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## 莫桑比克石油天然气产业中上游营业活动

### (i) 概述：探索和经济持续政策

首次在莫桑比克发现天然气可以追溯到1961年，地点是潘德（Pande）。随后又在Buzi和泰玛尼（Temane）发现了气田。这些气田最初都没有提交商业开发声明，一直处于项目研究阶段，直到2000年，来自南非的著名的Sasol公司发表承诺，在25年内购买1亿2千万兆焦的天然气，用于自给和在南非商用。该承诺意味着潘德（Pande）和泰玛尼（Temane）气田开始投入生产，并且建成一条从泰玛尼（Temane，位于伊尼扬巴内省）至塞康达（Secunda，位于南非）的865千米的输油管道。这使得莫桑比克成为整个南非最大的天然气生产国和出口国。

根据2009年11月2日公布的莫桑比克天然气市场发展战略规划的数据显示，潘德（Pande）和泰玛尼（Temane）气田的储备量为3.59万亿立方英尺，且极有可能达到4.63万亿立方英尺。同时，在Buzi和伊尼扬巴内省以及潘德（Pande）和泰玛尼（Temane）气田附近，也有气田存在的可能。这些探索主要集中在离岸的第16和第19区，位于巴扎鲁托湾西北边，目前正在评估阶段。预计2011年9月，莫桑比克中部的索法拉海岸天然气勘察作业平台建设项目将进行公开招标。

而依据2009年6月8日的石油开发特别许可证战略规划指出，位于莫桑比克的沉寂盆地地区极有可能存在多处油田。莫桑比克盆地面积30万平方公里，平均每8000平方公里就有一个陆地油井，每1万7千平方公里就有一个海上油井，其油田较鲁伍马盆地（Rovuma basin，面积为6万平方公里，油井分布密度为平均每1万7千平方公里一个陆地油井，没有海上油井）多出不少。

莫桑比克能源产业还有巨大的潜力可以挖掘，基本国策就是要鼓励碳氢化合物的开发、评估和生产项目。这有助于降低该国的贫困水平，特别是通过完成电网基建项目解决人口中心的供电问题，以及发展本国石油精炼产业。这也有助于避免该国过高的燃油进口，因为过高的燃油进口已经对国家贸易平衡产生了不良影响。莫桑比克寻求能源多样化的努力以及其他政策的实施也符合南非国家发展共同体的要求。

所以，现在很明显，莫桑比克想要逃离“自然资源的魔咒”——经济学上叫“荷兰病（Dutch Disease）”——由于过分依赖单一经济活动发展国家经济而引发的问题，通常是自然资源，因为该类活动利润高而成本低，但对其他行业的发展极为不利。

莫桑比克在鼓励发展自然资源产业竞争力的同时，也利用能源产业的发展带动其他各经济领域的发展，从旅游业到基础设施建设，希望通过投资者和市场管理当局的努力发展可持续经济。

2010年10月，马拉维公开进行国际招标建设一条始于索法拉省（Sofala）的贝拉港（Beira port）的石油管道，以保证该国每年9亿公升的燃油供给。

该项目预算达到1亿4千美元，除了这条从贝拉港（Beira port）到马拉维南部恩桑杰地区的石油管道外，还包括在该国各地建设多个油库。招标内容还包括工程可行性研究、经济可行性研究和环境评估。该石油管道建成后，马拉维的燃油储备将从现在的10到15日增加到3个月。

2010年，中石油子公司——大庆钻井工程公司成功竞标莫桑比克1千5百万美元的天然气钻井工程。随后，莫桑比克政府宣布由美国ANADARKO公司在鲁伍马发现油田，但该油田因多孔性还不适宜商业开发。

莫桑比克政府针对最近石油和天然气资源发现，颁布第56/2010号2010年11月22日法令石油天然气作业环境保护规则，规定了石油天然气作业环境影响测评程序，以及环境保护、控制、减轻污染和恢复环境措施。根据该法令，罚款最高可达到54,200美元。该法令既满足了环境保护的需要，又在近年自然资源作业增多的情况下，提高了管理效率。

