MOZAMBIQUE -- DRAFT MINING TAX LAW

COMMENTS

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June 2013

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MOZAMBIQUE DRAFT MINING TAX LAW

Comments

EXECUTIVE SUMMARY

The purpose of the consultant's study was to review the draft mining tax law of Mozambique and to comment on it from various points of view. The draft mining law was found some minor definitional ambiguities and a number of ambiguities in the body of the law. It noted, but did not calculate, the effect of, other taxes such as the surface tax and labor taxes because the study was conducted under a tight schedule. It also observed that a sophisticated tax analysis, especially as to maximum cumulative taxes, would require computer simulations.

The section on reintegration (meaning capitalization) and depreciation were found confusing and revealed an apparent preference against deducting operating expenses and the law reveals a questionable preference against allowing losses for abandoned exploration activities. The consultant considers that extensive interpretative regulations should be issued soon after enactment in order to assure transparency.

The law was found to be too complicated and to be in need of streamlining. The largest flaw is that high cost production could lead to high tax rates; this needs to be cured or else producers will only select cheap and easy projects and will be induced to abandon them too early. It may, however, be that that is what you want.

The law was also found difficult to administer, largely because of the need for difficult valuations of production instead of using actual sale prices.

There are many recommendations, some of which track the comments on the draft petroleum law, principally:

1. Convert the Mineral Resource Tax into a pure royalty that treats the government as an owner of the share of production that the royalty percentage represents, and base the royalty on actual sales minus transportation costs, not imaginary ones. This will keep the royalties out of the income of the producer, thus simplifying and making fairer the computation of the corporate income tax. The royalty rate was considered within international norms and noted it is a good feature so as to assure revenue even if the producer loses money from production.
2. The income tax was generally accepted and the rate was approved as being within international norms.
3. The concept of an increased tax based on discounted was approved, but with a preference for using a cash flow analysis based on long-standing accounting practices used in the business world which are more realistic and faithful to the purpose behind the tax increase.
4. Thin capitalization, which results in denial of interest expense deductions, should be based on equity value, not book values. Doing this will bring the thin capitalization rules into line

with the purpose of those rules, namely to disallow deductions for interest expenses with respect to debt that the marketplace would not provide.

5. Intercompany pricing rules should be clarified as to the government's authority. Under the present law the tax authorities can make any adjustments they want to, which can lead to capricious results. The recommendation is that in the event of a dispute over a government adjustment the adjustment will stand if it is not arbitrary and capricious.
6. Bonus payments were generally approved, subject to the comment that the government should consider the risk of not attracting smaller innovative producers and the impossibility of knowing potential Concessionaires that are discouraged and therefore never materialize.
7. The local content requirement was understandable, but was considered a possible source of conflict.
8. Revenues should go to a separate formal government fund and be established and regulated in accordance with the Extractive Industries Transparency Initiative. The information concerning financial flows in and out of the fund should be readily accessible to the public and the press
9. In order to facilitate information sharing with other governments and to facilitate intercompany-pricing issues multi-laterally, the government should seriously consider entering into further bilateral tax treaties. It was also suggested that it consider entering into an existing multi-lateral tax treaty (The Convention on Mutual Administrative Assistance in Tax Matters).
10. The consultant considered that a top total tax take was within norms, but only because the Rent Tax applied top rate by reducing the production-sharing quota for the year.
11. The consultant recommended that the Rent Tax be eliminated in favor or raising the corporate income tax by 10 percentage points. This would avoid complicated calculations and the administration of a separate tax regime.
12. The consultant recommended enactment of a branch profits tax to make the withholding tax system symmetrical as between subsidiaries of foreign corporations and branches of foreign corporations operating in Mozambique. This recommendation is in part because the withholding taxes are likely high enough to encourage the use branches to avoid withholding taxes.
13. The consultant considered the timing of revenues to be generally appropriate, noting that the tax system encourages investments in rich fields, thereby encouraging early development of infrastructure for later less dramatic projects and provides the government with significant bonus.

I. Introduction

The objective of this report is to take a look at, and comment the draft tax law for oil and gas prepared by the Government of Mozambique (GOM). The GOM requested CTA – Confederation of Business Associations of Mozambique to produce comments to the draft law. CTA, due to the complexity of such draft law, requested assistance from SPEED-Support Program for Economic and Enterprise Development, a USAID-financed project. SPEED hired Professor Richard Westin to prepare the detailed comments that are the report.

The Author

Richard A. Westin is a professor of law at the University of Kentucky, where he has the title of Distinguished University Professor. He teaches courses on the federal income taxation of individuals, partnerships and corporations, international taxation and taxation of natural resources. He has been a consultant to the Law Department of the World Bank and to several countries, and drafted the mining laws of the Russian Federation. His major books include:

- Environmental Tax Initiatives and International Trade Treaties: Dangerous Collisions (Kluwer Law International, 1997);
- Mineral Properties Other Than Oil and Gas — Exploration, Acquisition, Development and Disposition (Portfolio 601), Bureau of National Affairs (2008);
- Mineral Properties Other Than Oil and Gas — Operations (Portfolio 603), Bureau of National Affairs (2008); and
- Federal Income Taxation of Business Enterprises, 4d Ed, with S. Parejo (New Mexico) R. Beck (New York) (4th Ed.VandePlas 2012).

He holds a B.A. from Columbia College, an M.B.A. from the Columbia University Graduate School of Business Administration, and a J.D. from the University of Pennsylvania Law School.

This memo consists of nine parts:

1. Introduction
2. A discussion of economic principles and tax policies applicable to the mining industry
3. Some comments on the draft mining law
4. A technical appraisal of the draft mining tax law
5. Analysis of tax burden
6. A summary of proposals for change
7. Timing of revenues
8. Best Practices
9. Some suggestions as to further work to be done.

There are also various Appendices at the back.

The author understands that the report should take a look at, and comment on this draft law. The object is a translation from Portuguese and it may be that many of the comments arise from the fact that it was translated to English. The next heading is repeated in the comments on the draft oil and gas law. I have only glanced at other taxes because of time constraints. These include the surface tax, which struck me as not a great burden, and the municipal tax, which seems to add a 1.1% profit tax load, according to the IFC at http://www.doingbusiness.org/data/exploreeconomies/mozambique/paying-taxes/ . There is also a

labor tax, apparently at 4% of wages. There are also government fees that companies will face. I have not included the municipal taxes or fees, so the tax burden described below is somewhat understated.

II. Economic Principles and Tax Policies Applicable to the Mining Industry

a. Basic Principles

This section attempts to explain "international norms" in the context of the basic principles behind what a mining law (including the tax component) should be trying to achieve. These basic principles are behind the intent and direction of many international jurisdictions. The intent would then be to assess how well the wording and provisions of the Mozambique law can drive the economy on a sustainable development path.

It is often expressed that there is no agreed framework for sustainable development, and this has been in the context of many national and international discussions among stake-holders in the mining industry. Nevertheless, the concepts of sustainable development have been introduced in the field of “welfare economics”. These concepts should underlie the actions, certainly of government, but also of anyone else who is a stakeholder in mining industry development. In regard to production activities, through all the life-cycle from exploration to production and eventual facility closure, the intention should be to arrive at a win-win situation among all the legitimate stake-holders, in relation to each stake-holder's prior defined rights.

Before considering whether a project should go ahead, the rights of all stake-holders have to be defined. Then a project may go ahead if it produces not only private benefits through the rate of return[1] to investors and employment opportunities for employees, but also in a social sense that it is a worthwhile project that does not go ahead at the (negative) expense of others in society.

Essentially, the project should go ahead in a private and social sense, if there are no net losers in the endeavor. It doesn’t necessarily mean that there are no negative impacts of the project, but solely that the negative impacts are compensated - so that if the losers lose, but are compensated by the winners, and if the winners have more than enough left over to induce them to continue their activity, then the outcome really is a win-win project, and it should be allowed to go ahead. That is the basic philosophy. If a project fails this test and the negative impacts outweigh the benefits, then the project is not socially viable.

The government role is to determine what other sorts of property rights should be upheld - for example, innocent bystanders from the point of view of “rights” to air and water quality, health, and other aspects. Governments have a role and responsibility to set safe levels. This

[1] The author does not have information sufficient to run internal rate of return analyses. In any case, such analyses by outsiders to companies depend on a great deal of conjecture and are therefore unreliable. Nor can I do more than guess at operating companies’ cost of capital and how they weigh for risk. Other approach includes net present value (which is more common) and payback period. For a survey of methods used by South African mining companies, see African Journal of Business Management Vol.6 (32), pp. 9279-9292, 15 August, 2012 Available online at http://www.academicjournals.org/AJBM, DOI: 10.5897/AJBM12.747, ISSN 1993-8233 ©2012 Academic Journals

argumentation leads to the conclusion that the project costs should include all external costs, so that 'rent' is after such costs - and taxation has to be out of this net notion of 'rent', i.e., government should not tax so high as to deny the project the ability to meet its payments to negate any damaging externalities caused by the project.

Moreover, there is a strong preference on the part of host governments to eliminate 'rent' so that the operator does not get an unjustifiable premium for its investment in money and effort. Conversely, the operators of proposed projects want certainty that they can earn at least their cost of capital (or similar base 'hurdle rate') plus a premium for the various risks they perceive, stated as an addition to the minimum acceptable rate of return. Just what a particular operator's hurdle rate is tends to be a closely guarded secret.

b. Principles of sound tax policy

The following paragraphs describe internationally accepted standards of tax policy:

Revenues. The first issue is ordinarily the adequacy of the tax as a revenue source. Clearly, taxes are the foundation of government operations. The tax should also be stable as a revenue source, with no adverse impact on steady, noninflationary economic growth.

Fairness. The second tradition issue is the perceived fairness of the tax. This is not relevant in the oil and gas sphere, except that it is of course unfair to change the rules retroactively, which Article 127 of the Constitution of Mozambique wisely prohibits. From the business taxpayer's perspective, the important issue is not fairness, but whether the return on the investment, after taxes and other obligations are met, is sufficient to induce deploying money into the project. Whether the project is viable depends in large part on the perceived country risk, including corruption, legal instability, risk of expropriation. Mozambique is a recent participant whose risks in these regards are difficult for a Concessionaire to appraise.

Another aspect of fairness is fiscal impact, meaning the question of how much a taxpayer gets back from government compared to what it pays in. This cannot be calculated in the case of an oil and gas tax law.

Administrability. A tax ought to be certain, convenient and economical to collect. It may, for example, be that a tax can yield a substantial flow of revenues, but that its complexity is so great that the administrative burdens will largely offset the revenue, thereby making the tax inefficient in a fiscal sense. The burdens may consist of the administrative costs to the government or the compliance costs to taxpayers, or both combined. In addition, tax administration must be honest and competent, because if not, taxation cannot be fair, simple, clear, or neutral.

