

THE UNITED REPUBLIC OF TANZANIA

MODEL PSA ADDENDUM FOR NATURAL GAS

Addendum to Existing PSA between GOT, TPDC and Contractor ABC For Deep sea Operations

MODEL PSA ADDENDUM FOR NATURAL GAS For Deep sea Operations Addendum to Existing PSA between GOT, TPDC and Contractor for Block ---dated

Preamble

The Parties have agreed to enter into this Addendum on _____2010 in order to facilitate the commercialization of any Natural Gas discovery in the Contract Area.

The Parties note that **Contractor** is a Company organised and existing under the laws of the United Republic of Tanzania, with office and legal representatives in the United Republic of Tanzania, recognised under the laws of the United Republic of Tanzania through its Certificate of Compliance No.

This Addendum is entered into in consideration of the rights and obligations in respect of the development of a gas commercialization project bestowed upon each of the Government, TPDC and **Contractor**.

Article 1: Definitions and Interpretation

- **1.1** Unless otherwise defined in this PSA Addendum, defined terms shall have the same meaning as that given in the PSA. The provisions of Article 1 of the PSA shall include (or where such terms are defined in Article 1 of the PSA shall be replaced by) the following definitions:
- (a) "Adjusted Gas Quantity" means a quantity of Natural Gas produced and saved from the Contract Area less any Natural Gas used for Production Operations.
- (b) "Affiliated Company" or "Affiliate" means in relation to any person, another person that controls, is controlled by, or is under common control with, such person.

- (c) "Associated Gas" means Natural Gas which is found in association with Crude Oil either dissolved in the oil or as a cap of free gas above the oil.
- (d) "Block PSA" means the production sharing agreement relating to Block offshore of the United Republic of Tanzania, entered into between the Government, TPDC and **Contractor** on, as transferred or amended from time to time and "Block" means the area described in Annex A and shown on the map in Annex B of Block PSA.
- (e) "Business Day" means a Day excluding a Saturday or Sunday or public holiday on which banks in the United Republic of Tanzania are open for business.
- (f) "Btu" (British thermal unit) means an energy unit; the quantity of heat necessary to raise the temperature of one pound-mass of water one degree Fahrenheit from 58.5"F to 59.5"F under a standard pressure of 30 inches of mercury at 32"F.
- (g) "Cost Oil" shall be as defined in Article of the PSA.
- (h) "Cost Gas" shall be as defined in Article 9 of this Addendum.
- (i) "Crude Oil Operations" means Petroleum Operations carried out in respect of Crude Oil.
- (j) "Delivery Point" means the point Freight-On-Board of the Tanzania loading facility at which Crude Oil reaches the inlet flange of the lifting tanks hip's intake pipe or such other point which may be agreed between TPDC and the Contractor, or in case of Natural Gas means:
 - (i) the wellhead; or
 - (ii) such other point which may be agreed between TPDC and the Contractor.
- (k) "Exploration Expenses" means those expenses as so categorised in Annex D of the PSA, the Accounting Procedure (as amended herein), which for the avoidance of doubt includes Appraisal expenditure, to the extent not already categorised as Development Expenditure.
- (I) "Gas Plant Liquids" means any liquids (including condensates, propanes, butanes and other liquid petroleum gas fractions) produced in Block...... separated at the well head or the offshore or Gas Plant operating platform, such liquids shall be governed by and marketed in accordance with the Crude Oil terms set out in the Production Sharing Agreement.
- (I) "Gas Plant" means a CNG Plant, GTL Plant, LNG Plant, NGL Plant or a plant for any other products derived from the treatment, conditioning, synthesizing, refining, processing, separation or conversion of Natural Gas.
- (m) "Good Oilfield Practice" means, to the extent that such is not inconsistent with the definition of such term in the Act, such practice as would be used by a reasonable and prudent operator exercising that degree of skill, diligence, prudence and foresight as would reasonably and ordinarily be expected from a skilled and experienced operator engaged in the same type of undertaking under the same or similar circumstances and conditions. Reference to "good oilfield practice" in the PSA shall be to "Good Oilfield Practice" as defined herein.
- (n) "Joint Operations" means the Petroleum Operations carried out jointly by the Contractor and TPDC.
- (o) "MMbtu" means a million British Thermal Units.
- (p) "MMscf means a million standard cubic feet of natural gas.
- (q) "Natural Gas Operations" means Petroleum Operations carried out in respect of Natural Gas.

