

THE JDZ MODEL PSC: A LEGAL ANALYSIS

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I. INTRODUCTION

Oil and gas operations may be carried out under concessions, leases, or contracts granted by the Government (or any other competent body). The legal framework of such arrangements are established by the Constitution, the laws and regulations, and, in some cases, negotiated in a case-by-case basis following either direct negotiations or competitive bids.

Production sharing contracts (PSCs) are among the most common types of contractual arrangements for petroleum exploration and development¹. Historically, the first PSC was entered into between IIAPCO and Permina (Indonesian Oil Company) back in August 1966. Since then, PSCs have been popular in many oil-producing countries, especially in the developing world. According to Daniel Johnston, a recognised expert on petroleum contracts, in the 1980s and 1990s there was a trend towards the use of PSCs by most oil and gas producing countries. The Joint Development zone of Nigeria and Sao Tome and Principe has adopted a PSC system for the administration of petroleum exploration development activities.

Since 2003, the Joint Development Authority (JDA) has launched two licensing rounds and awarded six blocks (blocks 1 to 6) in the Joint Development Zone (JDZ). Following the 2003 Licensing Round, in which Block 1 was awarded to ChevronTexaco with a signature bonus of US\$ 123 million, the first JDZ PSC was signed between the JDA and the Contractor (a consortium comprised of ChevronTexaco, as operator, 51% equity; ExxonMobil, 40% equity; and Dangote-Energy Equity Resources, 9% equity), on 1st February 1 2005.²

Petroleum exploration is a high-risk activity: on average 9 out of 10 exploration efforts are not successful. Under a PSC, the contractor group led by their operator conduct operations at their own risk, and are only paid for their endeavours from a share of the oil and gas produced, if any is discovered and subsequently recovered. The key elements of how this is done under the Model PSC for undertaking oil and gas operations in the JDZ is the subject of this paper.

¹ “Probably [the] most dominant form of granting access to oil & gas exploration and development to international petroleum companies in developing countries”. Thomas W. Wälde, *The Indonesian Production Sharing Contract*, book review. 2003. OGEL.

² Negotiations for the 2004 Licensing Round PSCs (for Blocks 2, 3, 4, 5, and 6) have begun last July 22, 2005.

II. GENERAL THEORY OF PSC

[A] CONCEPT, USE AND LEGAL NATURE

1. Daniel Johnston, one of the world leading specialists in oil and gas fiscal issues, defines Petroleum Sharing Contracts (PSCs³) as “a contractual agreement between a contractor and a host government whereby the contractor bears all exploration costs and risks and development and production costs in return for a stipulated share of the production resulting from this effort”.⁴
2. Traditionally, the State or the Government is represented by one of its agencies or a national oil company. In some cases, such an agency may be an entity established by international treaty, as in the case of the JDZ, for which the JDA represents the State Parties. PSC can be agreed following direct bilateral negotiations or a competitive bidding process.
3. Even though the risk is similar to the risk associated with exploration under a concession agreement, differences arise with regard to the ownership of the minerals, how the costs are recovered if commercial reserves are found, and how the profits are split between the host country and the company⁵.
4. There is a controversy surrounding the legal nature of PSCs; some scholars consider them to be international agreements (submitted to the principles of public international law), whilst others consider them to be made under domestic law (which can be amended by the State by sovereign act). The majority of opinion considers PSCs to be commercial contracts. According to Zhigou Gao, the PSC is a mixture of public and private law,⁶ encompassing elements subject to the State sovereign privileges and elements of a contractual nature, governed by the principles of private law. As such, and notwithstanding their dual nature, PSCs are submitted, *inter alia*, to the principles of *pacta sunt servanda* (contracts must be complied) and *bona fide* (good faith and fairness) and, unless otherwise expressly provided for, PSCs cannot normally be amended unilaterally by the State.

³ PSC and Production Sharing Agreement (PSA) can be used interchangeably, although PSC is more commonly used.

⁴ Johnston, 2003(a), p. 356.