2011年2月，一位政府高官说近两年莫桑比克将就石油天然气探测项目向国际公司进行招标。上一次国际招标时2009年10月，招标项目是探测中部索法拉省。天然气的年产量将会随着潘德（Pande）和泰玛尼（Temane）气田的进一步投资和扩大探测范围而上升，从1.2亿千兆焦上升到1.83亿千兆焦。

下面，我们简要描述法律对进入石油天然气行业的程序和要求。

### 二、权利持有人、经营活动和程序

根据第3/2001号2001年2月21日法律，石油产业营业活动的界定，限定在中上游营业活动，排除了石油精炼、工业使用、分销和石油产品的销售等下游营业活动。该法受2004年8月20日通过的24/2004号法令石油产业规章的限制。

莫桑比克领土、领水、大陆架及经济专属区内的石油都归莫桑比克国家所有。莫桑比克通过政府相关部门和机构对进入该国石油领域进行控制。

**国家：**国家保留参与石油产业活动的权利，甚至包括参与商业开发，且无需支付参与经营活动的相关费用()。而国家参与石油产业活动的依据是与相关权利人的合同约定。

**相关权利人：**任何莫桑比克国民或外国实体，只要符合莫桑比克相关法律法规的要求，能够证明自己有足够的技术和资金投资石油产业，就可以有权在莫桑比克开展石油开发项目。当然，莫桑比克国民在分配开采区域方面有优先权，如果外国法人与莫桑比克国民投资成立莫桑比克法人，也可以享受同等待遇。

值得注意的是，对于莫桑比克法人的认定，不仅仅是其成立需符合莫桑比克法律，营业总部位于莫桑比克境内，而且50%以上的股份需由莫桑比克国民持有。

**营业活动和法定程序：**石油作业需符合莫桑比克特许证合同的规定，分为（i）勘探，（ii）评估和生产，（iii）铺设石油天然气管道。特许证原则上是通过公开招标的方式颁发，在石油产业规章明确规定的特殊情况下，可以通过即时或直接谈判颁发特许证。

（i）**勘探：**根据勘探合同，权利人可以在合同约定的区域内，通过利用领空、空间、土地或其他介质进行地球物理学、地球化学、古生物学、地质学地志学研究，开展初步勘探并进行评估。合同期限最长两年，可在地表和海底钻井（最深100米）。权利人在勘探合同到期六个月之前表示愿意继续履行评估和生产合同的，享有优先权。矿产资源部是该类合同的审批机关。权利人需向矿产资源部递交申请书，申请书的内容包括申请人的基本信息，国籍，勘探作业区域的范围和确认，勘探作业活动的性质及对合同条款的建议。

（ii）**评估和生产：**评估和生产合同项下的评估开采权是排他性的——原油、天然气、其他烃类化合物或其他副产品或从沥青性粘土、沙中提炼获得的产品。同时，该合同还包含石油天然气管道的铺设和管理权，此权利不具备排他性。但如果可以以市场合理价格使用石油天然气管道系统。

部长会议是评估和生产合同的审批机构。

合同期限为8年，权利人可向矿产资源部申请延展期限，但需要向国家石油中心提交材料加以说明。延展期限申请可基于以下理由：a）当合同到期时，权利人的钻井或评估、测评作业进展很好，可以适当延长期限以便完成工作、得到检测结果，通常延长期限不超过一年；b）在评估、生产阶段新发现油田或气田，而权利人已经完成合同项下的义务，但表示愿意对新发现的油田或气田进行评估或商业评估的。

新发现油田的，则合同延长期限最多为2年，新发现天然气气田则可延长8年。具体时长，视评估工作或商业评估工作的复杂程度来决定。如果是在评估和生产合同的最初阶段或者是在延展期间声明商业发现，则需在发表声明一年内，递交相应的发展规划。