- (r) "Petroleum" has the meaning defined in the Act.
- (s) "Profit Gas" is as defined in Article 9 of this Addendum.
- (t) "Service Costs" means those costs as so categorized in Annex D (Accounting Procedure) of the PSA, (as amended herein).
- (u) "TCF' (trillion cubic feet) means a volume of measurement of natural gas approximately equivalent to one quadrillion Btu.
- (v) "Technical Expert" means a suitably qualified technical expert of international repute who has the skill and competency necessary to assess the sub-surface and engineering as well as the economic aspects of any proposed development and commercialization of an accumulation and (i) in the case of an individual who is retained as an expert, the individual is not a national of either Tanzania or a country in which the ultimate parent companies of the Companies constituting Contractor group are established or (ii) in the case of a company that is retained as an expert, the Company is not incorporated in, nor is any branch office of such company located in Tanzania or in a country in which the ultimate parent companies of the members of the Contractor are established.
- (w) "Well Head Liquids" will have the same meaning as for the "Gas Plant Liquids"
- **1.2** References to Articles in this Addendum shall (unless otherwise specified) be to articles of the PSA, and references to Annexes and paragraphs shall be to annexes of the PSA and paragraphs of those annexes.

Article 8 Discovery and Development

The provisions of Article 8 (Discovery and Development) of the PSA shall only apply to Crude Oil Operations. In the case of a Natural Gas discovery, the following provisions shall apply:

- (a) "In each instance where Natural Gas is discovered in the Contract Area, Contractor will, within thirty (30) days from the date on which evaluated test results relating to the discovery are submitted to TPDC, inform TPDC by notice in writing whether or not the discovery is, in the opinion of Contractor of potential commercial interest. If the Contractor notifies TPDC that discovery is of potential commercial interest, the Contractor will at the same time notify TPDC whether the discovery is of eventual commercial interest ("Eventual Interest') or of present commercial interest ("Present Interest"). In making such notification, the Contractor will provide TPDC with all information as would be reasonably required, in accordance with Good Oilfield Practice, to support its submission.
- (b) If Contractor informs TPDC that, in its opinion, utilizing Good Oilfield Practice, the discovery is not of potential commercial interest as a standalone or as part of an aggregated production then the Contractor shall, if requested by TPDC, relinquish the said discovery comprising the geological feature (as outlined by the relevant seismic data) in which the discovery is located.
- (c) TPDC's option in Article 8(b) of this Addendum will lapse if not exercised by TPDC within eighteen (18) months from the date that the Contractor informs TPDC that the discovery is not of potential commercial interest pursuant to Article 8(a). During the said period of eighteen (18) months and any subsequent period if the option lapses without being exercised, the Minister will in respect of the discovery to which that notice relates exempt TPDC (as the licence holder) for the remainder of the Exploration Term from the requirements of Section 32 (2) of the Act.