Because Mozambique lacks an experienced tax administration, administrability is of special importance. This is not to be unkind; the American IRS is unable to fully administer its laws, with the result that there is an enormous annual "tax gap" (the Treasury Department considers that 17% of correct revenues are lost) despite an administration that has existed almost 100 years in a relatively rich country whose Congress intends to collect its taxes and which has a revenue service considered free of corruption.

Transparency. This is a close relative of administrability. The notion is that legal rules -- including tax rules -- should be clear ("transparent") and not, for example, only apparent to taxpayers who can afford to pay for expensive tax advice. The term is of more recent origin and is common in Europe and among economists and tax policy experts generally. The more transparent the law, the safer it is from abuse.

Simplicity. A tax should be free of interpretative doubt, and have obvious meanings and purposes. In addition, it should not invite unintended behavior to defeat the tax.

Neutrality. Taxes should be compatible with a free market. A tax is "efficient" in the economic sense if, per dollar of revenue, it interferes minimally with the free-market decisions that people would make in the absence of the tax. Those decisions -- about how hard to work and how much leisure to take, how much to save and how much to consume, how much of one product to consume compared to another product, how much to spend on education, etc. -- presumably lead to an optimal allocation of resources in a perfect free market and generally should be distorted as little as possible by imposing a tax, unless the distortion or correction is desired as a matter of public policy. The concept seems obvious; in order to prevent the misallocation of resources, including the misallocation caused by tax avoidance (or compliance) practices, the tax system should not conflict with the free market system, unless the conflict is intended.

However, when speaking of taxes (or tax incentives) the subject ceases to be simple. For one thing, the *lack* of a tax may imply a conflict. For example, if harmful pollution generated in the course of manufacturing a consumer good goes untaxed, then the price of the good is too low, and excessive production and consumption will occur, compared to the level of output that would occur if the good bore its full environmental cost. This topic is of great interest to economists.

Macroeconomic Considerations. A related concern is that the tax be consistent with macroeconomic (study of the overall economy) values. That body of learning generally prefers steady growth, high levels of employment and minimal inflation. A well-formed national tax will neither stimulate inflation nor invite a recession. This consideration does not fit well with an oil and gas tax law, which is only one part of a much larger picture, and is not considered further in this report.

Tax Policy in Practice. A serious lack of publicly available empirical data haunts the study of all of these criteria. Tax legislation tends to be born in the cauldron of political debate, influenced by the economic fashions of the day. If systematic follow-up studies of tax legislation do exist, but they are seldom available to the public. On top of that, private influences often prevent governments from releasing much useful data.

A Tax Base That Corresponds to Economic Income. Every tax (meaning a forced payment to a government other than a fee for a service or a penalty) has a *base* to which a *rate of taxation* is applied. Rates are simple; designing bases is complicated. It is important to make certain that the base for a tax on income provides a realistic measure of "income," which involves a *legal* definition, that does not vary too much from "economic income" or else the tax runs the risk of being unrealistic and arbitrary. Economists have derived a definition of income, known as the Haig-Simons definition after its creators. What follows is the Haig-Simons theoretical definition of

income[2] that is much favored by economists and is often used by income tax theorists as a possible standard for reforming an income tax and for keeping tax bases realistic:

> "Personal income may be defined as the algebraic sum of (1) the market value of rights exercised in consumption [for the year] and (2) the change in the value of the store of property rights between the beginning and end of the [year] in question." [3]

The words "market value of right exercised in consumption" are not relevant here because business enterprises – unlike humans -- do not engage in "consumption" except in minor cases such as excessive compensation to executives. Changes in net worth (the value of the entity's assets minus its liabilities) can be negative or positive. For example, if a corporation suspended its operations and lived on its capital for a year, there would be a reduction in its net worth, which would not be offset by an equal amount of personal consumption.

The economist's theoretical definition suffers from the practical problem of valuing the taxpayer's net worth every year. Income tax systems avoid this problem by measuring changes in net worth only when income or losses are *realized* by means of a sale, exchange or other palpable transaction (known as a *taxable event*). Governments' pragmatic refusal to use annual appraisals to measure income flings open the door to having taxpayers decide exactly when to stage their taxable events. That is true in Mozambique and everywhere else.

c. Recommended strategy

Every tax consists of a rate and a base. The base of income taxes is always complicated and subject to change. The changes are expensive for governments and taxpayers to implement. Rate changes are easy. Taxpayers do not honestly believe they are entitled to the same tax rate later as they have now, because they know government revenue needs change so while they will complain about rate increases, their basis for objection is weak unless the increase amounts to confiscation, such as imposing an tax that results in imposing a tax greater than income.

If a country has a highly convoluted tax base, it injures its reputation for good sense and discourages seriously considering a country as a place to invest. Conversely, once a country demonstrates it has a clear set of tax and related laws and implements them fairly and professionally, the country's attraction (and ability to attract fresh Concessionaires and raise its taxes on fresh Concessionaires) increases.

In light of this, the author thinks, viewed from a great distance, Mozambique would be wise to strive to simplify the draft law, plan to administer it fairly and with no risk of corruption, and to raise its rates in the future. To optimize this strategy, present day Concessionaires should obtain only relatively small shares of Mozambique's national treasure of natural resources so as to control the "fiscal cost" of lower earlier year's rates in favor of maximizing overall long-term rates. (In other words, the report recommends starting with smaller projects.) Others take a different view and consider that the last penny of "rent" should be squeezed out from the very beginning, but they too would agree that revenues will be optimized, all things being equal, by straightforward laws and fine administration.

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[2] Their work is in turn based on the work of von Schanz and Davidson.

[3] H. Simons, PERSONAL INCOME TAXATION 50 (1938).

III. Technical Appraisal of the Draft Law

As a preliminary comment, the author speaks some Portuguese, but not enough to use the original Portuguese draft of the law effectively in the rare cases where he cannot understand the English translation. The author considers the translation to be very good.

The general conclusion is that the draft law is in need of substantial revision to make it functional. In addition it is complex.

The author has taken the liberty of inserting the draft of the law and making comments in **red bold** in the vicinity of each segment of the law that seems in need of improvement, sometime in the text, sometimes beneath it and sometimes both.

The author is unsure if a Concession agreement can in any way displace the tax law. This should be clarified. The author's impression is the law prevails and therefore that should be said explicitly in the tax law.

SPECIFIC TAXATION REGIME FOR MINING ACTIVITIES

CHAPTER I

General Provisions

Article 1

(Definitions)

For the purposes of this law, the following definitions shall be considered:

a) **Mining Activity** - operations that include, individually or jointly, exploration, development and extraction, mineral processing and mineral product marketing activities;

b) **Immovable Mineral Assets** - for the purposes of this regime, the mineral deposits and resources, as well as other natural resources, are defined as immovable mineral assets;

c) Immovable Assets - the use of goods that have an abstract existence but have economic value and variable or fixed payment obligations deriving from the exploitation of mineral deposits, sources and other natural resources;

Question: is mining waste piles (tailings and culm banks) considered mining?

d) **Mining Concession** - includes the operations and works related to the development, treatment and processing of mineral resources, as well as the disposal of mineral products;

e) **Mine Closure Costs** - costs approved by the Competent Authority, related to the methods and procedures carried out in the design, development, construction, operation and closure,

for the decommissioning of the mine and the rehabilitation and environmental control of the mining area and adjacent zones affected by mining activity, including social, economic and cultural rights; **If the taxpayer accrues current expenses for future mine closing, must it set aside funds? Must there be an annual approval of the amount or just a general approval in the Mining Contract as to the mine closing process and duties?**

f) **Effective Date** - the date of approval of the Mining Contract by the administrative law tribunal;

g) **Mine Closure** - the process through which mining activity is concluded in a particular area granted under mining rights, which does not end with the depletion of the deposit reserves or the conclusion of mining operations for other reasons, but with the completion of the restoration and/or land recovery actions, as provided in the approved environmental impact assessment.

h) **Exploration License** - the mineral title issued under the terms of the law permitting the realization of geocentric and geotechnical [**we say geological and geophysical**] activities that allow the assessment of the potential of mineral resources, including the discovery, identification, determination of the characteristics and economic value of the respective minerals;

i) **Mine** - place, excavation or work where mining takes place, including land, surface and underground, aerial [**??**], river, lake and maritime infrastructure and facilities, which are required for the operability, functioning and maintenance of a mineral exploitation, including the spaces related to the storage of mineral products such as dumps, waste and residue, as well as improvements of a social character [**vague**];

j) **Mining Operations** - Works carried out as part of Mining Activity;

k) Ore Preparation or Treatment 1 - set of operations that aim to turn the raw ores into usable or economic products that are marketable, using combination operations to release of useful parts of the ores and separation operations to obtain concentrates. It may also be defined as the process consisting of several stages of ore breakdown and concentration, ending with the separation of the desired useful minerals or sufficiently concentrated ore to allow the economic extraction of useful minerals. The process varies depending on the type of ore, from simple beneficiation consisting of the extraction from the gangue by simple washing, up to complex floating and bacteriological methods, among others [Comment: methods are potentially endless—no reason to place an arbitrary limit here]. For the purpose of this code, lapidary operations and the industrialization of ornamental rocks are considered to be part of this process;

Comment: the endpoint is sometimes called "first marketable product." I propose using it because it makes the MPT base easier to describe.

l) **Processing** - mineral operations subsequent to **Ore Preparation or** Treatment along the transformation industry chain, which include, among other economic activities, metallurgy, steel milling, fertilizer and cement production, industrial lime, metal refinery, lapidation;

m) **Mineral Product or Ore** - is the product after treatment, resulting from mining activity carried on within Mozambican territory, whether or not under a mineral title;

n) **Mine Closure Program** - methods and procedures carried out in the design, development, construction, operation and closure, for the decommissioning of the mine and the rehabilitation and environmental control of the mining area and adjacent zones affected by mining activity, including social, economic and cultural rights;

o) **Mining Project** - include**s** mineral productions projects, including exploration, development, extraction and treatment, corresponding to a single mineral title;

What is a single mining title? How does it relate to "Mineral Title"? Same thing?

p) **Recovery of Areas Affected by Mining Activity** - actions aimed at restoring the land affected by mining to a state where it can support one or more land uses, different to the use prior to the commencement of mining activity, without prejudice to the environment and after taking into consideration the provisions in the environmental impact assessment;

Comment: Why "different"? For example, if it was ranching land and is returned to ranching land, why is that excluded?

q) **Mineral Resource** - solid, liquid or gaseous substance with an economic value formed in the earth's crust by geological or associated phenomena;

This excludes miscellaneous items such as oyster shells and sod. That is fine.

s) **Fiscal Regime** - tax regime applicable to mining activity, which includes taxes, fees, and other tributes in accordance with applicable law;

t) **Mineral Title Holder** - person or entity in whose name the mineral title is issued in accordance with this law;

Is the title really obtained in accordance with this law, or the more general mining law?

u) **Mineral Title** - comprises the exploration license, mining concession and mining certificate, mining permit, mineral processing license, ore processing licence and mineral trading license;

v) **Transportation** - refers to the transport of mineral products or ores after treatment from the mine to the point of sale in Mozambique;

Comment: why not call it "Mineral Transportation" for specificity?

w) **Mineral Treatment** - release of useful parts from the ore in order to make them usable and profitable mineral products, which can be obtained by operations that include screening, crushing, grinding, separation, flotation, washing and concentration.