⁵ The division of profits between Government and oil companies is usually referred to as take and is represented in percentage.

⁶ Gao, 1994, p. 209.

[B] OTHER FREQUENTLY USED CONTRACTS

5. Aside from PSC there are other commonly used arrangements:

- (i) **CONCESSION AGREEMENTS.** The Concession Agreement is the oldest of international agreements and is sometimes referred to as a licence agreement, or as a tax and royalty agreement. In the Concession Agreement, the Concessionaire⁷ bears all the risk and cost to explore for, develop and produce petroleum. Under this agreement, the Concessionaire has the right to sell the production minus a portion of the production referred to as royalty. All production belongs to the Concessionaire.
- (ii) **SERVICE CONTRACTS.** Under the Service Contract arrangement, the service company (Contractor) bears all of the cost of exploration. If production results, the Contractor recovers its costs from production and a fee per barrel of oil produced thereafter by the Contractor. The Contractor is subject to income tax and all production belongs to the Government.
- (iii) **JOINT OPERATING AGREEMENTS (JOA).** When two or more companies wish to jointly conduct petroleum operations in a prospect area, they generally enter into a JOA. In the JOA, they agree on the terms of the "joint operations" and to share on a pro rata basis the costs and the petroleum production. Host Governments may also enter into JOAs through their National (i.e. the State-owned) Oil Company.

The table below compares the risk/reward differences of the main contract types:

Arrangements	Oil companies	Government
<i>PSC</i>	Exploration risk; share in reward	Share in reward
<i>Concession</i>	All risk and reward	Reward is function of production and price share in reward
<i>Service Contract</i>	No risk	All risk
<i>JOA</i>	Share in risk and reward	When entered w/ the Government, share in risk and reward

Source: Adapted from Bindemann (1999), p. 6

[C] FEATURES OF PSCs

6. There are various models and types of PSC varying from country to country, location of exploration areas (onshore or offshore), and other aspects regarding the prospectivity of a given block. However, there are some common characteristics of PSCs, as follows:

⁷ The private party of the concession agreement.

- (i) The State remains the owner of the petroleum and gas produced; and the ownership of the production only transfers at the export point (usually established as the wellhead).
- (ii) The Contractor pays a royalty, recovers the cost of operations, and then shares the remaining production with the Government.
- (iii) Remuneration of the Contractor is made in kind, i.e. by the allocation of a “production-share” of the oil produced after the recovery of costs.
- (iv) The Contractor pays taxes on its share of profit oil.
- (v) The Contractors provide all the equipment and technology, and bears the cost of operations and risks.
- (vi) Equipment for the operations reverts to the Government after installation, except if leased or rented.
- (vii) Usually, a joint committee (where both parties are represented) is established to monitor the operations, approve the working programme and authorise the necessary budgets.

[D] RESOURCES RENT FISCAL SYSTEMS

- 7. Resource rent is the difference between the value of production and the related costs associated with the operations (exploration, development) and other operating costs to recover the oil and gas.
- 8. Under PSCs, Governments may also obtain revenue from the sale and purchase of seismic data, rentals, royalties, profit and corporate taxes, production sharing, bonuses, national oil company participations, miscellaneous fees and charges for rendering public services.
- 9. The mechanism designed to achieve the balance in the objectives of the parties is the fiscal system. In the PSC fiscal terms, the host Government and the Contractor agree on the best risk/reward scheme, balancing risks associated with the specifics of the development of a field with the expected rewards and benefits of the operations. Even when adopting a model contract or when the main elements are established in laws and regulations, countries typically negotiate (and renegotiate) economic and fiscal terms within the provisions of these arrangements to obtain the best resultant oil and gas revenues. This is why specialists often consider that “there are more [oil and gas] fiscal systems than there are countries”.

10. Commonly, two pure fiscal systems are distinguished:

- (iv) Concessionary system – Under a concessionary system (also called a royalty/tax system), the government – or rarely the land owner (in countries where the Constitution or the law do not reserve the ownership of natural resources to the Host State) will transfer title of the petroleum upon production to the oil company which is then subject to the payment of royalties and taxes,
- (v) Contractual system – The host government gives the oil company the right to receive a share of the production (or revenue) in accordance with a PSC (or Service Contract), and the Contractor in return pays royalties and taxes.

