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THE USE OF UNITIZATION AND JOINT DEVELOPMENT AGREEMENTS IN PETROLEUM TRANSBOUNDARY DISPUTES

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Introduction

The paper discusses the framework used in developing cross border hydrocarbon resources. The role of states practices, legal regimes and international law requiring co-operation between two countries in developing migratory petroleum resources, either through the concept of cross border unitization for demarcated borders or its alternative the concept of joint development in dealing with overlapping claims. In the end, the ultimate objective for countries in co-operating is to maximize the recovery potentials and thus gain economic benefit for both countries. Petroleum development provides the financial resource from which a country predominantly depends to provide services for its citizens and therefore it is imperative for each petroleum rich state to develop the resource effectively.¹ Energy security and reduced dependence on petroleum imports have over the years become the motivating factors for countries having cross-border petroleum deposits to co-operate and effectively develop in a manner that ultimately leads to financial benefit.²

The Concept of Unitization

Petroleum being in liquid state, tends to migrate to areas with less pressure³. In the event that it is located in blocks that straddle a line of international maritime delimitation into continental shelf parts under the control of different States, legal regimes and licensees, two opposing approaches may arise. The first approach is where one state tries to extract as much of the resources as it can in a process referred to as capture⁴. Under the rule of capture, title to petroleum belongs to the owner who physically extracts it from a well on his land, even if the petroleum has migrated underground from adjoining lands. The resultant effect of the rule of capture

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¹B. Taverne, *Petroleum Industry and Governments: An Introduction to Petroleum Regulation, Economics and Government Policies* (Kluwer Law International, 1999). P.135

²D. Tas *Oil and Gas in the East China Sea: Maritime Boundaries, Joint Development and the Rule of Capture*(OGEL 2012).

³ N. Macleod *Unitization in G. Gordon, J. Peterson and E. Usenmez Oil and Gas Law-Current Practice and Emerging Trends.* (2nd Ed. Dundee University Press 2011) 411

⁴ D. Asmus. J.L. Weaver, *Unitizing Oil and Gas Fields Around the World: A Comparative Analysis of Natural Laws and Private Contracts* (vol.28, No.3. Houston Journal of International Law. 2006) 6

was scramble and hustle by various land owners to drill much more than their neighbors to enable them secure the maximum yield from the underground resource irrespective of the source of the resource, which culminated in competitive and uncoordinated drilling and production leading to massive economic and physical wastage and unnecessary expense. The other approach is when the two states come to an agreement as to how the resource will be developed jointly, and this is either through cross-border unitization, joint development agreements, framework agreements, or by soliciting help of third expert arbitrators or the International Court of Justice or other competent judicial or quasi-judicial entities. In a typical legal dispensation, the ultimate desirable objective is to provide basic rules to facilitate the exploration and production operations for the benefit of both states.

Unitization has been characterised as one of a number of legal devices which seek to remove the competitive element occasioned by the rule of capture with the effect that the petroleum deposit is exploited as a whole, expenditure is reduced and recovery maximized.

The notion of unitization refers to cooperation between license holders in the process of developing oil and gas deposits found in a single continuous block within a state.⁵The different licensees enter into a unitization and unit operating agreement (UUA) as to how the block will be developed.⁶ Unitization may either be compulsory/mandatory or voluntary.

Voluntary unitization is when the adjoining license holders freely agree to develop their respective adjoining interests as a single unit. On the other hand, compulsory unitization is when there is an enabling law under which the relevant government compels the license holders or contractors to agree to a unitization plan amongst themselves or have a unitization plan imposed upon them by the government⁷ as seen for instance in the Nigerian Petroleum Act 1969 and the associated 1969 Petroleum [drilling and production] regulations, which impose an obligatory statutory requirement to co-operate if and when a straddling reservoir must be developed as long as it is in the national interest to secure efficient maximum recovery of petroleum and to avoid unnecessary competitive drilling.

Arising from the lack of supervision and co-ordination in the exploitation of petroleum deposits, the resultant effect was competitive drilling which under the rule of capture was legally permissible. The associated consequences were economic and physical wastages, disorderly operation, lower recoveries, lower revenue income and multiplicity of

⁵Opcit p. 414

⁶ Ibid P. 419-432.

⁷ Denis.V. Rodin. *Offshore Transboundary Petroleum Deposits: Co-operation as a customary obligation*. University of Tromso.

expenditure⁸. Unitization was therefore adopted to regulate and / or prevent wastage, reduce duplication of expense and maximize efficient recovery of petroleum deposits. Aside from the main objective of increasing the ultimate recovery of hydrocarbons, the other objectives of unitization include minimizing disputes which may arise between competing license holders and endanger or hinder efficient exploitation of the license area, allowing the sharing of the best technical information held by different license holders, reducing and rationalizing cost and making the best use of equipment.