Comment: call it "Treatment" to be consistent with "l" above.

Article 2

(Subject)

The purpose of this Law is to establish the taxation regime applicable to mining activity, except where only mineral processing and or mineral product trading operations are carried out as well as the fiscal benefit regime.

Article 3

(Scope of application)

The Law applies to Mozambican and foreign individual and legal persons registered in Mozambique or subject under the terms of Article 5, who exercise or are involved in mining activity or activities related to the mining sector, excluding those who are engaged exclusively in mineral processing and mineral product trading operations.

Comment: This is a little vague. Is the intended meaning "Mozambican individuals and legal entities and Mozambican individuals and entities? Must foreign entities be registered in Mozambique? Article 4 suggests so. If so, they can be "branches" and my comment on the branch profits tax becomes relevant.

I suggest you have a definition of these people called "Affected Taxpayers" and use that term in the text.

Article 4

(Taxes specific to mining activity)

Mozambican and foreign individual and legal persons registered in Mozambique, who exercise or are involved in mining activity or activity related to the mineral sector, excluding those engaged exclusively in mineral processing and mineral product trading operations, are subject to the Mineral Production Tax - MPT, Surface Tax - ST, Resource Rent Tax - RRT as well as the Specific Corporate. Income Tax (IRPC rules)) as provided under this Regime in addition to other taxes as provided in the tax system, including the municipal tax regime.

Comment: this suggests a trader is subject to the production tax and other odd outcomes. This needs to be clarified to prevent possibly absurd applications. I think the intended meaning is that the many persons are subject to the specified taxes to the extent logically applicable.

Article 5

(Immovable assets and source in Mozambican territory)

For the purposes of this Law and the IRPC or the IRPS (Personal Income Tax), as appropriate:

a. Mineral deposits located in Mozambican territory and any mineral titles are immovable assets located in this territory;

b. The provisions in the preceding paragraph include direct or indirect shareholding **(including other indirect ownership via other entities such as partnerships, trusts and limited liability companies**) in entities holding a mineral title whether owned by Mozambican residents or non-residents.

The author thinks the following tax, like the MPT proposed for petroleum, is a bad idea because it is unduly complicated and calls for calculations of value often not based on reality and invites disputes that will cost the government and the taxpayer time and distraction to deal with. It is proposed that it should be replaced with a royalty based on actual sales minus costs of transportation.

CHAPTER II

Mineral Production Tax - MPT

Article 6 (Objective incidence)

The Mineral Production Tax is levied on the value of the mineral product and mineral water resulting from mining activity carried on within Mozambican territory.

Article 7

(Subjective incidence)

Individual and legal persons who carry out mining activity **(including extraction of mineral water for sale)**, whether or not a mineral title holder, are MPT taxable persons.

Comment: awkward language, but it might be much clearer in Portuguese original.

Article 8

(Taxable event)

1. The obligation is incurred when the mineral product is extracted from the ground, after treatment.

Comment: I recommend saying, when the taxpayer produces the first marketable product.

2. In the case of mineral water, tax liability is deemed to be incurred at the moment of its extraction.

Comment: Drop "mineral". I think it makes no sense. Water is water is H20.

Article 9

(Exemptions)

1. The following are exempt from the Mineral Production Tax:

   a. Mineral products extracted for construction, in areas not subject to a mineral title or authorization, if the extraction is performed by:

      i. Individual persons, on land where it is usual to perform this extraction, when the extracted materials are to be used on this land for the construction of dwellings and other installations for personal use;

      ii. Individual persons who are land users, when these materials are for the production of artisanal ceramics including the construction of dwellings, storehouses and installations on their own land;

      iii. Individual or legal persons, who use these materials in construction projects, rehabilitation and maintenance of roads, railways, dams and other engineering works or public interest infrastructure on land subject to a land use and benefit title, when said projects are carried out by the same persons, with the approval of the competent authority.

   b. b) Mineral products extracted for geological research, conducted by the State through specialized state entities, by educational or scientific research institutions, under the terms of the Mining Law;

   c. c) The self-consumption of the ore, as authorized by way of a development plan approved under the Mining Law.

   d. d) Non-commercial disposal of mineral resource and water samples.

The exemptions referred to in the preceding paragraph shall not relieve the title holder or the permit holder of the requirement to submit **legally required** information and periodic reports on the mineral product to the tax authority.

Comment: otherwise this seems to produce a new obligation for many people.

Article 10

(Loss of exemption)

When mineral products mentioned in subparagraph a) and b) and d) of paragraph 1 of the preceding article are later intended for sale, they are subject to payment of the MPT.

Comment: I would exempt some minimum annual amount such as $1,000 for simplicity. Presumably it is still subject to income taxation, so the revenue loss would be small compared to the administrative burden.

Article 11

(Tax base)

The tax base of the Mineral Production Tax is the value of the mineral product extracted from the ground, post- treatment, **when the first marketable product is produced, using your approach and not using a royalty**.

Article 12

(Mineral Product Value)

1. Treatment costs relating to the mineral product are not deductible from the Mineral Production Tax.

2. The value of the quantity of the extracted mineral product is the sale value declared by the taxpayer, determined by taking the FOB or EXW price as the base or according to equivalent conditions, at the delivery point, when the mineral product has been sold in the month in which the tax is payable.

Comment: EXW should be defined. Again, I fear this is too complicated.

The author recommends a royalty approach, using actual sales, adjusted for transportation costs.

If taxation at the time of production is considered imperative, then use the most reliable world market price and reduce the tax rate by some arbitrary percentage, say 20%, in order to accommodate for the failure to consider transportation and handling costs. The tax should not be imposed until there is a marketable product by industrial standards.

3. The mineral product extracted in a month but not sold that month is assessed on the price of the last sale held by the taxpayer.

4. If there are no sales, the base for determining the value of the extracted mineral product is the reference price in the international market.

5. The criteria for determining the reference price in the international market should be defined in specific regulations.

Article 13

(Correction of the tax base)

The Tax Administration may proceed to correct the declared taxable value, if:

a. There are any irregularities and inaccuracies in the sales documents or lack thereof, that do not allow directly and accurately proving and quantifying the elements essential to the determination of the value of the mineral product;

b. The sale or other disposal has been made in an amount less than the market value or has been carried out without taking into account commercial criteria.

Comment: This may be used capriciously because it is asks the administrator to make a subjective decision which could easily be abused and lead to bribery. The author would allow the taxpayer to prevail in pricing if it can show the government was arbitrary and capricious in its adjustment.

Article 14

(Rates)

The Mineral Production Tax rates are the following:

1. 7% for diamonds;
2. 6% for precious metals and gemstones;

Exactly what is the difference between precious and semi-precious? There is no definition. However, it could be settled by regulations pursuant to the law. An example is titanium; where does it fall?

3. 5% for semi-precious stones, coal, mineral water, base minerals, heavy minerals and **all [for certainty]** other mineral products.

Article 15

(Settlement and payment)

1. The amount of Mineral Production Tax results from the application of the rates provided in the previous article to the value of the mining, product calculated pursuant to the provisions of Article 14.
2. The Mineral Production Tax is paid each calendar month in which a tax obligation occurs by the taxpayer using the official form for , and must be paid to the tax administration services.

Comment: for clarity, set a deadline, such as 30 days, which is normal. I would say 30 days after end of month of the sale.

Article 16

(Sale in the domestic market and export)

1. In the case of domestic market sales of the mineral product, and there is no proof of payment of the Mining Production Tax, then the holder of the trading title is required to make payment. **The author does not know what trading title is, but it appears to be an understood part of Mozambican law.**
2. The export of the mineral product is permitted only after payment of the Mineral Production Tax.

Comment: This can disrupt commerce, e.g., if there were prompt sale and export but delayed payment or problems with payment, such as bank error or holidays and be a source of corrupt payments. Therefore I suggest adding:

"Permission shall be granted promptly (with three working days) of receipt by the government of payment of the tax as determined by the taxpayer. This procedure does not preclude further government investigation and the later levying of the correct amount of tax."

3. The provisions in the preceding paragraph are without prejudice to the provisions of the applicable customs legislation.

CHAPTER III Surface Tax - ST

Article 17

(Objective incidence)

The Surface Tax **(ST)** is payable annually and is levied on the area subject to the exploration license, mining concession or mining certificate, measured in hectares and, in the case of mineral water, it is levied on each mineral title.

Comment: It should be pro-rated for short years in the interest of fairness.

Article 18

(Subjective incidence)

Individual and legal persons, whether or not a mineral title holder, who carry out mining activity are ST taxable persons.

Article 19

(Taxable event)

The tax liability is deemed to be incurred from the attribution of the area subject to the exploration license, mining concession or mining certificate.

Article 20

(Tax base)

1. The ST tax base is the number of hectares of the area subject to the exploration license, mining concession or mining certificate.
2. In the case of mineral water, the ST tax base is determined according to each mineral title.

Article 21

(Rates)

1. The Surface Tax rates are: (no comments)

Article 22

(Assessment)

The amount of Surface Tax results from the application of the rates provided for in the preceding article, followed by payment at the tax authority services, in accordance with the regulations to be issued.

Article 23

(Exemption from the land use and tenure tax)

Persons subject to the Surface Tax on the mineral title area are exempt from the annual land use and benefit fees.

The author does not know the references. Perhaps this should be expanded for clarity.

Overall comment: this seems fine. These taxes are normal.

CHAPTER IV

Specific Rules for the Corporate Income Tax

Article 24

(Scope of application)

The specific rules on income provided for in this chapter shall apply to the taxable persons subject to the Individual Income Tax (IRPS) and Corporate Income Tax (IRPC), who carry out or are involved in mining activity or activities related to the mineral sector, excluding those engaged exclusively in mineral processing and mineral products trading operations, and the provisions of the Corporate Income Tax Code may alternatively apply.