（iii）**石油天然气管道：**当评估和生产合同没有涉及管道铺设作业的时候，权利人可依据该类合同铺设石油天然气管道并经营维护。注意，相应的发展规划是该类合同的组成部分。开发生产期限是30年，从发展规划文件获批之日起起算。

**合同转让：**合同转让无论是进行部分权利义务的转让还是全部权利义务的转让，都需经过矿产资源部的批准，再依据相应的合同规定来进行。

**担保：**银行担保或权利持有人的母公司的保证书，其担保额需达到能完成最低合同义务的要求，以保证完成特许证要求的合同义务。

**保险：**经营者需根据相关法律就设备损坏，污染损坏，第三人责任，事故后的清理工作，员工工伤等情况进行投保。

**土地使用权及地役权：**权利持有人应当请求获得相关合同项下的石油作业地区的土地使用权，如果有需要，也可依法请求地役权以便其石油作业的进行。

特许合同终止：上述合同终止情形：

- ( i ) 特许证持有人请求解除合同：特许证持有人完成了合同项下全部内容，达到最低义务要求的，可在合同到期前3个月向矿产资源部提出解除合同。在开发生产领域（石油天然气管道），解除合同的条件有所不同。如果解除合同是在商业生产开始以后，则需至少在合同到期前一年，向矿产资源部提出；
- ( ii ) 单方终止合同：矿产资源部通知特许证持有人终止合同的，合同立即终止。终止合同的理由有：合同履行不符合特许合同目的的，特许证持有人破产的，违法行为被罚款处罚后仍然不符合法律法规要求的，实质违约的，重大故意违反实际运营人责任的，营业活动因实际运营人的原因或特许证中列明的其他原因长期停止的；
- ( iii ) 事实放弃：特许证持有人在三个月或更长时间内没有正当理由未能开展石油营业活动且的，特许合同视为终止，自始无效。

当特许合同基于以上情况解除后，除非合同中另有约定，国家将无偿取得所有财产。

另外还有必要提及停运规划的递交。该规划在征求国家石油中心的意见后，至少应在生产经营活动期限结束的前两年，递交矿产资源部报批。该规划内容需包含停运后的环境影响评价报告。石油作业活动要符合油田作业的国际标准（包括对安全、环境影响和经济效率等方面的要求）和相关环境的法规。

其中还涉及到环境保护，石油作业中对安全健康保护的严格要求，以及燃除天然气的条件（已没有其他办法能确保开发的商业性）。

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本通讯旨在向客户及同事介绍一些普遍和抽象的概述。它不应该被用来作为作出决策和专业法律意见的基础。本通讯的内容未经作者明确统一不得复制部分或全部内容。如果需要有关此主题的详细信息，请联系：Luis Sáragga Leal (luis.saraggaleal@plmj.pt) or Manuel Santos Vítor (manuel.santosvitor@plmj.pt).

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## OIL AND GAS UPSTREAM AND MIDSTREAM ACTIVITIES IN MOZAMBIQUE

### (i) OVERVIEW: DISCOVERIES AND POLICIES OF ECONOMIC SUSTAINABILITY

The first discovery of natural gas in Mozambique goes back to 1961, in Pande. This was followed by the discovery of the Buzi and Temane fields. These discoveries were declared as not commercial, a number of projects having been studied up till the year 2000 when the well-known South African company, Sasol made a commitment over 25 years to buy 120 million GJ /a of natural gas for its own consumption and commercialisation in South Africa. This commitment meant that it became viable to produce natural gas from the Pande (2008) and Temane (2004) fields and to build an 865 km gas pipeline between Temane - in Inhambane Province - and Secunda in South Africa. This enabled Mozambique to become Southern Africa's biggest producer and exporter of natural gas.

