Minister. Clause 23 of the UK Regulation further provides a special provision for unit development that empowers the minister to compel unitization if he thinks that there is a straddling reservoir.

Further to the above statutory foundation, the Nigeria's 1979 Service Contract authorizes unitization to secure "as far as is practicable minimum total expenditure and maximum oil recoveries and economic efficiency . . . *to prevent waste of reservoir energy and consequently prevent the loss of recoverable hydrocarbons is hereunder reproduced for proper effect.* It is pertinent to note that there is also a recent DPR's Guidelines for Unitization in Nigeria (2008). The Guidelines is also a subsidiary legislation made pursuant to the Petroleum Act. The Guideline was issued in January 2008 following industry-wide consultations undertaken by the DPR. Given the brevity of the provision of Regulation 48 reproduced above, the 2008 Guidelines has actually provided an elaborate regulations and clarity in the unitization practice. As noted by M.A Lateef,[41] the guidelines clearly allow unitizing both straddling and non-straddling oil fields for the purpose of maximizing recovery and subject to agreement of the concerned parties. In other words, unitization needs not necessarily be informed by straddling oil and gas oil fields. There could be other strategic purposes for economic benefits such as in mergers, or for environmental conservation. This is a welcomed development as china, for example, mandates unitization of non-straddling oil fields if linking such fields will generate more economic benefits

[41] MA Lateef, 'Interest in Oil and Gas: Unitization or Pooling of Oil and Gas Fields; Marginal oil Fields, Oil Pipelines' (Obafemi Awolowo University, Ile-Ife, Osun State, Unpublished Article)

from an otherwise non-commercial independent fields. The same thing applies in Angola where Sonangol, the state oil company, may mandate unitization if the contract areas will only produce commercial quantity through joint development and production. Section 10 of the DPR Guidelines (2008) safeguards the challenges that may result if the underlying rights to minerals from one side of the contracting parties terminates before the other. It provided that where the expiry date of one of the concessions ends prior to the end of the life span of the unit operation, the minister shall consider the following:

(a) The unexpired duration of the adjoining concessions, and
(b) The expected economic life of the DPR and the DPR will recommend to the minister a renewal of such underlying concession right by taking into account the expected economic life and utility of the unitized development.

In any event, the basic principle remains that the underlying rights of the contracting parties, either as Joint venture Contract, or production Sharing Contract are maintained and respected at all times. In other words, unitization as a collateral agreement should not change the underlying existing rights in the areas being unitized.

A Critique of the Nigerian Unitization Legislation

As could be gleaned above, the Unitization Policy in Nigeria is faulty in some respect; there is no specific legislation that provides for the guidelines of the content of a Unitization agreement in Nigeria. The only provision which is near only provides that the agreement should be fair and equitable. It is important to state that omission to state in clear terms what is fair and equitable might be ambiguous. It is important to note that Brazil and Ecuador provides for a list of items, a Unitization Agreement must contain. Thus, it is important that Nigeria borrow a leaf from these two countries in order to provide for a list of items the agreement must contain. This is very necessary for equitable distribution of benefits. Thus, this will help in predetermination of procedure for changing the operator if need be and thus spelt out in clear terms the obligations of the operator.

It is of note however that the Guidelines for Farm Out and Operations of Marginal Fields, 2013 provides that where a field or reservoir straddles as a non-operated discovery into another block owned by another leaseholder, it provides that it shall be operated as a unit under the same agreement entered into with the first leaseholder. It therefore mandates that unitization agreement shall be a condition precedent for the approval of a Farm-out. In essence, a unitization agreement is a determining factor that birth farm-out. Bearing this in mind, it is important that there should be a guideline to the

effect that a unitization agreement must comply with in order that the parties have an equitable distribution. Moreso, it is important that such agreement state equivocally the development plan for adjoining communities affected by the drilling exercise with respect to provision of social amenities. Thus, there is a need for a legislation spelling out in clear terms, the standard list of items that must be contained in the unitization agreement.

Conclusion and Recommendation

A unitization agreement can be very difficult to negotiate and implement considering the complex issues revolving around it, ranging from the layering of several sets of agreements of overlapping interest and subject matter, the prospect of revisions to the economic and voting interest of parties during the life of the agreement. Thus, unitization can be best achieved when contracting parties carefully spelt out the terms that could be possibly envisaged in order to cure any defect whatsoever and do a thorough investigatory survey in order to eschew unnecessary cost that may arise in redetermination. It is however recommended that the guidelines for unitization agreement should be adequately spelt in subsequent legislation in Nigeria, as this will help contracting parties to make adequate provisions as to their right and obligations while the contract subsists. It is also recommended that government should effectively participate in unitization negotiations so as to ensure compliance on contracting parties thereof. Thus, a Unitization Operating Committee can be set up to manage and supervise operations of each common reservoir, in order to ensure strict compliance.