Comment: This may be a translation issue, but is the intended meaning that incorporated processors and traders are subject to Corporate Income Tax? If so, is that not obvious? Also "activities related to the mining sector" is undefined. Accountants who work only on mining issues for example?

Article 25

(Objective incidence)

The income tax is levied on the profit obtained in the financial year from the conduct of mining activity or activity related to the mining sector, excluding those engaged exclusively in mineral processing and mineral products trading operations.

Comment: underlined material is vague.

Article 26

(Subjective incidence)

Taxable persons of income tax are individual persons of Mozambican nationality, whether resident or not in Mozambique, as well as legal persons established and registered in Mozambique, who carry out mining activity or activity related to the mineral sector, excluding those engaged exclusively in mineral processing and mineral products trading operations.

Comment: This excludes non-Mozambican nationals who are individuals. That seems to be a mistake, but perhaps it is because foreign individuals cannot engage in mining and mining process under Mining Contracts.

Is it any concern to you that a mining company might establish an affiliated processor which buys, transforms and sells the product?

Article 27

(Determination of taxable income)

1. The determination of the tax base concerning the Concessionaire **[This is being introduced for the first time; I would suggest the potential taxpayers be consistently called "affected taxpayers"]** is limited to each Mineral title and pertains to each fiscal year.

This next item is out of place. I suggest a separate article for it.

2. The taxpayer must obtain a Taxpayer Number (NUIT) for each Mineral Title and have separate accounts for each of them, according to the preceding paragraph.
3. Costs and income derived from a Mineral Title can only be deducted or allocated to that same Mineral Title, for each fiscal year.

Article 28

(Sales value)

For the purposes of the income tax on mining activity, the sales value of the mineral product corresponds to the value of the transaction, i.e. the value actually paid by the buyer.

Article 29

(Principle of Independent Entities)

1. The following transactions are treated for IRPC purposes as if they were between independent entities, applying the IRPC Code rules on transfer pricing:

    a. The transactions between different Mineral Titles held by the same taxpayer;

    b. b) The transactions between a Mineral Title and other activities of the same taxpayer, including processing;

    c. c) Any transactions between entities with special relations.

Comment: not clear. If the Corporate code meaning is intended to apply, say so, please. I do not understand why they are released.

2. For purposes of the preceding paragraph, the transfer of an asset for a mining activity, excluding mineral processing and mineral product trading operations, is treated as an acquisition or transfer of assets, as appropriate.

Article 30

(Profits or gains)

Without prejudice to the provisions of the Corporate Income Tax Code, the following are also **[Is it not clear to me they are not income under Article 20 of the other corporate tax law, so instead of "also" I would say "explicitly include"]** considered profits or gains derived from mining activity:

1. Income resulting from the sale or transfer of Mineral Products or Ores;
2. The compensation received for any loss or destruction of Mineral products or Ores and resulting from an insurance contract or from other source;

Comment: If insurance produces income, expenses for generating that income should be deductible, for symmetry.

3. Amounts received from the sale of information relating to mining activity or mining assets;
4. Capital gains arising from the direct or indirect sale of assets in the area of the Mineral Title, which are located in Mozambican territory, and in relation to which the activity is conducted;
5. Not using a provision concerning mine decommissioning costs;

What does this mean? Reversal of an unpaid accrual of an expense? Recovery of actual funds? Both?

6. Any other amounts received by virtue of the mining activity relating to the Mineral title.

Article 31

(Costs or Losses)

Without prejudice to the provisions of the Corporate Income Tax Code, the following are [explicitly] considered losses or costs derived from mining activity:

a) Contributions for a financial guarantee for the closure and rehabilitation of the mine through an escrow account, as determined in a mining concession agreement;

Comment: would this include a contribution to a fund also, or is that part of the intended meaning. If it is part of the intended meaning, it would better if it were made explicit.

b) The mineral product treatment and [mineral] transport costs.

Comment: It seems mineral extraction costs at the producing stage are not deductible. This is completely out of step with normal practice. Once a company reaches the production stage it is an operating enterprise and its day-to-day expenses are deductible as a cost of doing business as an offset to the ordinary income it produces. If my understanding of the law here is correct, this denial of deductions will generally be unacceptable, and for good reasons.

Article 32

(Determining transportation costs) [Tax treatment of transportation costs]

1. For the purposes of subparagraph b) of the preceding article:

a) A reasonable tariff paid by the entity that holds the Mineral title to the entity that incurred such costs is deductible.
b) The costs necessary to the construction and operation of transportation infrastructure should be accounted for separately from the mining activity, and one reasonable national tariff charged to this activity is deductible.

2. The construction and operation of transportation infrastructure are taxed as independent entities under the terms of Article 29 of this Regime and Article 49 of the Corporate Income Tax Code.

Article 33

(Allocating exploration costs)

1. The exploration mineral operations undertaken up to

   the date of the granting of the first mining concession title and the mining activity developed under this title are treated as the same autonomous mineral title, provided that the mining concession area lies within the exploration area.

2. The subsequent exploration mining operations developed outside the mining concession area are treated as a separate mineral title, as part of the next mining concession licence.

Comment: When can the costs of abandoning a search for minerals be deducted as a loss? Can it be done when the license to explore is abandoned? I think it is a fair to allow allocable costs to be deducted at that point.

Article 34

(Deducting general administrative charges)

1. The general administration charges deductible by the affiliate company, which derives income from a mineral title in Mozambican territory in a given fiscal year, may not exceed 2% of the deductible total expenditure of that affiliate in that year, excluding the reintegration and depreciation (costs) and headquarter expenses.
2. For the purposes of this article, the general administration charges include consulting costs related to hired staff and assistance related to financial, legal and consulting services and dependent (employee) work, and cover the exploration, development and production costs, costs of capital, operating costs and service costs.
3. The provisions of this Article apply to deductible expenses incurred by a Mozambican branch of a non- resident parent company **[as well as in other circumstances.]**

Article 35

(Non-deductible costs)

In addition to the provisions of the IRPC Code, the following are not deductible:

a) Exploration costs without the occurrence of discovery;

Comment: Are these costs added to the minerals actually discovered? If none are discovered and the full area that can be legally explored yields no discoveries, a loss should be allowed to be consistent with basic income tax principles. I think abandonment represents a real economic loss.

b) The costs resulting from the intentional breach of legal and regulatory obligations on the part of the taxpayer or anyone acting on his behalf, concerning the management of mining projects;

c) The costs incurred on contracts to cover risk, or losses incurred deriving from such contracts;

Comment: why? Insurance is a normal current expense of any business.

d) The counterparts offered to the State for the granting of mining concessions;

e) The Mineral Production Tax; **[as you know I disagree with the MPT and consider it should be a royalty and never be income to the Concessionaire]**

f) The commissions paid to intermediaries;

g) The expenses incurred in arbitration, unless incurred for the defense of mineral operations.

Comment: These provisions are unreasonable as to the MPT, commissions paid with respect to current transactions (such as sales of minerals) unless they relate to capital expenditures, such as a commission paid in order to acquire a locomotive, which should be added to the price of the locomotive. Likewise, arbitration costs that relate to current operations should be deductible as a cost of doing business. I consider these denials of deductions to be completely inconsistent with normal tax law and make the law look unfair.

Article 36

Reintegration and depreciation

1. Notwithstanding the provisions of this Article, the Concessionaire shall reintegrate and depreciate all the depreciable elements of the tangible and intangible assets, in accordance with the IRPC Code.

2. The Exploration, Development and Production expenses made under the Concession or the Mineral title are treated as depreciable elements of the intangible asset.

Comment: Does this mean Production expenses are not immediately deductible and instead have to be capitalized and amortized? If so it is unusual and calls for wasteful calculations to determine the cost of produced minerals for determining profits, disputes, etc. and my be unacceptable because production costs are true economic costs. If they are deductible, then say so.

3. The Development and Operation expenses made under the Concession or the Mineral title are treated as depreciable elements of the tangible asset.

Comment: Is this last sentence not part of the prior sentence?

Article 37

(Reintegration and depreciation rates)

The following rates apply to the reintegration and depreciation of the mining projects' assets, unless their useful life as part of a mining project approved by a development plan is shorter:

a) The costs incurred on contracts to cover risk, or losses incurred deriving from such contracts;

b) The counterparts offered to the State for the granting of mining concessions;

c) The Mineral Production Tax;

d) The commissions paid to intermediaries;

e) The expenses incurred in arbitration, unless incurred for the defence of mineral operations.

Note: I cannot understand the plan behind Article 37. I can understand that all expenditures leading up to getting the Concession must be capitalized, but why capitalize the MPT and all commissions?

Article 37 (2)

(Reintegration and depreciation rates) **(NOTE: The chart below still needs to be included.)**

The following rates apply to the reintegration and depreciation of the mining projects' assets, unless their useful life as part of a mining project approved by a development plan is shorter:

Type of Asset	Designation	Rate (%)
	Extraction of Mineral Product or Ore • Equipment directly used in extraction • Buildings & constructions • Treatment & Processing Infrastructure • Geophysical Survey Machinery • Equipment for preparatory and soil removal works • Rail lines and operating material (locomotives & wagons)	a () 5 10 10 a () 6,25

According to the deposit mine life or production. The depreciation rate is determined by the length of time that the exclusive use of the mineral title takes. Not perishable.

Comment: Looking at this and the corporate tax law, I cannot tell if salvage value [value at the end of useful life of the thing being depreciated] is used in computing depreciation deductions. Salvage values lead to many controversies. I suggest not using them. It seems that exploration, development and other pre-operational expenditures are not capable of being written off. That is an important judgment.

I am not able to ascertain the periods over which exploration and development are deducted and am confused by this part of the law.

A simpler solution may be to capitalize exploration and development and Concession costs (call the total "X") and then multiply sales of production by say 10% per year and use that figure as a deduction, but limit the deduction so it never exceeds X.

Article 38

Asset Registration and Evaluation

1. The Mineral titleholder shall maintain detailed records of assets in use in the mining activity, in accordance with applicable law and Best Mining Practices.
2. The Concessionaire shall carry out inventories of assets allocated to the mining activity, in accordance with the law.
3. The Government shall be notified in writing when inventories are carried out, at least thirty (30) days in advance, and is entitled to be present during the **[physical determination of year-end]** inventories.

Comment: I added this for clarity, if that is the intended meaning.

Article 39

(Transfer of rights or shares in the contract)

If a concessionaire transfers a mineral title or a right or an interest in the mineral titleholder or mineral title, the entity that receives the right or share shall continue to reintegrate and depreciate any tangible and intangible assets in the surveying and development phase, according to the terms adopted by the original Concessionaire.

Article 40

Provision for the depreciation of stocks [“Inventory” is the intended meaning, I assume.]