According to the data provided in the Strategic Plan for the Development of the Natural Gas Market in Mozambique published on 2 November 2009, the value of the natural gas proven reserves in Pande and Temane, is 3.59 TCF and the probable reserves amount to 4.63 TCF (in the same fields). In the meantime, other discoveries with probable reserves have also been made in the Buzi and Inhassoro fields and in the areas around the Pande and Temane fields. The discoveries made in offshore blocks 16 and 19, located to the north west of the bay of Bazaruto, are still being evaluated. A public tender for the construction of a platform supporting the prospection works for natural gas, along the coast of Sofala, in central Mozambique, and Inhambane, further south Province, is foreseen to be launched on September 2011.

The Strategic Plan for the Concession of Areas for Petroleum Operations published on 8 June 2009 states that the sedimentary basins in Mozambique have areas with great potential for the occurrence of oil. The Mozambique basin which is 300 000 km<sup>2</sup>, has a density of around one well per 8 000 km<sup>2</sup> onshore and one well per 17 000 km<sup>2</sup> offshore, while the Rovuma basin, which is 60 000 km<sup>2</sup> has a density of one well per 17 000 km<sup>2</sup> onshore and none offshore.

Mozambique's great potential is still to be exploited and one of the foundations of the country's energy sector strategy is to incite investment in projects of exploration, appraisal and production of hydrocarbons. This will help to keep on lowering poverty levels in the country specifically through the creation of infrastructures for the supply of energy to population centres and also by seeking to develop the country's refining industry. In this way it will be possible to avoid the high levels of fuel imports which, as has been seen, have a negative effect on the country's trade balance. Mozambique's actions seek to diversify the energy system and the implementation of many other strategic measures will help in meeting the objectives of the Southern African Development Community (SADC), of which it forms part.

So it is clear that the State intends to escape the "natural resources curse", also known in economic terms as the "Dutch Disease" – a problem which results from the growing dependence of the economy on one single activity, usually related to natural resources, because this activity is more profitable and has a lower cost, but leads to a failure to invest in the other areas.

The Mozambican State is encouraging the race for its natural resources while, at the same time, imposing sustainability through contributions from investors and market agents from the various economic sectors, from tourism to infrastructures, passing through the energy components used in industry. Within this policy, the Mozambican State awards preferential rights to Mozambican legal entities and foreign legal entities with Mozambican associates.

On October 2010, Malawi launched an international tender for the construction of an oil pipeline starting from Beira port, in Sofala Province, to guarantee the supply of 900 million litres of fuel, per year to the country.

Budgeted at 140 million dollars, the project provides, in addition to an oil pipeline between Beira's port and the Nsanje district, in southern Malawi, for the construction of fuel depots in various parts of the country. The tender also included the execution of engineering, economic viability and environmental studies. With this pipeline, Malawi foresees to increase their fuel reserves for 3 months, against the actual 10 to 15 day reserves.

The Chinese company Daqing Oilfield Drilling Engineering - a subsidiary of PetroChina -, won a tender budgeted in 15 million dollars, in 2010, to perform natural gas drillings in Mozambique. Concomitantly, the Mozambican government announced the discoveries of oil in Rovuma, by the American company ANADARKO, although these discoveries were deemed as non-commercial due porosity characteristics.

In the wake of the recent oil and gas discoveries, the Mozambican government approved, by means of Decree 56/2010, of 22 November 2010, the Environmental Regulation for oil and gas operations, setting forth the procedures for environmental impact evaluations resulting from oil and gas operations, as well as environmental measures for prevention, control, mitigation and rehabilitation. Applicable fines may reach 54.2 thousand US dollars. This instrument serves the need for environmental safeguard as well as to promote a correct and efficient management of the natural resources, within the context of growth of the oil and gas operations in recent years.

In February 2011 a senior government official stated that Mozambique will solicit bids for oil and gas exploration from international firms within the next two years, the last international tender having been issued in October 2009, for exploration of the referred central province of Sofala. Natural gas annual production is foreseen to be increased, through further investment and expansion of the Pande and Temane natural gas explorations, from 120 million GJ to 183 million GJ.