[E] OBJECTIVES OF EXPLORING FOR OIL

11. The host country's objectives generally fall into three categories, which are sovereignty, economic growth, and environmental quality (or quality of life)⁸. Differently, the main aim of the multinational oil and gas company is profit maximization and diversification of assets to reduce exploration risks for the company.

12. The objectives of both parties of a PSC can be summarized as follows⁹:

- (i) States: maintaining control over resources; attracting risk investment; securing rapid exploration and development; maximize national revenues from petroleum; developing local technology and expertise; promoting growth of the national economy;
- (ii) Oil companies: seeking discoveries; obtaining a reasonable investment rate of return; securing crude oil supply; retaining flexibility and control of operations.

III. THE JDZ MODEL PSC

13. Companies wishing to undertake oil operations (exploration, development and production) in the JDZ must submit an application for blocks in a Licensing Round. The blocks are awarded to the winning company or companies with the grant of an OPL (Oil Prospecting License) which may be converted into an Oil Mining Lease

⁸ Bindemann, 1999, p. 6.

⁹ Gao, p. 207.

(OML)¹⁰ which grants the oil company the exclusive right, within the leased area, to explore, develop and produce oil and gas. The terms and conditions of the OPL and the OML are negotiated and enforced by the PSC. The JDZ Model PSC was approved by the JDZ Joint Ministerial Council on April 4, 2003, pursuant to the Treaty provisions.

[A] THE OBJECTIVES OF PETROLEUM OPERATIONS

14. Under the Treaty, the JDZ regulatory system has to meet the following objectives:

- (i) obtain optimum revenues for the JDA and via JDA, for the State Parties from commercial exploitation of the resources;
- (ii) encourage commercial exploitation and provide incentives for investment;
- (iii) ensure clarity and certainty of operations;
- (iv) ensure that, as far as possible, the contractors' tax payments under the financial terms qualify for double taxation relief, including taxation in third States; and
- (v) ensure optimum utilisation of any fields wholly or partly within the JDZ over the life of those fields.

[B] INSTITUTIONAL FRAMEWORK

15. The Treaty sets forth the institutional framework as follows:

- (i) **JOINT MINISTERIAL COUNCIL** – The Joint Ministerial Council (JMC) is the decision maker and political organ of the Zone. The JMC has authority to give directions to the JDA; to approve PSCs, which the JDA may propose to enter into with any Contractor; and to approve the distribution to the State Parties of revenues or products derived from development contracts in the Zone.
- (ii) **JOINT DEVELOPMENT AUTHORITY** – Under the Treaty, the JDA is the managing authority of the JDZ, vested with the exclusive mandate to implement the JMC policy within the Zone. Subject to the decisions of the JMC, the JDA is vested, *inter alia*, with the authority to: allocate acreage by bidding processes; contract on behalf of the State Members; manage the

¹⁰ The conversion takes place prior to the beginning of the production.

JDA administration; control and oversee the implementation and compliance of licenses and contracts. The JDA is responsible to the JMC.

- (iii) HEADS OF STATE – Although the Heads of State have no executive power under the Treaty, they are vested with appointment powers: they appoint (and may dismiss) the members of the JMC and the Directors of the JDA; and additionally, the Heads of State play an important role in settlement of disputes. Under the Treaty, the JMC may refer any dispute to the Heads of State for settlement with respect to the functioning of the Treaty and which is not settled either by the Board of JDA or the JMC.¹¹ Parallel to these expressed functions provided by the Treaty, the Heads of State play an informal and influential political role in the activities of the Zone.¹²

[C] LEGAL FRAMEWORK (THE TREATY AND THE TAX REGULATIONS)