1. The provision that is intended to cover the loss of value that stocks suffer, within the limit of effectively observed losses, shall be equal to the difference between the cost of acquisition or production of the stocks in the balance sheet at year end and the market price at the same date, when the latter is lower.

2. For purposes of the preceding paragraph, market price is understood to be the replacement cost or the sale price, depending on whether the goods were purchased for production or are meant for sale.

3. This provision can be used only in the fiscal year in which the loss becomes effective.

Comment: Normal practice.

Article 41

(Thin capitalization)

1. Thin capitalization occurs when the total amount of debt of a Mineral titleholder towards **[owed to]** a resident or non-resident entity in Mozambican territory exceeds the debt to capital ratio of 2 to 1, applied to the net financing requirement defined in paragraph 5 of this article, and regardless of the existence of a special relation with this non-resident entity.

Comment: 2:1 is often low in the real world, but I sympathize with the "base erosion" concern.

2. The thin capitalization referred to in the paragraph 1 of this Article applies to any date within the tax period.

Comment: So if there is thin capitalization one day in the year, the whole year is "thin" or only the day?

3. In case of thin capitalization, as defined in paragraphs 1 and 2 of this Article, interest and other financial charges related to the portion in excess of the ratio are not deductible for purposes of determining the taxable income.

Can they be deferred or lost forever? These are real economic expenditures, but they arguably are dividends. 2:1 is low ratio in the business world. I recommend considering deferral rather than complete disallowance.

4. The determination of the debt attributable to a Mineral titleholder in relation to a resident or non-resident entity, with which it has special relations, is made according to the principle of independent entities (arm's length transaction).

5. The net financing requirement is the net cumulative negative cash flow of the Mining Project during any period in which the material mine development activity is conducted, after taking into account any income.

6. Interest related to an increase in debt is not deductible, when there is a forecast that operating cash flows are sufficient to meet the costs under the Development Plan, without leading to negative cash flows.

7. The financing plan, the debt terms and the principles to ensure timely repayment of the debt must be approved as part of the Development Plan.

8. Interest and other financial charges referred to in paragraph 1 refer to all forms of credit, regardless of the remuneration form, including the financial component of financial leases.

9. The determination of the equity capital portion takes into account subscribed capital.

Comment: You must decide whether to use value in determining capital or the cost shown on the books. In my opinion only value is logical because this section is concerned with banking situations, and bankers rely on value on "book cost" which can be greatly different from value. Equity capital shown on the books is not the same as fair market value.

Article 42

(Deduction of tax losses)

Tax losses in any given year are deducted in accordance with the rules of the IRPC Code.

Comment tax loss carry forward: Nearly all countries are lenient in this manner. Carry forward is generally allowed and for quite a few years. The only limitations include that of a specific amount able to be carried forward (Germany), yearly allowances of carry forward (usually 5 years or unlimited), and what income the losses must be used against. Countries follow 1 of the 3 regimes: unlimited, specified amount of years, and specified income for loss distribution.

In the author's opinion, they should be carried forward indefinitely because they are real and any other rule is arbitrary and cannot be explained. The only reason the problem exists is because economic activity is taxed every near and not over the life of an entity or project.

Article 43

(Tax rate)

The tax rate on taxable profit is 32%.

Article 44

(Withholding tax)

1. The taxpayer who pays or makes available to a non- resident, either directly or through a third party on its behalf, amounts relating to the remuneration for services rendered by non-residents, regardless of where they take place, if the beneficiary is a resident in Mozambique or attributable to a permanent establishment in the national territory, shall withhold tax at source at the rate of 20% of the gross amount paid.

2. The provisions in the preceding paragraph apply to any income paid or made available to a non-resident that was sourced in Mozambique, and related to mining activity.

Comment: "related to mining activity" is not clear. Even "directly related" would be an improvement. Regulations can clarify this term.

3. The obligation to withhold tax pertaining to the IRPC occurs on the date of payment of the income, when due, even if presumed, when made available, when it is settled or the respective amount has been cleared, as appropriate, and the retained amounts shall be delivered to the tax authority within the terms and dates established in the Personal Income Tax Code.

Comment: "as appropriate" is vague. I suggest when paid or when made available to the payee, whichever is earlier.

Article 45

(Taxation of capital gains)

1. The gains accrued by non-residents in Mozambican territory resulting from the direct or indirect transfer for consideration of mining rights in Mozambique, are taxable as capital gains.

2. Gains referred to in paragraph 1, including those from the transfer of shares in companies holding mining rights are, for all tax purposes, gains related to immovable assets.

3. The gains resulting from the onerous transfer, directly or in directly , between non-residents of shares in the capital of entities holding a mineral title, or other securities issued by such entities, relating to that title, involving mining assets located in Mozambican territory, regardless of where the sale occurs, are considered to have been obtained in Mozambican territory.

Comment: you might want the mine operator to bear the tax if it goes unpaid.

Article 46

(Assessment and payment)

1. The taxable base related to mining operations during a fiscal year is calculated by applying the rate established in Article 43 to the taxable income, calculated in accordance with Articles 24 to 42 of this regime and the IRPC or PIT Codes, as appropriate.
2. If the taxpayer has other taxable income, such income is taxed under the IRPC Code or PIT Code, as appropriate.
3. The amount of tax on capital gains on the transfer of mining rights results from the application of the rate provided for in Article 43 to the value determined in accordance with Article 45.

4. The tax on capital gains on the transfer of mining rights is paid by the taxpayer in the fiscal year in which the tax obligation is constituted.

CHAPTER V

Mineral Resource Rent Tax

Article 47

(Nature)

1. The Mineral Resource Rent Tax is a direct tax on the net cash flow of a mining project, from the moment in which these developments have exceeded a rate of return of 18%, <u>before taxes</u>.

Comment: The draft disallows income taxes in determining discounted cash flow. Ignoring them is arbitrary and inconsistent with the idea of computing cash flow.

2. The MRRT applies jointly with other taxes including the IRPC.

Article 48

(Objective incidence)

The Mineral Resource Rent Tax (MRRT) applies to mining projects that have accrued net revenues (cash gains) during a fiscal year determined in accordance with Article 51.

Article 49

(Subjective incidence)

Mineral title holders are taxable persons of MRRT.

Comment: clarify if they are the only taxable persons.

Article 50

(Taxable event)

The MRRT is due **[if and]** when there are accrued **[do you mean "accrued" in the accounting sense of earned? If not, delete "accrued"]** net revenues **[do you mean 'net cash gain' ?]** at the end of the fiscal year.

Article 51

(Determining the tax base)

1. The determination of the accumulated net cash gains accrued for the purposes of the MRRT begins in the fiscal year in which a mining concession or mining certificate is granted, and in each fiscal year it corresponds to the taxable income as determined for the purposes of the IRPC:

Comment: the IRPC is out of step with cash flow analysis and in my opinion makes a poor starting point because it is legalistic, if the concept of the tax is to really determine whether the miner has captured "rent."

a) Interest and other financial charges are added

Why? They are cash costs. The thin capitalization rule already limits them;

Comment: I would also add back to cash flow any amortization and depreciation tax deductions because they are not cash costs. This is consistent with including capital expenditures as a cash outflow.

b) The capital costs and other immovable assets, excluding the mineral title acquisition costs **[why?]**, are deducted; and

c) In the first year of calculation, the costs incurred in the seven years prior to the granting of the mining concession, including operating costs, **[if and to the extent]** verified by the competent authority, are deducted **[agree]**.

d) Overhead charges of a related entity are not allowed unless they are actually paid to that entity.

Comment: this allows overhead actually paid.

2. Interest and other financial charges referred to in subparagraph a) of paragraph 1 shall contain **[include]** the financing component of financial leases.

3. The net cash gains **[or losses]** of a given fiscal year are added to the opening balance of accrued cash gains **[and losses]** and the sum is the closing balance of accrued net cash gains **[or losses]**.

Comment: the opening balance could also be negative.

4. The opening balance of accrued net cash gains at the beginning of a fiscal year is equal to the closing balance of the accrued **[it should mean "accumulated"]** net cash gains **[or losses]** at the end of the previous fiscal year.

5. If at the end of the previous fiscal year the accrued net cash gains produce negative results, the opening balance is the closing balance of the previous year revalued by 18%.

Comment: revalued up or down?

6. If at the end of the previous fiscal year the net cash result is positive, the opening balance will be zero.

7. The 18% **[upwards downwards?]** revaluation applies only during the period in which the mining project is in development or production. If there was no commercial production during the fiscal year, the closing balance of accrued cash gains is carried to the next fiscal year without revaluation.

8. The tax base for purposes of assessing the MRRT corresponds to the closing balance of the net positive accrued cash gains.

Article 52

(Tax rate)

The tax rate on the Mineral Resource Rent Tax is 10%.

Article 53

(Assessment)

The MRRT payable amount is obtained by applying the rate of 10% to the result of the closing balance of the accrued cash gains **[if and to the extent]** it **increased for the year**.

Comment: now the taxpayer has two complicated calculations and the tax authorities have the same. Why not just increase the IRPC rate by 10 percentage points and use the MRRT as a

trigger for the imposition of the higher rate? This would result in administrative savings for government and taxpayer with minor revenue impact.

Article 54

(MRRT Deductibility)

The MRRT is deductible in respect of IRPC.

Comment: the calculations are interdependent, resulting in difficult simultaneous calculations. Also, the IRPC should be used as a source of negative cash flow if the intention is really to measure profitability on a cash flow basis.

The author's proposed solution to the forced simultaneous equations is to use the cash flow tax as a trigger to increase the corporate tax rate, say by 10%.

Article 55

(Reporting requirements)

The taxpayer must submit their MRRT annual tax return on the same date of the IRPC annual tax return, settled under the terms of the preceding article.

Comment: The mine operator is likely to prepare its own cash flow statement, but it will be "real", not taxable income as adjusted, so it is "cleaner" to apply its cash flow model, and the concept of an extra tax burden after the operator has recovered its investment plus "X" is good. The main problem with the proposed tax is its disconnection from standard cash flow models.

Comment: The fiscal benefits below are reasonable and unlikely to create administrative problems.

CHAPTER VII

Fiscal Benefits

Article 56

Scope of application

The provisions of this chapter apply to mining projects which undertake investments under the Mining Law, by individual or legal persons, as long as they are duly registered for tax purposes.

Article 57

Fiscal Benefits

1. Fiscal benefits are considered, for the purposes of this Law, to be the tax measures contained herein that imply a reduction of the applicable tax amount to be paid, in order to encourage the mining companies, to encourage the economic and social development of the country
2. Fiscal benefits are considered tax expenditures and for their determination and control an appropriate statement of benefits used in each fiscal year is required.