- (d) If Contractor informs TPDC that, in its opinion, utilizing Good Oilfield Practice, the discovery is of Eventual Interest then the Minister shall be advised by TPDC to agree to allow the Contractor to retain the Discovery Block for the longer of four (4) years or the duration of the Exploration Licence and any renewal thereof (the "Exploration Term") and the Minister shall act in accordance with that advice provided that:
 - (i) the determination of Eventual Interest shall be based on relevant economic criteria, including but not limited to, potential Petroleum production rates, Petroleum prices, development costs, sufficiency of the reserves discovered in the Block to date. operating costs as well as any other relevant criteria, as established by the Contractor;
 - (ii) Contractor shall reassess the commerciality of the discovery prior to the expiry of four (4) years from the date of notification that the discovery is of Eventual Interest based on the same economic criteria as set out in Article 8(d)(i) of this Addendum; in case of further discoveries that could be tied and developed together in order to make economies of scale, the Contractor shall inform TPDC accordingly;
 - (iii) Contractor shall within thirty (30) days prior to the expiry of four (4) years from the date of notification that the discovery is of Eventual Interest inform TPDC whether, as a result of a re-assessment, it determines the discovery still to be of (a) Eventual Interest; (b) Present Interest, or (c) no potential commercial interest. TPDC shall inform the Minister of the re-assessment study results;
 - (iv) if the results of Contractor's re-assessment determine that the discovery is no longer of potential commercial interest, the provisions of Article 8(b) and 8(c) of this Addendum shall apply
 - (v) If the results of Contractor's re-assessment determine that the discovery has become of Present Interest, the provisions of Articles 8(f) to 8(m) of this Addendum shall apply
 - (vi) If, upon the expiry of four (4) years from the date of notification that the discovery of Eventual Interest, the results of Contractor's reassessment determine that the discovery is still of Eventual Interest, and TPDC, utilizing Good Oilfield Practice, does not agree with such determination, TPDC may, at any time prior to the expiry of the Exploration Term, dispute the results of the Contractor's reassessment. If TPDC and the Contractor cannot resolve such dispute within sixty (60) days of the date on which TPDC informed the Contractor of its opinion, then the matter shall be referred to the Technical Expert and the Technical Expert shall determine whether the discovery is of (a) Present Interest; or (b) Eventual Interest. The Technical Expert shall notify TPDC and the Contractor of its findings and:
 - **A.** where the Technical Expert determines that the discovery is no longer of potential commercial interest the provisions of Article 8(b) and 8(c) of this Addendum shall apply;
 - **B.** where the Technical Expert determines that the discovery is of Present Interest and the Contractor agrees with such determination, the provisions of Articles 8(f) to 8(m) of this Addendum shall apply;
 - **C.** where the Technical Expert determines that the discovery is of Present Interest and the Contractor disagrees with such determination, then the Contractor shall if requested by TPDC, relinquish said

discovery comprising the geological feature (as outlined by the relevant seismic data) in which the discovery is located; or

- **D.** where the Technical Expert determines that the discovery is still of Eventual Interest, the Contractor may retain the discovery for the remainder of the Exploration Term.
- (e) Where the Contractor has relinquished a discovery pursuant to Article 8(d)(vi)(c) of this Addendum and TPDC decides to appraise and develop such discovery, the Parties will meet and discuss in good faith the development of said discovery such that it does not impact the exploration, appraisal and development of the remainder of the whole Block.
- (f) Where, Contractor (a) pursuant to Article 8(a) of this Addendum, has informed TPDC that, in its opinion the discovery is of present commercial interest, or (b) pursuant to Article 8(d)(vi)(b) of this Addendum the Contractor agrees with the determination of the Technical Expert that the discovery is of present commercial interest, Contractor will:
 - (i) As soon as practicable thereafter, submit to TPDC, for the consideration of the Advisory Committee, its proposals for an Appraisal programme to meet the requirements of Section 32 (2) of the Act.
 - (ii) Pending submission of the proposals referred to in Article 8(f)(i) of this Addendum, provide to TPDC such information as is available to it from time to time in relation to the chemical composition and physical qualities of the Petroleum discovered.
 - (iii) TPDC may within ninety (90) days of receipt of the Contractor's Appraisal programme, make proposals or amendments on the Contractor's Appraisal programme to the extent that the Appraisal programme does not meet the requirements of Section 32 (2) of the Act.
 - (iv) Where the Advisory Committee has agreed on an Appraisal programme submitted by Contractor as aforesaid or on a revision thereof, and a Location has been declared, the Minister will, to the extent necessary, extend the period within which an application may be made by TPDC for a Development Licence, when TPDC at the request of the Contractor applies in that behalf, for a period not more than eight (8) years in the case of a Natural Gas Location, so as to ensure that the Appraisal programme can be carried out and the results thereof assessed before the said period expires.
 - (v) During the conduct of the Appraisal programme, the Contractor shall provide TPDC with all information enabling it to make a detailed examination of the data relating to the discovery so as to make an ongoing assessment in full understanding of the facts as to whether or not the discovery is likely to be capable of being commercially exploited. This information shall be provided promptly following it being obtained by the Contractor
- (g) Where Contractor has requested TPDC to make an application for a Development Licence, TPDC shall make such application provided that the proposals accompanying such application pursuant to paragraph (a) of Section 36 of the Act shall:
 - (i) be drawn up by Contractor after consultation with TPDC;