Below, we move on to a summary description of the procedures and requirements for access to the oil and gas sectors, taking into account the widening of the existing applicable legislation.

## II – HOLDERS, ACTIVITIES AND PROCEDURES

Law no. 3/2001 of 21 February applies to petroleum operations which are defined by the exclusion of oil refining processes, industrial use and distribution and sale of oil-based products and are thus limited to upstream and midstream activities, without differentiation and exclude downstream activities. This Law is regulated by the Petroleum Operations Regulation approved by Decree 24/2004 of 20 August.

Access to petroleum operations is controlled by the State through its institutions and public law bodies as it is the owner of all petroleum resources located in the soil or in the subsoil, in inland waters, territorial waters, the continental shelf and Mozambique's exclusive economic zone.

The State: it reserves the right to participate in petroleum operations in which any legal entity is involved and is, even up to its decision to participate in a commercial discovery, exempt from payment of any costs of the said operations (carried forward interest scheme). The decision on participation of the State in any given project may be made at any stage under the terms to be established by contract between the State and the holder(s) of the rights.

Rights-holders: any Mozambican or foreign legal entity that can demonstrate that it has the technical competency and adequate financial resources to effectively carry out the operations, according to the requirements set out in the applicable legislation and regulations may hold the right to carry out petroleum operations. Mozambican legal entities enjoy the right of preference in the allocation of blocks, as do foreign legal entities associated with Mozambican legal entities.

It should be noted that for the purposes of meeting the requirements to qualify as a Mozambican legal entity, it is not enough for a company to be incorporated under the laws of Mozambique with its operating headquarters in the country. More than 50% of its share capital must be held by a Mozambican legal entity.

Activities and procedures: Petroleum operations covered by the law are subject to the prior celebration of a concession contract with the Mozambican State and are divided into (i) exploration, (ii) appraisal and production and (iii) oil and gas pipelines. The concession is awarded, as a rule, through public tender and by simultaneous or direct negotiation in cases exclusively provided for in the Petroleum Operations Regulation.

- (i) Exploration: the exploration contract grants the right to carry out preliminary exploration and appraisal work in the area covered by the contract, through aero and space, land and other surveys including geophysical, geochemical, paleontological, geological and topographic studies. This contract is made for a maximum period of two years and allows drilling up to 100 metres below the surface or the sea bed. This contract gives the right of preference to the holder of the exploration right in the execution of the contract for appraisal and production on condition that the holder makes their intention to exercise the right known at least 6 months before their right expires.

The Minister of Mineral Resources has the authority to approve these contracts and the award of this right is made through an application addressed to the Minister containing information about the applicant including its nationality, the identification of the area in question, the description of the scope and nature of the activities and the proposal for the terms and conditions of the contract to be executed.



- (ii) Appraisal and Production: this contract awards the exclusive right to petroleum appraisal and production – crude oil, natural gas and other hydrocarbons produced or capable of being produced from them or from bituminous clay and sand. This contract has the unusual characteristic of also including the non-exclusive right to build and operate oil and gas pipeline systems for the purposes of transporting crude oil or natural gas produced in the area of the contract, except when there is availability for access to an already existing system under commercially acceptable terms and conditions.

The Council of Ministers has the authority to approve the execution of appraisal and production contracts.

The right is awarded for a period of 8 years, except when an application for an extension is made to the Minister of Mineral Resources to be presented to the National Petroleum Institute indicating the area that is subject to extension.. The application for an extension may be based on the following grounds: a) if, at the end of the period of appraisal and production, the holder of the right is carrying out drilling works or testing an appraisal well, a time extension may be given for the period necessary to finish the works and evaluate the results. This period may not exceed one year, or b) a discovery is made during the appraisal and production phase, if the holder of the right has met its work obligations, and makes a commitment to carry out the programme of appraisal or a commercial appraisal of the discovery.