Article 58

Right to fiscal benefits

1. The projects carried out under the legislation referred to in Article 56 shall enjoy the fiscal benefits set out in this Law, provided that they fulfill the conditions laid down herein.
2. The effective enjoyment of fiscal benefits cannot be revoked, nor acquired rights may be diminished, except in cases provided for by law, and if the beneficiary has failed to comply with established obligations or if the benefit has been wrongly granted.

Article 59

Transferral of fiscal benefits

Fiscal benefits are, in accordance with the legislation referred to in Article 56, transferable during its term of validity, subject to authorization by the minister who oversees the finance area, provided it remains unchanged and the transferee complies with the requirements for the enjoyment of the benefit.

Article 60

Incentives for projects under the Mining Law

1. The Mining projects carried out under the Mining Act shall, for five fiscal years after the effective date of the Mining Contract, be exempt from customs duties payable on the importation of goods including spare and accessory parts, intended to be used in exploration or mining exploitation operations, classified as class K in the Customs Tariff, set out in Annex I.
2. The imports referred to in the preceding paragraph also benefit, during the same period, of exemption from the Value Added Tax.
3. The benefits referred to in paragraphs 1 and 2 shall be granted only when the goods to be imported are not produced in the national territory, or if they are produced, they do not meet the required specific characteristics of purpose and functionality or inherent to the nature of the activity being developed and explored.

Comment: paragraph 3 is likely to be controversial.

Article 61

Requirements for obtaining fiscal benefits

The requirements for obtaining fiscal benefits are:

1. Have a mineral title authorized by the competent authorities to carry out mining activity under the Mining Law;

2. Be registered for tax purposes and have a Single Taxpayer Identification Number - (NUIT);

3. Have organized accounting in accordance with the Accounting System for the Business Sector and with the requirements of the Corporate or Personal Income Tax Codes.

Article 62

Termination and suspension of the fiscal benefits

1. The fiscal benefits terminate after the period for which they were granted elapses or when the sanction of cancellation is applied.

2. The termination or suspension of the fiscal benefits implies the automatic application of general taxation as provided by law.

3. In the event of the application of the sanction of suspension of fiscal benefits, this suspension shall remain in effect until the grounds for the suspension are remedied including the payment within thirty (30) days from the date of notification by the competent tax services of the unpaid tax amount.

4. The holders of the right to fiscal benefits have the continuing obligation to declare within a period of thirty days that they have ceased, legally or in fact, the activity on which the fiscal benefit was based. This same notice shall be given in the case of the suspension of fiscal benefits.

Article 63

Procedures and rules for the procurement, suspension and termination of fiscal benefits

The procedures for obtaining fiscal benefits referred to in this Law, as well as the definition of the rules for their suspension or termination, in the case of tax offenses and other non-compliances with the conditions set in the granting of fiscal benefits, are subject to regulation.

Article 64

Expiration of fiscal benefits

The fiscal benefits expire shall expire at the end of the time period for which granted or if conditional, on verification of either any resolutive condition or the noncompliance with the obligations imposed on the beneficiary.

Article 65

Transfer of goods with fiscal benefits

When a fiscal benefit concerns the acquisition of goods intended for the direct realization of acquirer's purposes, and if the goods are disposed of or used for other purposes without the authorization of the competent authority, the benefits are without further effect and other sanctions may be applicable.

Comment: why not reverse the benefit and force a payment of the voided VAT and import duty, given that the expectation on which the benefit was based was never achieved?

Article 66

Incentives under the Investment Law

Tax incentives applicable to projects carried out under the Investment Law are not applicable to mining activity.

CHAPTER VIII

Final Provisions

Article 67

General transitional Regime

The benefits that were granted to the mining areas, whose right has been acquired before the entry into force of this Regime are kept under the same terms, **[subject to any change in the general corporate tax rates if the Concession did not guarantee rates?]**

Comment: no foreign investor, or citizen, assumes fixed income tax rates.

This provision should presumably not be a grant of extra tax benefits.

Article 68

(Inspection)

1. Compliance with the requirements imposed by this Code shall be monitored by the tax administration, and the taxable persons subject to the taxes provided for in this Law and other tax obligations, within reasonable limits, shall collaborate when such is requested of them by the competent services, in the exercise of their respective powers.

2. The inspection procedure obeys to the rules set out in the Regulation on Tax Inspection.

Article 69

(Taxpayer Guarantees)

Taxpayers have the guarantees provided for in the Law establishing the general principles and requirements of the Mozambican tax law order applicable to all national and local taxes.

Article 70

(Transgressions)

Transgressions of the provisions of this Law are tax offences punishable under the Law establishing the general principles and requirements of the Mozambican tax legal order applicable to all national and local taxes, the General Regime on Tax Offences and other applicable legislation.

Comment: There should be heavy penalties for fraud and I recommend a reward system for "whistleblowers." Anonymity should be protected.

Article 71 [New]
(Application of Revenues)

Revenues paid under this law shall be handled as follows:

1. **The taxpayer shall identify the character of each payment in accordance by Contract Area and the tax obligation being paid.**
2. **The government shall record the annual amount of accumulate such payments and shall deposit the funds in sub-accounts within the revenue accounts by taxpayer, Contract Area, amount and type of tax.**
3. **Collectively, the accounts shall constitute the National Mining Fund.**
4. **The government shall permit accounting firms selected by taxpayers under this law to validate the amounts paid in to each account pertinent to each taxpayer that has paid taxes under this law. The government shall cooperate with the accounting firm.**
5. **Each taxpayer shall report to the government all cumulative payments to any one payee exceeding $600 during the year, with such report including the name, identifying number (if any) and address of each payee, domestic or foreign.**
6. **Disbursements from any and all sub-accounts shall be promptly described with specificity (at least the payee, date, form of payment and amount paid) on the books of the pertinent subaccount.**

7. **The above information shall be posted on the government website and shall conform to standards no less than those called for called for by the Extractive Industries Transparency Initiate.**
8. **The government website shall be easily and constantly available to anyone who wishes to see this information.**
   Comment: if this basic concept is acceptable, then this section must be expanded.

Article 72 [New]
(Language)

All official documents and all contracts with the Government of Mozambique shall be in the Portuguese language. If there is both a foreign translation of a document or communication with the Government, the Portuguese form shall control all interpretations.
Comment: to eliminate any doubt

Annex I

LIST OF ASSETS HELD FOR MINING ACTIVITY EQUATED TO THE K CLASS IN THE CUSTOMS TARIFF (Art. of Law No.)

Table I

1. Radial and axial flow fans;
2. Mobile laboratory for mineral analysis;
3. Drilling equipment;
4. Excavators;
5. Dump tractors for mining transportation;
6. Borers for mining exploitation;
7. Suction dredges and dredging equipment;
8. Rock crushing machines;
9. Pneumatic and hydraulic hammers;
10. Ore separating machines (cyclones, vibrating tables and others)

Table II

1. Gaterres;
2. Granulometric scale
3. Stereoscopes
4. Kits and devices for measuring the physical and chemical characteristics of water

Table III - Seismology and Magnetism Devices

1. Seismographs
2. Seismometers;

3. Special mouse for equipment;
4. 24-bit digital scanner;
5. Special cellular modem for seismograph stations;
6. Theodolite;
7. Sensor (Fluxgate);
8. Proton magnetometer and sensor;
9. Tripod;

10 Fluxgate magnetometer with three sensors;

11. A to D Scanner;
12. PPM Processor;

Table IV - Geophysical Devices
1. Electrical conductivity and resistivity devices; 2. Radiometric devices;
3. Devices for measuring magnetic susceptibility: 4. Induced Polarization devices;
5. Proton magnetometers;
6. Spectrometers;
7. K-meters for magnetic susceptibility;
8. Electrical resistivity devices;
9. Induced polarization devices;
10. Gravimetric devices.

IV. ANALYSIS OF TAX BURDEN

a. Foreign tax credits as a consideration

Foreign corporations can often claim a tax credit in their home countries for income taxes paid on their overseas business operations. This has led many oil exporting countries to assure that their income tax systems can produce a credit overseas. The US has a long experience with this and it induces oil companies from the US to encourage foreign policy-makers to make sure their income taxes "fit" the requirements for a credit in the US. (The credit appears in section 901 of the US Internal Revenue Code.)

The author's research shows this is true in Germany, France and England, for example. However, those countries operate on a territorial system, so their home countries in various instances do no tax foreign earnings and therefore the credit is of no use. Thus, it is the US companies that generally have the greatest stake in making sure the foreign tax law fits the US rules. Without going into details, Mozambique's corporate income tax fits and at a 32% rate that is generally compatible with a full use of the Mozambique tax as an offset to the US corporate income tax.

In the United States at least withholding taxes are generally creditable, but the sum of income taxes and withholding taxes are only currently creditable to the extent they do not exceed the American corporate tax rate (35%) The author does not know about the limits in other countries.

The trouble is that because of the limit on creditable foreign taxes, it is unlikely the Mozambique withholding tax would help a US parent corporation. I do not know about other countries in this regard.

The 20% withholding taxes on independent services would formally be creditable, but would be blocked the American 32% foreign tax credit limit assuming that was the only foreign tax the taxpayer paid during the year.

b. Administrative and fiscal burden of taxes

Mining on an industrial scale is expensive and requires years to implement, whereas oil and gas activities can be quick. Also, the proportion of mining expenses to revenues tend to be much higher than for fresh oil and gas fields.

Taxpayers face a large array of taxes, hence a large administrative burden that adds to costs and to the minimum profit levels they must achieve to consider investing in a Mozambican project. According to the law, they primarily consist of:

- Mineral Production Tax: 5-7% of production value.
- Resource Rent Tax – 10% of positive net cash flow after discounted break-even at 18% is achieved.
- Corporate Income Tax – 32% with deduction for Resource Rent Tax (Article 54).
- Crudely stated, the "government take" from these collective taxes is around 43-53%, depending on many factors, most especially the royalty rate. According to the somewhat old PWC study (see below), this is somewhat high compared to the 39.3% rate it claims to be the worldwide average, especially in light of the failure to add in other taxes. According to a rough study of my research (Appendix C), it is within bounds.

The above taxes are not all, because there are further uncalculated burdens, including:

- VAT – within limits
- Employment tax - evidently 4% of wages.
- Exploration and development fees -- many, but such fees are commonplace in the mining industry.
- Indirect charges, such as cost of training of Mozambican employee.
- Withholding taxes on dividends and interest.
- Surface Tax: Evidently, this an annual tax levied in respect of a reconnaissance license, an exploration license, a mining concession or mining certificate. This tax is payable by the holders of such mining titles. The tax is calculated on the basis of the number of hectares or squares kilometres of the area under license. I have not been asked to review it, and I cannot find the official basis for the calculation, although I am told that these taxes are basically minor.