- (ii) be designed to ensure the recovery from the Development Area of the maximum quantity of Petroleum which the economics of the development shall justify;
- (iii) be in compliance with Good Oilfield Practice; and include:
 - **A.** a copy of the environmental impact assessment certificate, issued by the ministry responsible for the environment, together with any approved terms and conditions attached thereto; and
 - B. all proposed project and financing arrangements for Natural Gas operations.
- (h) When an application for a Development Licence in respect of a Natural Gas Location is made in accordance with Article 8(g) of this Addendum and the Act then, unless the Contractor is In Default at the time of such application, the Minister shall grant pursuant to Section 37 (1)(a) of the Act, on such conditions as are necessary to give effect to the application for the Development Licence, the Development Licence applied for. The Development Licence so granted shall, in full satisfaction of the requirements of Section 40(2) of the Act, incorporate by reference the obligations of the Contractor as set out in Article 16 ("Lifting, Marketing and Domestic Supply Obligation") of the PSA. The provisions of Article 16 of the PSA shall also apply to both Crude Oil and Natural Gas.

In circumstances where the Parties determine to undertake the gas commercialization project in accordance with the terms and conditions set out in this Agreement, the Contractor shall, in respect of the domestic market obligation employ a suitably qualified international independent consultant(s) to prepare a reserve assessment report to determine the:

- (i) proven and certified reserved gas reserves in the Block ("Proven Reserves"), and
- (ii) the minimum amount of gas required for a gas commercialization project.

Following receipt of such report, the Contractor shall notify GOT/TPDC in writing of the Proven Reserves that are to be dedicated for supply to the gas commercialization project from the Block (the "Accessible Proven Reserves"). The amount of Proven Reserves available for the domestic market shall then be determined by the parties.

- (i) Contractor. shall respectively provide TPDC with at least 60 days prior written notice before dedicating to a third party available capacity in the Pipeline or Gas Plant that would have the effect of excluding TPDC's ability to transport and process all or any portion of the DMQ volume through the Pipeline and the Gas Plant.
- (j) Natural Gas Quantity comprised in the domestic market and Natural Gas for the gas commercialization project shall be lifted at the Delivery Point proportionately, subject to normal operational requirements, it being understood that lifting shall be consistent with the Natural Gas lifting schedule for the gas commercialization project and shall take into account the delivery obligations of the gas commercialization project.

- (k) Where a Location has been declared, the Minister will not, without the prior agreement of Contractor, give any direction to TPDC pursuant to Section 34(1) of the Act; provided however that if an application is made for a Development Licence in respect of any Block nothing in this Article 8(k) shall be construed as limiting the scope of any notice which the Minister may give to TPDC pursuant to Section 37(2) of the Act.
- (I) Where the Exploration Licence is due to expire during the above mentioned period allowed by the Minister for application for a Development Licence under Article 8(f)(iv) of this Addendum, then the Minister shall prior to the expiry of the Exploration Licence grant to TPDC for such period, a new Exploration Licence on the requisite terms as may be appropriate to enable TPDC to apply, upon request of Contractor, for a Development Licence related to the Blocks forming the previous Location as per Article 7(f)(iv) of this Addendum.
- (m) When TPDC, upon request of Contractor, makes an application for a Development Licence as per Article 8(I) of this Addendum, in respect of a Block or Blocks forming the Location as per Article 8(f)(iv) of this Addendum, then the Minister shall grant, on such conditions as are necessary to give effect to the application for the Licence, the Development Licence applied for. "

Article 9 Joint Operations

- **9.1** The provisions of Article 9(b) (**Joint Operations**) of the PSA shall be replaced entirely by the following provision:
 - (b) "TPDC (or its assignee (Assignment by TPDC) may at any time, by notice in writing to Contractor, elect to participate in Petroleum Operations to be carried out under the terms and conditions of this Agreement for a ------ per cent (...%) participating interest. TPDC shall bear its proportionate share of all Contract Expenses related to Development Operations (not to include Exploration and Appraisal expenses). TPDC's per cent (...%) participating interest shall be taken proportionately from Contractor's interest, including a proportionate share of Profit Oil/Profit Gas and Cost Oil/Cost Gas to which Contractor is entitled as hereinafter provided in Article 11 (Recovery of Costs and Expenses and Production Sharing) of the PSA in respect of Crude Oil and Article 11 of this Addendum in respect of Natural Gas."
- **9.2** The provisions of Article 9(b) of the PSA as amended above shall apply to both Crude Oil and Natural Gas.