The extension period may be of up to two years for a discovery of crude oil and up to eight years for a discovery of natural gas. The period will depend on the complexity of the work involved in conducting the appraisal programme or a commercial evaluation of the discovery. If a commercial discovery is declared during the initial appraisal and production period or of any extension, a Development Plan must be submitted within a year of the date of the declaration of the commercial discovery.

- (iii) Oil and Gas Pipelines: this contract grants the right to construct and operate oil and gas pipelines for the purpose of transporting crude oil or natural gas when these operations are not covered by an appraisal and production contract. The contract must be accompanied by the respective Development Plan which is an integral part of the contract. The maximum period for development and production is 30 years from the date of approval of the respective development plan.

The Council of Ministers has the authority to approve the execution of oil and gas pipeline contracts.

The holder of the said right is under an obligation to allow third party access, transmitting the oil of third parties without discrimination and on reasonable commercial terms, as long as there is capacity available in the pipeline and/or there are no unsolvable technical problems that prevent the use of the oil or gas pipeline system to satisfy the third party requirement. This access obligation also applies to any holder of appraisal and production rights that has included an oil and gas pipeline system in their project under the Development Plan submitted following the commercial discovery declaration.

Assignment of rights: the transfer of the rights and obligations of the holder, even if only partial, must be governed by the respective contract and be authorised in advance by the Minister of Mineral Resources.

Guarantee: a bank guarantee or letter of guarantee from the parent company, in an amount equal to the minimum work obligations, must be rendered in order to guarantee the contractual duties arising from the concession contact.

Insurance: the operator must take out insurance in accordance with the applicable legislation, specifically with coverage for damages to the facilities, damages caused by pollution, third party liability, removal of scrap and cleanup after accidents and work accidents of employees involved in the operations.

Right to use and benefit from land and establishment of easements: the holder must request a right to use and benefit from the land to carry out the petroleum operations for a period compatible with that established in the respective contract. The holder may require the establishment of rights of way for access to the locations where the petroleum operations are carried out, in accordance with the lands legislation.

Termination: the concession contracts described above may be terminated for the following reasons:

- (i) Total Relinquishment of the contract area by the holder to request to the Minister of Mineral Resources no later than three months before the term of the respective contract, on condition that the holder has met all the work and minimum expenditure commitments as set out in the contract. These conditions for termination do not apply in the case of a development and production area (oil or gas pipeline system). Here, the application to the Minister must be made at least one year in advance if it is made after commercial production has begun;
- (ii) Unilateral Termination by a communication from the Minister of Mineral Resources to the holder of the right with immediate effect. Such rescission may be based on deviation from the objective of the concession, insolvency of the concession holder, failure to comply with the applicable laws and regulations after earlier sanctions have proved to be ineffective, serious material breach of the contract clauses, serious and wilful breach of the operator's duties, prolonged interruption of activity imputable to the operator or for any other reason established in the respective concession contract.; and



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(iii) Abandonment, if the concession holder ceases to carry out petroleum operations in the area without due cause for a minimum period of three months, this results in the termination of the contract and in the area being declared as unoccupied.

When a concession ends in one of the circumstances set out above, the assets will revert to the State for no consideration, unless the contrary is contractually provisioned.

It is noteworthy to mention the requirement to submit a Decommissioning Plan, in consultation with the National Petroleum Institute, at least two years before the date established for the end of the production operations. The plan, which must be submitted for approval by the Minister of Mineral Resources, includes an evaluation of the environmental impact of the activities of closing and abandonment. The petroleum operations must follow both good international practices for oil fields and the applicable environmental legislation.

Relevance is given to issues of environmental protection and health and safety in petroleum operations which follow strict parameters, natural gas flaring being only permitted in cases where there is no alternative that ensures the commerciality of the exploration.

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