High cost field in later year example: Field production is 200, costs are 100, net profit before taxes is 100. Using top rate for MPT mineral. Assume RRT applies and positive net cash flow equals taxable income for corporate income tax purposes. The resource is diamonds.

Early year: the take is 46%. If one used a royalty approach it would be 32% x 86 = 27.52 (income tax) + 14 (MPT) = 41.52

Late year: treating corporate tax base and cash flow as the same

Revenue and expenses	MPT	Corporate income tax/ after impact of deducting RRT	Resource rent tax (RRT)	Total tax rate on net 100 field revenue as percentage
200/100	14	32/ 28.8	10*	52.8

In early years the tax burden would be 48, which is 48% of the 100 of field revenue.

This would be lower if the MPT were treated as a royalty.

Low cost field in a later year example: Field production is 200, costs are 10, net profit before taxes is 190. Using top rate for MPT mineral. Assume RRT applies and positive net cash flow equals taxable income for corporate income tax purposes.

Revenue and expenses	MPT	Corporate income tax/after subtracting RRT	Resource rent tax (RRT)	Total tax rate on net 190 field revenue
200/10	14	60.8/54.72	19*	88.72/190 = 46.1

In an early year the tax would be 74.8 which is 39.4% of field revenue.

*The MPT cannot be currently deducted in full for corporate tax purposes (Article 37), although it can be evidently amortized over some period (Article 37) that is unclear to me, but apparently clear to others and it is not an adjustment in determining the RRT. As a result, I ignored the MPT deduction for corporate and RRT purposes. In doing so, I apparently overstated the corporate tax. This analysis should be refined, but it is sufficient for extracting useful generalizations.

The conclusion is that, all other things being equal, the tax regime substantially encourages mining in low cost areas. The static nature of the royalty is performing a normal role, which is protecting against cases where companies are unprofitable but the government still gets revenues from extraction. Also, notice that the Resource Rent Tax will apply much earlier in this low cost field, so the government revenues here are understated.

The author cannot accurately determine the true fiscal burden because of the various other fees and taxes. Doing so requires computer simulations and a variety of assumptions.

The author considers the 10% MRRT rate reasonable because from the objective mining company's objective point of view (ignoring whether 18% is correct), it is only then that a real profit has been made. His objection is using cash flow as a basis for a tax. It would be easier to use it as an event that increases the corporate income tax.

The issue of highest acceptable rate ultimately cannot be resolved except in generalities without running complicated simulations taking into account all taxes and a series of permutations of the assumed facts.

Despite the roughness of the example, the low cost producer can stay in business despite the MRRT, but it drives the producer from considering pursuing high cost fields. That implies rapid exploitation of easy fields and lack of interest in high cost fields (such as diamonds?)

Recommendation: If you make the adjustments suggested below, including making the royalties a simple retained share of actual production and streamlining the law as recommended by increasing the corporate tax instead of having a third tax and use a real cash flow model, the rates are acceptable for a low cost production activity. Realize that high cost producers may be discouraged and that it is impossible to measure discouraged investors. If there are not applications for high cost activities, evaluate later if you want to reduce the burden, such as by reducing royalties towards a 5% rate.

c. External standards

The unsolved mystery is how low a rate of return, after taxes, will a mining company tolerate and still be attracted. There is no known external answer because mining companies require different minimum rates, assign different value to factors used to price in things like country risk and may even on occasion take an unreasonably low return in the hope of being drawn into more attractive deals later.

A extensive survey by the international accounting firm of Price Waterhouse Coopers (PWC), using 2008 data from its "participants" – which were not necessarily clients—and drew a number of important conclusions regarding government take in the mining industry. The core of the study is an Appendix to this memo:

- The highest average top level of government take was in Latin America at 39.5%, perhaps because the projects are mature
- The lowest was in Africa, at 34.3% (p. 23 of study)
- Worldwide average is 39.3% (p. 19 of study)

The study is almost five years old, and in that time there the trend is clearly towards higher taxes. That trend is strong indicated by an Appendix showing tax increases in the petroleum industry in the study of that industry.

Looking at the components of the three-part tax, it seems clear that the rates are within international norms but if anything somewhat high:

- The 32% rate corporate income rate is typical. This is apparent from two sets of charts, one I did and another by PWC. One need only scan the "corporate tax" columns at it is readily apparent.
- The MPT, treated as a royalty, is a modest 5-7%. International practices fluctuate wildly, from 0% (various countries) to 20% (India). I consider royalties an important component in assuring the government stability of revenues.

- The MRRT adds 10% points to a 32% tax, but only after recovery of capital. That brings the total post-recovery rates to a reasonable level for low cost fields.

Also, please note that this does not include the 20% withholding tax on distributions. Many taxpayers will operate as branches and make transfers to their home offices that are not subject to withholding because there is no branch profits tax, or they will transfer profits to other overseas affiliates to establish new operations. This is common practice for American corporations. Stated another way, the absence of a branch profits tax and the significant withholding taxes are likely to encourage operating as branches as opposed to forming Mozambique subsidiaries.

The author's review of other countries' rates shows a highly variable pattern:

Corporate Tax Rate – Corporate Tax Rates range from 15% to about 42% with an average between 30 and 35% when federal and regional taxes are weighed (if there is a provincial or local tax). Tax rates in this area are very similar to that of the oil and gas sector with the exception of the lack of profit sharing contracts altering the corporate income tax rate.

Remittance tax – Taxation in this category ranges from 0 to 30% in each category. Amounts seem arbitrary but total tax in this area ranges from a combined total (dividends, interest, service and capital gains taxes) of 12.5% across the board in Bolivia to Chile's 35, 30, 15, and 20% rates. Most countries hover between the 15%-20% range for any form of remittance taxation. That puts Mozambique in the normal range.

Specific Mining Tax – Mining taxes are extremely variable from country to country, ranging from 0 to 25%. Countries that do have such taxes generally impose it on a sliding scale according to mineral production. After a certain production amount is reached the tax rate is capped.

Fiscal Stability Regimes and Incentives – generally fiscal stability regimes do not exist, except for individual agreements made on a per company basis with the government. Terms and conditions are determined at that time. This makes Mozambique typical.

Incentives are often given for exploration and accelerated depreciation at the beginning of a project.

Government Mining Royalties – There is no trend in this area. Choices of whether to require royalties seem arbitrary. They plainly protect revenues.

V. A SUMMARY OF PROPOSALS FOR CHANGE

a. Proposal as to Taxes

Looking at the draft law in terms of its basic attributes from the point of view of tax policy, the picture is mixed:

- It produces considerable revenues, and is on the high side, although it arguably lacks a windfalls profit tax if mineral prices were to greatly increase.

- It will be difficult to administer, especially in connection with valuation under the MPT, and implementing the cash flow tax, and coordinating the three separate forms of revenue it calls for.
- It is reasonably transparent now, but in large measure because there is so much to interpret that has not been interpreted.
- It is not simple at all. It is complex and uncertain.
- It is not neutral. It only works for large companies because of the $5 million early payment, which is apt to push out small creative companies and result in a less competitive market, along with the complexity and uncertainty of negotiating a concession. It encourages early abandonment of (post-tax) unprofitable fields. It discourages investments in high cost fields.

b. Proposals other than as to rates

Taken as a whole the draft law is complicated and in need of streamlining.

1. The MPT

To repeat, the draft's proposal with respect to the MPT is likely to lead to disputes. A good solution is to convert the rather complicated MPT and into a royalty that is treated as a retained government share, free of costs, rather than treating it as a separate tax. The royalty assures some revenue for the government, even if the operator is falling apart, which is normal and I think prudent practice. Make the royalty simple to calculate by basing it on actual sales. The royalty approach has the additional merit of eliminating the harshness of not allowing a deduction for the MPT in computing corporate income taxes. Operators will understand the system and it will be clean and simple.

The author realizes that some countries treat the operator as receiving all the income then deducting the royalty.

Recommendation: make it a royalty for simplicity and base it on sales for reality.

2. The corporate income tax component

It is good that the amortization and depreciation schedules are in the law so that they are visible and independent of some change to the old Proclamation they are apparently currently embodied in. On the other hand, I cannot fully understand them and consider them complex.

Keep the rate. It is in line with international norms. However, if you want to simplify the system, you could move to the Norwegian model. In fact, you could adopt it in large measure and eliminate all the other components of the law. The problem is that the Norwegian law lacks the protection of a royalty.

Recommendation: in the interest of simplicity, consider disregarding intercompany sales of output and make the sole measure of income final sales to the first unrelated party.

An approach under U.S. law in this area is to demand that the taxpayer who engages in a related party sale promptly make a record of the reason for the price or face a higher penalty structure in the event the price is investigated and found to be wrong.

3. Rent Tax

Its underlying purpose of increasing taxes once the taxpayer has received back its expenditures plus a return on those expenditures is reasonable tax policy, but in practice the draft law (which relies on the "R-factor" approach) is convoluted and confusing. For actual implementation, I recommended applying the rules that appear as professional accounting practice. Specifically, the (American) 1987 "Statement of Financial Accounting Standards" (No. 95) issued by the Financial Accounting Standards Board (FASB) which requires businesses to issue a statement of cash flow; there are two ways to presenting this statement, the direct method and the indirect method. The FASB encourages using the direct method for reporting. The FASB is the professional accounting body of the United States and is highly competent and FASB 95 is a thorough document. It is located at http://www.xavierpaper.com/documents/usgaap/n.Fas95.pdf.

The direct method reports major classes of operating cash receipts and payments. One starts with money received and then subtracts money spent, to calculate net cash flow. Depreciation is excluded altogether because, although it is an expense that affects net profits, it is neither money spent nor money that is received. The indirect method is really just a more complicated version of the indirect method because it starts with net profits, and is somewhat like the proposal in the draft mining law.

I strongly recommend using a standard direct cash flow method, and applying it as the measure of profitability in order to determine a moment when income taxes should increase, (I would use FASB rules to determine the calculation in order to have an objective external standard) and drop this extra tax in favor of a higher corporate tax rate. The result will be a much simpler, less controversial tax system, with savings to government and taxpayers. The revenue changes compared to a tax on net cash flow should be trivial.

I have prepared as an attachment a simplified imaginary cash flow statement and tied it to the most common method for determining whether a company should undertake a project. It is based on so-called present value theories and is below.