In instances, petroleum deposits extend across international boundaries of states or as seen in the case of the UK continental shelf, the median line of international maritime delimitation, it raises more complicated and far reaching problems because such a deposit will be subject to different legal regimes and different terms and conditions for exploitation and transportation. This amounts to cross border unitization.⁹

Under the application of the fundamental principle that the territorial sovereignty or exclusive sovereign rights of states do not extend beyond their border, each state exercises exclusive authority over its territory and any infringement across the international boundary constitutes a violation of another state's territorial sovereignty or exclusive sovereign rights. Thus, no single state can order a mandatory unitization of a cross border petroleum deposit nor can the operators in different states freely enter into a unitization agreement of contract areas in different countries.

An amicable solution to avoid dispute and harmonize the conflicting interests of the different interest holders from different states is for the concerned states to enter into a co-operative arrangement to develop the deposit and in doing so being guarded by the principle of respect for the preservation of the 'unity of deposit'

It may be argued that it is in the interest of the states to co-operate as the absence of agreements to co-operate in the development of petroleum deposits straddling international boundaries raises thorny legal issues because there is no well-developed or express rule of custom under international law requiring unitization for apportioning such common petroleum deposits.

An important characteristic of a cross border unitization is that both states must agree to co-operate in the development of the straddling petroleum deposits. In order to achieve this, two sets of agreements have to be entered into to wit ¹⁰ : bilateral agreement or treaty between the relevant states which will set out the rights and obligations of each state regarding the development

⁸ Framework that exists for neighboring states to develop transboundary offshore oil and gas resources. Ronnah Tumusiime. At www.academia.edu. Accessed on 20th April 2014

⁹ Energy Newsletter. May. 2012. King & Spalding: Strategies for development of cross-border petroleum reservoirs. Phillip Weems, Archie Fallon.

¹⁰ Avril-Lee Wong The North Sea Experience-An analysis of Cross Border Unitization-And move towards establishing an international legal framework..

and various development areas of cooperating states will agree on; and secondly, an international unitization agreement or unit operating agreement between the relevant international oil companies from both states which will be subject to the provisions of the treaty and embody such issues subject to the agreement of the states, such as choice of unit operator or redetermination of participants.

One aim of the bilateral treaty is to set out the rights and obligations of the relevant states with respect to the field development and include procedures to reduce conflicts. Such treaty will then form the basis of an international unitization agreement among the various license holders. In coming to consensus about a bilateral agreement, the interest of the relevant state must be in tandem with that of the relevant interest holders due to the fact that the government has got an interest in the maximum interest of the interest holder as it will have an impact on the relevant governments and as such has no direct effect on the interest holders.

One example is the bilateral delimitation agreement between the United Kingdom and the Netherlands¹¹ to establish the boundaries of the Dutch continental shelf. In addition to the Bilateral delimitation agreement, the states entered into an agreement to govern the exploitation of any field which crosses the international border. The agreement provides that ¹² “where a field extends across the border, the states shall seek to reach agreement as to the manner in which the structures or fields shall be most effectively exploited and the manner in which cost and proceeds relating thereto shall be apportioned, after having invited the licensees concerned, if any to submit agreed proposal to this effect”

When the relevant states have entered into a bilateral treaty, the respective operators in the different states will prepare a single development plan and enter into an international unitization agreement which will usually follow the normal pattern in most respects¹³. It will however be subject to the provisions of the relevant treaty, such that, for example, the selection of the unit operator or a determination of tract participants will necessitate the agreement of the respective states. The international unitization agreement itself will require the approval of the relevant states in order to ensure that it contains the requirements of the treaty.

An international unitization agreement is similar in content with a unitization agreement for deposits situated in the same country, the difference being that the international unitization agreement is conducted within a bilateral treaty between the states that share the common petroleum deposit.

¹¹ October 6th 1965

¹² Article 1

¹³ En.wikipedia.org.sunrise international agreement. Accessed on 20th April 2014

Unitization agreements are unique in their focus on petroleum conservation and the use of technical factors and reservoir models to ascertain the equitable distribution of petroleum underlying each separate contact area. Unitization agreements are also more complex because they combine two or more international petroleum agreements under which the different contractors may have different rights and obligations to the relevant site. Unitization agreements only come into being because of the geological discovery of a common petroleum deposit underlying the several international petroleum agreements and so are not negotiated in advance of such discovery. They receive the legal authority from the bilateral delimitation agreements entered into and signed between the relevant states.