16. The Treaty created a Joint Development Zone (JDZ), the institutional framework, and the regulatory framework for the operations in the Zone. In April 2003 pursuant to the Treaty, the Joint Ministerial Council (JMC) approved the Petroleum Regulations and the Tax Regulations to be applied to the JDZ pursuant to the Treaty provisions. Additionally, the JMC also adopted the model PSC at the same time.
17. THE TREATY – The petroleum operation principles are set forth in Part 8 – Regime for Petroleum in the Zone; articles 21 to 31. Under the Treaty, the JMC has to approve the regulations for the JDZ operations. The exclusive rights to carry out activities in the JDZ are authorized by petroleum development contracts after a licensing round.
18. THE PETROLEUM REGULATIONS – The Regulations address principles and rules applicable for petroleum operations in the JDZ such as: licensing, leasing and contracting; fees, rents and royalties; rights and obligations of the contracting parties; standards of safety and environmental protection; rules for accounting, reporting and recording; recruitment and training of national personnel; settlement

¹¹ Recently, on 31 April 2005, the Head of States settled the dispute arisen with respect to the 2004 Licensing Round. In short, there was a dispute between Sao Tome and Principe and Nigeria with regard to the bid criteria. The Santomean political parties opposed the decision of the JMC and called for the cancellation of the bids. Called to settle the dispute, the Heads of State agreed with the suggestion of the JMC and announced the winning companies. The press release of this announcement is available in the Press Releases and Publicity Section of the JDA Website at www.nigeriasaotomejda.com.

¹² Two important examples: (i) on 6, February 2003, Heads of State renegotiated Article 5 (Special Regime Area), which under the original version of the Treaty, said Special Regime Area was under Nigeria exclusive jurisdiction, and is now subject to the general regime of the Zone; and (ii) on last 24, June 2004, the two Heads of State signed the [Abuja Joint Declaration](#), which is an important document parallel to the Treaty regarding transparency and good governance of the JDZ affairs.

of disputes (arbitration). Under the Regulations, any oil company (only companies incorporated or registered under Nigerian or Santomean Law may participate) wishing to undertake operations in the Zone may bid for blocks in a licensing round and, if a bid is successful and the block awarded, the company is required to enter into a PSC with the JDA. The PSC is referenced in Regulation 5, paragraph 5.1(c) and in Regulation 9.

19. THE TAX REGULATIONS – The Tax Regulations set the rules and procedures regarding, *inter alia*, the calculation, charging, and payment of taxes (including deductions and allowances), accounting, and bookkeeping.

[D] MAIN ELEMENTS OF THE PSC¹³

20. CONTRACT AREA – The Model PSC defines a contract area according to the OML awarded to the contractor. Each contract has a contract area that is described in an Annex of each PSC.

21. DURATION – The initial term of the contract is 28 years from the Effective Date, renewable for a 20-year extension period. The initial term is comprised of an exploration period of 8 years; and an exploration, development and production period for 20 years. The Exploration Period is divided into three separate phases as follows:

- (i) Phase 1 – 4 years from the Effective Date;
- (ii) Phase 2 – 2 years from the end of Phase 1; and
- (iii) Phase 3 – 2 years after the end of Phase 2.

22. BONUSES – Under the Model PSC, oil companies are subject to the following bonus payments:

- (i) *signature* bonuses offered in the bidding process. This signature bonus is payable 30 days after the signing of the PSC; and
- (ii) *production* bonuses based on attainment of set cumulative amounts of production of crude oil in the Contract Area from fields discovered. The bonus is calculated based on the attainment of cumulative production thresholds. These bonuses are not recoverable as cost oil, but are deductible for tax purposes.

23. WORK COMMITMENT – There is a Minimum Work Programme and Expenditure clause. This clause provides for the minimum operations and expenditure (on

¹³ The outline of the Model PSC is attached as an Annex to this document.

geological and geophysical surveys, drilling and engineering studies) that companies/operator must carry out during the term of contract. In addition, the companies must submit a performance bond to guarantee the performance of the Minimum Work Programme.