Article 11 Recovery of Costs and Expenses and Production Sharing

11.1 In respect of Natural Gas and Natural Gas Operations, recovery of costs and expenses and production sharing shall be governed by the following provisions.

- (a) Subject to sub-article (c) of this Article 9.1, all Contract Expenses incurred by the Contractor and where Joint Operations have been established by TPDC, shall be recovered for Natural Gas, from a quantity of Natural Gas produced and saved from the Contract Area less any Natural Gas used for Production Operations (the "Adjusted Gas Quantity") (hereinafter referred to as "Cost Gas") and shall in any Calendar Year be equal to the lesser of (i) seventy per cent (70%) of the total Adjusted Gas Quantity produced from the Contract Area and (ii) the quantity of Cost Gas with a value equal to the remaining outstanding Recoverable Contract Expenses.
- (b) Contract Expenses which pursuant to the provision of Annex D of the PSA
 - (as amended herein) may be recovered from Cost Gas are hereinafter referred to as "**Recoverable Contract Expenses**". Such expenses may be recovered as from the date they have been incurred. To the extent that in any Calendar Year the Recoverable Contract Expenses exceed the Cost Gas available under Article 9.1 (a) of this Addendum, the unrecovered excess shall be carried forward for recovery in the next succeeding Calendar Year and, to the extent not then recovered in the subsequent Calendar Year or Years.
- (c) Where, additionally, Joint Operations have been established:
 - (i) No Contract Expenses incurred by TPDC pursuant to Article 8.1 of this PSA Addendum shall be recovered from the Cost Gas unless there is production from a Development Area in respect of which there are Joint Operations;
 - (ii) The available Cost Gas shall be applied to the Contractor (which for the avoidance of doubt includes TPDC once it has exercised its rights pursuant to Article 8.1 of this PSA Addendum):
 - A. first to recover Operating Expenses;
 - **B.** after recovery of Operating Expenses any excess Cost Gas available for distribution shall be applied to recover Exploration Expenses;
 - **C.** after recovery of Exploration Expenses and Operating Expenses any excess Cost Gas available for distribution shall be applied to recover Development Expenses;
 - **D.** any unrecovered Contract Expenses shall be recovered out of the Cost Gas available in the next succeeding Calendar Year or Years in the same manner as set out herein; and
 - E. any remaining Cost Gas once all recoverable Natural Gas costs have been paid will be put into the Profit Gas pool and distributed to the Contractor (which for the avoidance of doubt includes TPDC once it has exercised its rights pursuant to Article 11.1 of this PSA Addendum) and TPDC (as the recipient of the Profit Gas) via the Profit Gas system as described in Articles 11.1 (e) and (f) of this Addendum.

- (d) Subject to the limitations set out in Article 11.1(a) of this Addendum, the quantity of Cost Gas which the Contractor and, if Joint Operations have been established, TPDC actually require and shall be entitled to in any Calendar Quarter will be established with respect to Cost Gas on the basis of the fair market price agreed by the Parties (which for the avoidance of doubt is determined, for any Gas Commercialization Project.
- (e) Profit Gas
 - (i) For the purpose of sharing Profit Gas between the Contractor and TPDC, the balance of Natural Gas available in any Calendar Quarter shall be divided based on tranches of daily total production rates (MMscf per Day) in all producing fields in the Contract Area.
 - (ii) The tranches of production referred to in Article 11.1 (f) of this Addendum shall be specified in terms of average daily production rates. The average daily production rates shall be determined for each Calendar Quarter and shall be calculated by dividing the total Adjusted Gas Quantity produced and saved from the Contract Area during any Quarter by the total number of days during which Natural Gas was produced in such Quarter.
 - (iii) The quantity of Cost Gas required to satisfy Recoverable Contract Expenses in any Calendar Quarter shall be allocated to each of the applicable tranches of production in the same proportion as the total production in each tranch of production bears to total production from the Contract Area.
- (f) After allocation of Cost Gas for the recovery of Recoverable Contract Expenses in accordance with Article 11.1 (e) of this Addendum, for any gas commercialization project, the resulting Profit Gas shall be shared in accordance with the tranches set out in the table below in accordance with the ratio of the quantity of Natural Gas per MMscf:

Tranches of daily total Production rates in each of the Contract Areas (MMscf per Day)		TPDC Share of Profit Gas	Contractor Share of Profit Gas
0	249.999	50.0%*	50.0%*
250	499.999	55.0%*	45.0%*
500	749.999	60.0%*	40.0%*
750	999.999	65.0%*	35.0%*
1000	1249.999	70.0%*	30.0%*
1250	1499.999	75.0%*	25.0%*
1500	Above 1500	80.0%*	20.0%*

XX%* ; is subject to negotiations

(g) With respect to this Article 11.1, Cost Gas and Profit Gas calculations shall be done for each Calendar Quarter and the Natural Gas provisionally shared accordingly. To the extent that actual quantities, expenses and prices are not known, provisional estimates of such data based on the approved Annual Work Programme, Budget and any other relevant documentation or information shall be used. Within sixty (60) days of the end of each Calendar Year a final calculation of

Cost Gas and Profit Gas based on actual Natural Gas quantities, prices and recoverable costs and expenses in respect of that Calendar Quarter shall be prepared and any necessary adjustments to the Natural Gas sharing shall be agreed upon between the Contractor and TPDC and made as soon as is practicable.

- (h) Subject to the provisions relating to Domestic Market Obligation of the Contractor, the Contractor will be free to commercialize any Natural Gas received by the Contractor pursuant to Article 11.1 of this Addendum and to retain the proceeds of the sale of such Natural Gas outside the United Republic of Tanzania.
- (i) All liquids, including Well Head Liquids and Gas Plant Liquids, shall for the purposes of cost recovery and allocation of profit hydrocarbons be classified as oil and the cost oil and profit oil splits set out in the PSA shall be applicable to such liquids. Such liquids shall not be taken into account when calculating the Price Class Threshold.

Article 12. Valuation of Natural Gas

The provisions of Article 12 (Valuation of Crude Oil) of the PSA shall also apply to Natural Gas operations and for the purposes of this Clause all references to "Crude Oil" therein shall be read as including "Natural Gas".

Article 14. Taxation and Royalty

Article 14(c) of the PSA shall be replaced entirely by the following provision: "TPDC shall discharge its obligation to pay royalty under Section 81 of the Act, in respect of Natural Gas obtained from the Contract Area, to the Government in an amount equal to the minimum share of Profit Gas received by TPDC pursuant to Article 11.1 (f) of this Addendum in respect of Profit Gas, being equivalent at all times to five per cent (5%) of total Adjusted Gas Quantity, by payment of a cash equivalent of such quantity, based upon the Gas Price."

Article 19. Title to Assets

The provisions of Article 19 of the PSA relating to title to assets shall also apply to Natural Gas Operations and for the purposes of this Clause all references to "Cost Oil" therein shall be read as including "Cost Gas".

Article 21. Site Cleaning and Abandonment

The provisions in Article 21 of the PSA relating to site cleaning and abandonment of assets and facilities shall also apply to all Natural Gas Operations except that for the purposes of this Clause all reference to "Cost Oil" therein shall be read as "Cost Gas".

Article 26. Force Majeure

The provisions in Article 26 of the PSA relating to site cleaning and abandonment of assets and facilities shall also apply to all Natural Gas Operations except that for the purposes of this Clause all reference to "Cost Oil" therein shall be read as "Cost Gas".

Article 28. Consultation and Arbitration

The provisions in Article 28 of the PSA relating to site cleaning and abandonment of assets and facilities shall also apply to all Natural Gas Operations except that for the purposes of this Clause all reference to "Cost Oil" therein shall be read as "Cost Gas".

Annex D: Accounting Procedure

Annex D of the PSA shall be amended as follows:

For the purposes of this Clause all references in Annex D to "Profit Oil/" shall be read as "Profit Gas" and all references to "Cost Oil" therein shall be read as including "Cost Gas"

The second sentence of paragraph 1.4(a) of the existing Annex D of the PSA shall be amended to read as follows: "Metric units, Barrels and standard cubic feet (scf) shall be employed for measurements required under the PSA and this Annex D."

The references to "Cost Oil" in paragraph 11.3 of Annex D shall be replaced with "Cost Petroleum".