International law has played a pivotal role in advocating for co-operative arrangements in the exploitation and exploration of cross boundary deposits. International law primarily confers on coastal states sovereign rights to explore, conserve and manage the natural resources.

The UNCLOS 1982¹⁴, grants the coastal states inherent and exclusive sovereign rights to explore, the seabed and exploit its natural resources; thus no one can undertake activities of exploration and exploitation without the express consent of the coastal state.

The UNGA Resolution prescribes the necessity for co-operation between countries in the exploitation of natural resources common to two or more states in order to achieve optimum use of such resources without causing damage to the legitimate interest of others. It has been concluded therefore that a rule of customary international law requiring co-operation is now applicable to common hydrocarbon deposits.

It has been argued that the principle that states have a general obligation to co-operate in the exploitation of their shared natural resources can be formulated in two rules of customary international law. The first being an obligation to co-operate in reaching agreement on the exploration and exploitation of the resource and the second is that in the absence of such an agreement, there is an obligation to exercise mutual restraints with respect to the unilateral exploitation of the resource.

Although the global trend with regards to exploitation of cross-border deposits is in favor of cooperative development, the rule of customary international law requiring unitization is not yet established. International law cannot compel a state to accept the idea of unitization with regard to exploitation of common petroleum deposits if the state is not willing to do so.

Unitization has been described as one of a number of legal devices which seek to remove the destructive competitive element stimulated by the

¹⁴ Article 77(1) and (2)

rule of capture, which implies that there are other devices¹⁵. Situations arise however where parties choose to not unitize or regulate. This is a fall out of the difficulties involved in negotiating, unitization, complicated and expensive redetermination of tract participation, a key component of unitization.

The human resource and opportunity cost involved in the protracted unitization and redetermination procedures, far outweigh the benefits gained from minor increases in unit interest. It has been argued that depending on the factual circumstances, there may very well be occasions when approaches other than full unitization is merited. How useful these approaches will be and whether the benefits will outweigh unitization can be ascertained upon a close scrutiny of the different alternatives:

1. Where a field extends beyond its block into an unlicensed territory, the natural thing to do is to make an out of rounds application and if granted both fields can be developed by the same owners and unitization will therefore be unnecessary.
2. There are situations when a small part of a field crosses into a licensed field and unitization is not necessarily the option. This happens because of the huge capital involved in oil exploration and exploitation which necessitates interest holders to enter into co-operation agreements like the joint operating agreement (JOA) to mitigate their risk and minimize their financial contributions.
3. A third alternative is for one group to purchase the adjoining field extending into its block from another group and develop it on its own without the necessity of unitization. However, if the extension is sizeable, commercial considerations are likely to favor unitization in view of the huge economics of exploration and exploitation.
4. Other variations on full unitization exist such as fixed interest agreements and cross-license agreements. Fixed interest is an attempt to avoid the difficulties of redeterminations in tract participation and fix the percentage interests of the parties at the commencement of development but it is essential for the parties to agree on the technical details without drilling a development well. This is of course a high-risk option which may have negative financial implications in the case of small developments.

Cross licensing on the other hand involves the license holder taking a cross assignment of each other's interest and becoming parties to the entire utilized area. This option also requires that the parties agree on the sharing ratio of reserves and it is of course rare.

¹⁵Unitization by Andrew Derman and Kyle Vollus at www.tklaw.com. accessed 20th April 2014

The above options have clearly shown that they are only useful in cases of small developments. Oil and gas developments are by nature highly capital intensive with massive upfront costs which is a major incentive for oil and gas companies coming together under a co-operative arrangement to mitigate their risk and minimize their costs. Tavern¹⁶ has contended that the alternative to unitization, that is to say, independent, non-co-operative exploitation of the separate parts of a straddling reservoir will lead to costly, defensive or competitive drilling.

Joint Development

Joint development occurs when there are two or more states with each laying a legitimate claim to a common hydrocarbon deposit field in an overlapping continental shelf or exclusive economic zone and pending delimitation of the boundary area¹⁷, the two states agree to form a Joint Development Zone (JDZ) as a provisional solution while not foregoing their respective territorial sovereignty for the purpose of jointly exploring and exploiting the common deposits in the disputed area as quickly as possible¹⁸.

The objective of a JDZ is in the delimitation of boundary areas; but in several cases, a JDZ may be a permanent solution in place of a delimited boundary. A JDZ can be viewed strictly from the point of view of co-operation between states based on an agreement regarding the exploration for and exploitation of certain fields or accumulations of non-living resources that either extend across a boundary or lie in an area of overlapping claims.

Joint Development is a (n) inter-governmental arrangement of a provisional nature, designed for functional purposes of joint exploration for and or exploration of hydrocarbon resources of the seabed beyond the territorial sea.