24. ASSIGNMENTS – The partial or total assignments, transfer, conveyance or any other disposal of the rights and interests of the Contractor under the PSC are subject to prior written notice to the JDA and to its prior written consent.
25. RELINQUISHMENT – 50% of the Contract Area is to be relinquished at the end of the Exploration Period and the relinquished areas revert to the JDA. Both retained and relinquished areas must be single units.
26. NATURAL GAS – The contractor has the right to develop, commercialize and recover the costs from and share in the production of Natural Gas discovered in a given development field. In addition, the Contractor may utilize, at no cost any proportion of the produced Natural Gas either through short term flaring forced by emergency or operational necessities or as required as fuel for production operations; gas recycling, gas injection, gas lift, or any other crude oil enhancing recovery schemes.
27. EQUIPMENT AND MATERIALS – All necessary equipment for the operations is financed or purchased by the Contractor. The transfer of title, i.e., the ownership of the equipment to the JDA takes place upon cost recovery. When purchasing equipment and materials, the contractor and its affiliates in purchasing must give preference to the Nigerian or in Santomean markets, on the basis of competitive prices and quality.
28. ABANDONMENT/DECOMMISSIONING – The PSC provides for a Decommissioning clause for each Development Area. The Management Committee estimates the costs of decommissioning the development areas as part of each Field Development Programme. The provisions for decommissioning must be secured, with the prior approval of the JDA in a form of a standby letter of credit or corporate or bank guarantee or held in a Decommissioning fund.
29. LOCAL CONTENT – The contractor has an obligation of contracting nationals of Nigeria and Sao Tome and Principe, and to submit annual recruitment and training programmes.
30. SOCIAL COMMITMENTS – Under the Model PSC, the oil companies commit to carry out social projects in Nigeria and/or in Sao Tome and Principe. Since there are no mandatory projects, the projects are to be proposed by the companies. As in

the signature bonuses, the amounts of said projects are not recoverable as cost oil, but are deductible for tax purposes.

31. JOINT COMMITTEE – The Model PSC provides for a Management Committee to provide the direction in respect of all matters pertaining to the petroleum operations and work programs and budgets. The Management Committee is to be established within thirty days from the date of execution of the PSC; and is comprised of an equal number of representatives of the JDA and of the Contractor.
32. STABILISATION – Under the PSC, in the event of any change or amendments to the commercial and fiscal terms of the PSC, the Treaty or the Regulations, such amendments do not apply to the Contractor.
33. SETTLEMENT OF DISPUTES – Disputes between the parties arising from the PSC are settled by arbitration by an independent expert or, in the event there is no reconciliation, by an arbitration, pursuant to the rules of the UNCITRAL Arbitration Rules.
34. FISCAL TERMS:

- (i) *Royalties* – Under the Petroleum Regulations, the contractor must pay Royalties on the production of crude oil and any casing head petroleum spirit (i.e., any liquid hydrocarbon obtained from natural gas by separation or by any chemical or physical process which has not been treated or refined) in the operations area over the term of the PSC. No Royalties is payable for the production of Natural Gas in the JDZ. The royalties are calculated according to the following ‘sliding scale’:

$$P < 20, R = 0$$

$$20 \leq P \leq 70 \quad R = 5\% \{1 - [(70 - P) / (70 - 20)]\}$$

$$P > 70 \quad R = 5$$

[Note: P = production in thousands of barrels/day; and R = Royalty rate]

- (ii) *Cost recovery* – Cost recovery is limited to 80% of available oil production after the deduction of royalties;
- (iii) *Tax* – The Tax Oil rate applicable to the each contract area is a 50% flat rate assessed on the chargeable profits for the duration of the PSC. Tax is payable according to the Tax Regulations.
- (iv) *Sharing of Profit* – The oil production sharing between the parties takes place after royalties, cost recovery and tax. The production sharing is calculated according to the following sliding scale:

R Factor	CONTRACTOR Share	JDA Share
R < 1.2	P = 80%	100% - P
1.2 < R < 2.5	$P = 25\% + \{(2.5-R)/(2.5-1.2) * (80\%-25\%)\}$	100% - P
R > 2.5	P = 25%	100% - P

Where, for each Development Area:

$$R = \frac{\text{Cumulative Cost Oil} + \text{Cumulative CONTRACTOR Share of Profit Oil}}{\text{Cumulative Operating Costs}}^{14}$$

- (v) *Ring Fencing* – Calculation of royalty, cost recovery and profit sharing is made on a “ring fence” basis; i.e., they are calculated on a field-by-field basis, regardless of the number of fields which are being developed by the Contractor. In practical terms, the calculation is made as if the Contractor is only developing that given field.

IV. ADDITIONAL INCENTIVES. THE INVESTORS’ MEMORANDUM

35. In October 1, 2003, just before the end of the bidding process in the 2003 Licensing Round – the JDA released an Investors’ Memorandum. The Investors’ Memorandum introduced an Investment Tax Allowance (ITA) as an integral part of the fiscal terms applicable to that Licensing Round. Under the Memorandum, the ITA is an additional allowance for Tax (50% of qualifying capital costs except financing interest) and it was aimed to enhance the competitiveness of the JDZ fiscal regime, and is tax deductible. In addition, several other issues were reviewed and a number of clarifications was made, and incorporated into the Model PSC. The Investment Tax Allowance is a usual incentive device that has been adopted in other countries, namely in Angola, Indonesia, and Norway.

¹⁴ Cumulative Operating Costs include Development Area Costs and Contract Area Costs allocated to the Development Area.

V. FINAL REMARKS

36. Considering that the JDZ blocks are located in the deep waters of the Niger Delta,¹⁵ the Model PSC represents a good balance between the petroleum prospectivity, and fiscal terms, which should stimulate operators both to reduce costs and produce efficiently. Within the overall fiscal regime established by the Regulations, and the Model PSC, the JDA's take, i.e., the percentage of revenues resulting from the operations to the JDA (to be apportioned between State Parties – Nigeria and Sao Tome and Principe) will be approximately 67% (undiscounted), or 76% (discounted at 10%).¹⁶

¹⁵ Ranging between 1500m and 2500m deep.

¹⁶ Johnston, 2003(a), p. 4. Also according to Johnston, the average Government's take worldwide is around 65% (this is regardless the prospectivity of the fields) and for countries with above the average potential the Government take is closer to 80%.

Outline of the JDZ Model PSC:

<i>Clauses</i>	<i>Features</i>
Clause 1	Definitions
Clause 2	Bonuses
Clause 3	Scope
Clause 4	Term
Clause 5	Commercial Discovery and Declaration of Commerciality
Clause 6	Relinquishment of Areas
Clause 7	Minimum Work Programme and Expenditure
Clause 8	Management Committee
Clause 9	Rights and Obligations of the Parties
Clause 10	Recovery of Operating Costs and Sharing of Petroleum Production
Clause 11	Valuation of Petroleum Production
Clause 12	Payment
Clause 13	Title to Equipment/Decommissioning
Clause 14	Employment and Training of Nationals of States parties
Clause 15	Books and Accounts, Audit and Overhead Charges
Clause 16	Royalty and Taxes
Clause 17	Insurance
Clause 18	Confidentiality and Public Announcements
Clause 19	Assignment
Clause 20	Termination
Clause 21	Force Majeure
Clause 22	Laws and Regulations
Clause 23	Natural Gas
Clause 24	Representations and Warranties
Clause 25	Conciliation and Arbitration
Clause 26	Effective Date
Clause 27	Review/Re-negotiation of Contract and Fiscal Terms
Clause 28	Operator
Clause 29	Conflicts of interest
Clause 30	Notices
Annexes:	
Annex 1	Contract Area Co-ordinates and Map
Annex 2	Accounting Procedure
Annex 3	Allocation Procedure
Annex 4	Uniform Nomination, Ship Scheduling and Lifting Procedure.
Annex 5	Management Committee Meeting Procedure
Annex 6	Procurement Procedure

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