The JDZ arrangement advocates co-operative mechanisms in the resolution of disputes in the absence of boundaries. The UN Convention on the Law of the Sea obliges states which have not been able to resolve the boundaries of their continental shelves and exclusive economic zones to make efforts to enter into provisional arrangements of a practical nature to develop the petroleum deposit located on the overlapping geographical area under dispute, without foregoing their territorial sovereignty¹⁹.

¹⁶ B. Taverne, *Petroleum Industry and Governments: An introduction to Petroleum Regulation, Economics and Government Policies* (Kluwer Law International, 1999)

¹⁷ M. Ong, *Joint Development of International Common Offshore Oil and Gas Deposits: Mere state practice or customary international law?* (Vol. 93 *American Journal of International Law*, 1999) 771-804

¹⁸ R. Lagoni, *Report on Joint Development of Non Living Resources in the Exclusive Economic Zone* (Warsaw Conference of the International Committee on the Exclusive Economic Zone. International Law Association 1988) p.2

¹⁹ Article 74(3) of UNCLOS 1982

The concept of Joint development is a pragmatic solution to allow mutually beneficial petroleum exploration and development whilst putting a side conflicting claims of sovereignty over them. Important to note is that: it is an arrangement between two countries; it is naturally concerned with overlapping maritime area; and it is a temporary arrangement pending the settlement of the boundary delimitation disputed between the countries concerned.

There are different models of JDZ²⁰: The first is the single state model where one state manages the resources on behalf of both states; second is the two state / joint venture model where each state is entitled to nominate its own contractor which enters into joint venture with the contractor of the other state; third is the Joint Authority model where both states delegate power to a single body which becomes responsible for the overall supervision of petroleum activities in the zone. This model differs from state to state with respect to the powers given to the Joint Authority. It can be strong, likened to a separate state or a weaker purely administrative entity; it can contain more than one level of authority.

Although a JDZ will solve certain problems associated with boundaries, it will not remove the need to deal with the situation where a petroleum deposit crosses a boundary. In fact, since the perimeter of a JDZ is inevitably longer than the section of boundary that would otherwise be present, the likelihood of unitization being required is in a sense even greater than in the case of conventional boundary.

A JDZ covers a large geographical area which can contain several fields and contract areas. If separate contract areas held by different contractors are found to extend over a petroleum deposit within the JDZ, a unitization agreement will naturally be entered into among the different license holders in that particular field. Additionally, a field may cut across the boundary of the JDZ and intrude into the exclusive territorial area of a state as is the case with the Greater Sunrise Field Unitization Agreement where the field will be subject to a cross border unitization agreement between the JDZ and the state. In situations like this, the Joint Development Agreement would provide for states to co-operate.

The Difference between Unitization and Joint Development

The difference between the two agreements revolves around the issue of delimitation of boundaries, while their perceived similarities lie in their objectives, formation and players. While in a cross-border unitization agreement, the boundaries dividing the states are known, defined and demarcated and nothing about that is in dispute only that, the oil being

²⁰ D. M.Ong: Implications of Recent Southeast Asian State Practice for the International Law on Offshore Joint (Essex University Law School. 2011) 11

migratory in nature underlies an area within the boundaries to the extent that it is practically impossible for one country to extract its own share without the risk of infringing on the right of the other, in a Joint Development agreement the boundaries within an area are not delimited and all the states lay a valid claim of sovereignty over the area. In the latter situation, a state may have to wait for a very long time to resolve the assiduous process of delimitation before it may extract its own share of oil, a process that may take a very long time²¹.

Conclusion

Development of oil and gas resources is of ultimate commercial importance to any sovereign state, and since it is undisputed that states will always maintain sovereignty over their natural resources, there is need for effective management of these resources where they straddle two sovereign states.

From the foregoing, there is an obvious need for willing political and legal co-operation, and technical expertise between the relevant governments and license holders in order not only to avoid maritime boundary disputes but most importantly to achieve the accruing commercial benefit. Once the parties agree on the imperative of sharing trans-boundary resources, the most crucial consideration is already achieved because it is the rational choice of sovereign states. However, in the future, states will need to develop forms of co-operation that provide predictability and simplicity in a context of strong, continuing interest in petroleum resource development and considerable uncertainty about the exact requirements of international law. In conclusion, although unitization and joint development have setbacks, they are by far some of the best mechanisms for solving trans-boundary disputes.

²¹ Cross-border unitization and joint development agreements: an appraisal of their practical and contextual correlations. www.dundee.ac.uk/cepm/p/gateway/index.php? accessed on 14th April 2014