The essential idea from the operator's point of view is to determine the minimum acceptable return by projecting its future net cash flows (after taxes) and then discount the net future receipts and disbursements by a discount rate unique to the company. For example, if there were only two years at stake and the discount rate were 17% the company would have to get back $117 in a year in order to justify the project. Notice that in that case, the sum of the positive $117, as discounted, exactly equals the $100 disbursement. Under these circumstances, the discount net return is 0 and that is "acceptable." Anything less would not be.

Now imagine an 8-year project with the following attributes. In the first year the taxpayer invests 10,000 units of currency, then 20,000 in the second year and so forth. Returns of cash begin in the fourth year and end in the eighth year.

Net cash paid in units of currency	Net cash received in units of currency
10,000	
20,000	
30,000	
	40,000
	50,000
	60,000
	30,000
	10,000

Result: The operator received a net cash flow of $130,000 over the 8 years.

Using an 18% discount rate, the discounted present value of the project is 35,694 if one assumes the payments were at the start of each period and 42,119 if one assumes they were at the end of each period.

The discount rate is, as taught at graduate business schools, the company's internal cost of capital (basically meaning its cost of obtaining capital in an optimum mix of debt and stock) plus other such things as country risk.

Recommendation: adopt this proposal of pure cash flow discounting in the interest of modernity and clarity. Starting with the income tax means starting from a complex base and adjusting backwards with adjustments that a controversial, such as denying interest expense deductions.

Applying this to Mozambique.

The Mining Rent Tax could be revised to provide that taxpayers must determine their annual net cash flows as directed by FASB's 1987 rules and, using 18% as their mandatory discount rate, and compute each year's discounted net cash flows (reaching back as far as 84 months before obtaining a Concession agreement) directly allocable to the project and, when the accumulated discounted net cash flow turns positive, suffer the additional tax on net cash flows or, (as I would suggest) pay income taxes at a 10 percentage point higher rate.

The merit to this is that every business person will understand the concepts and will almost surely prepare cash flow statements, so the administrative burden is small. In addition, there is an objective stable external standard for preparing the statements. In addition, there will not be an extra tax to administer and coordinate with the corporate tax. The only change will be to its rate, which is the simplest way to modify income taxes. I believe this approach will cause investors to perceive Mozambique as being more in step with modern financial thinking that the draft's approach to the Mineral Rent Tax.

4. Denial of interest expense payments

According to my research, interest paid to a resident or nonresident is generally subject to a 20% withholding unless (in the latter case) the rate is reduced under a tax treaty. This will increase revenues by 20% of each payment, but each payment stands to reduce corporate income taxes by

32%. The thin capitalization proposal in the law is sensible in this regard, but it should specify whether 'equity' is based on fair market value or financial numbers.

Recommendation: use value because it ties to the reality of banking practices, but base erosion is a serious problem (now under serious review by the OECD) and using financial values is easier to apply than fair market values. I recommend you watch OECD developments closely in this area.

5. Withholding taxes

There is no branch profits tax. This facilitates branches of foreign corporations moving money to the home office or elsewhere with no withholding, Branch profits taxes treat such repatriations as dividends or interest. They are complicated taxes to administer, but prevent drainage of funds.

The withholding tax rates are comparatively high and can lead to trapping funds in Mozambique because the withholding taxes. I did not compute their impact because they create the alternative of not distributing dividends but instead moving profits to other countries where the funds are invested in fresh projects. This is a chronic practice of US companies.

Branch profits taxes. The concept is fairly recent and is as follows. It is the American version of what Mozambique could impose. In 1986, Congress enacted branch profits and branch-level interest taxes, which apply only to foreign corporations carrying on business through unincorporated branches in the United States. If a foreign corporation does business in the United States through a U.S. subsidiary, profits of the subsidiary distributed to the shareholder as dividends are subject to two U.S. taxes—the corporate income tax and a withholding tax on the dividends. The branch profits tax—a tax on profits earned in the United States through an unincorporated branch and deemed repatriated by the foreign corporation owning the branch—is intended to be comparable to the withholding tax on dividends that would apply if the branch was incorporated as a U.S. subsidiary. If a U.S. subsidiary borrows from abroad, interest on the debt is generally deductible by the corporation, but it is U.S. source income to the creditor, which may be subject to the withholding tax. The branch-level interest tax, which parallels the branch tax on transferred profits, is intended to be a comparable withholding tax on interest deducted by an unincorporated U.S. branch of a foreign corporation.

Recommendation: add a branch profits tax to the withholding tax system to protect your revenues.

Recommendation: Enter into bilateral tax treaties. Accept withholding tax rate reductions in favor of the improved enforcement that comes with such treaties.

Recommendation: because "base erosion" (erosion of taxable income by devious means such as excessive payments to affiliates) is a serious problem (now under serious review by the OECD), I recommend you watch OECD developments very closely in this area and prepare to adopt OECD standards, because they are likely to be thoughtful.

6. Application of revenues

I included an extensive addition to the draft law to conform to EITI standards and to minimize diversion of revenues.

Recommendation: Adopt proposed Article 72 above to coordinate with the EITI. This is discussed below.

VI. Timing of Revenues

Clearly, if the same amount of revenue is involved, then receiving the revenue early is preferable to receiving it late. Of course the operating company has exactly the opposite preference. Because of risk of failure for some reasons (mine collapse, civil unrest, etc.) companies going in to new areas with institutional weaknesses will particularly resist because of heightened risk of loss, as compared to Norway, for example. In the US, where mining has been in private hands during a century of activity, it is common practice for the operating company (usually a lessee) to pay the lessor a bonus, usually recoverable out of a share of later production; the Treasury Department treats the prepayment as a true bonus which is subject to depletion deductions.

Obviously, in some cases the host country simply needs money, in which case it can, among other things, borrow against future revenues (Russia's case for some time) or simply "front load" its revenue share within limits tolerable to operating companies. In theory, in the absence of risk increasing with time, as long as the discounted net cash flow from the project is not reduced by early payment, early payment is acceptable. On the government side, it must recognize that the operator engages in extensive financial modeling before its commits to a project, and in doing so will normally employ discounted net cash flow spread-sheets to evaluate the project.

In the author's view, the timing of the revenues in the draft law is roughly normal, namely an initial commitment (which may be too heavy for small projects) and a rising share of field revenues over time, with bonus payments along the way. However, the over 100% tax situation must be fixed to prevent loss of later revenue, or any from high cost production activities. This will tend to maximize early revenues, followed by a decline as operators move into high cost projects. All things being equal, it will tilt activities away from, e.g., diamonds (which I understand to be a high cost/yield activity) in favor of low cost production, such as surface mining of coal. On the other hand, this early capture will create funds for infrastructure that facilitate more rapid resource extraction.

VII. Best Practices

The author was asked for comments on the draft law in relation to the International Extractive Industries Transparency Initiative (EITI) and Publish What You Pay.

The Initiative is supposed to increase transparency over payments by companies from the oil, gas and mineral industries to governments and to government-linked entities, as well as transparency over revenues by those host country governments. The core idea is for companies to publish what they pay and for governments to report what they receive embodied in an EITI report. Procedurally, EITI demands that EITI Reports be comprehensible, actively promoted, publicly accessible, and contribute to public debate.

This is an issue I think important because mining is so environmentally disruptive it is to have a duty to restore the land, which I understand the Concessions provide for, as does the draft

Mining law, but the mining law refers to other laws so I cannot be sure how certain it is that the duty exists. In my strong opinion, mining companies should, after development begins, set aside reserve funds each year into a well-protected fund to prepare for future restoration. Payments into the fund should be deductible, but merely recording a liability should not be deductible. Income on the fund should not be taxed, and when the funds are paid out they should be income to the miner. The miner should then deduct amounts actually paid for land restoration.

The author saw nothing in the draft petroleum law that suggests further transparency. It is considered that absence as a failing. A few proposals were inserted in pursuit of EITI compliance as proposed amendments.

Below are the Draft Standards. They are likely to be accepted. The comments are inserted in bold.

*1. **Each country's EITI sets its own objectives.** All EITI implementing countries already develop an 'EITI work plan'. In the revised EITI Standard, a country's work plan will have a much more significant role. EITI multi-stakeholder groups (MSGs) in each country are required to set their own implementation objectives. These should articulate what they want to achieve with their EITI, and how they plan to realize these objectives. This ensures that the EITI is well-grounded in the national dialogue about how their natural resources are governed.*

The author knows nothing about this process in Mozambique.

*2. **Presenting the context.** In order to make the EITI Reports easier to understand and use, the revised EITI Standard introduces a new requirement that EITI Reports must contain basic contextual information about the extractive sector. This includes*

- *ensuring disclosure of production figures,*
- *ensuring disclosure of ownership of the license holders, with disclosure of ultimate beneficial ownership being encouraged,*
- *a description of how revenue allocations into state, local or other accounts,*
- *a description of the fiscal regime, with disclosure of production contracts being encouraged.*

This is seen as an internal matter.

*3. **New disclosure requirements.** Several of the EITI reporting requirements found in the previous EITI Rules have been strengthened and the EITI Standard introduces new reporting requirements in a number of areas:*

i. *Comprehensive and accurate disclosures. It is required that the EITI Report contains full government disclosure of all revenues received from the extractive industries. The reporting procedures have also been strengthened, requiring the Independent Administrator and the MSG to assess prevailing auditing practices and agree procedures for assuring the data to be disclosed in the EITI Report. These changes seek to ensure that the EITI Report provides*

a complete picture of the revenues received, and that the EITI Report more clearly addresses the reliability of the data.

ii. *Disaggregated reporting. The data in the EITI report must now be presented by individual payment type, company and government agency and by project. Project level reporting is to be consistent with requirements in the US and EU.*

iii. *State-owned companies. The revised EITI standard requires more transparency in of state-owned companies (SOEs) activities. SOEs will now report on financial transfers between SOEs and other government entities, revenues collected on behalf of the government, including revenues from the sale of the state's share of production, and any expenditure on social services, public infrastructure or fuel subsidies executed by the SOE. SOEs are also required to disclose their level of ownership in any extractive companies operating in the country.*

iv. *Sub-national transfers. In many countries, most of the revenues from natural resources accruing at sub-national levels are not derived from company payments to local government entities, but from transfers from the central government. Depending on the revenue-distribution frameworks in place, these transfers can be a considerably larger source of revenue for sub-national entities than taxes and fees collected at local levels. The revised EITI standard requires that such transfers are reported where mandated by law and where material.*

v. *Social expenditures by companies. Where companies are legally or contractually required to make social contributions, these must be disclosed.*

This is not a tax law matter.

vi. *Payments from transit. Where countries collect significant revenues from the transportation of oil, gas and minerals, such as pipelines, the government is required to disclose the revenues received.*

This is not a tax law matter.

*4. **Annual activity reports. The requirement to publish annual activity reports is no longer limited** to Compliant countries, but is now a requirement for all implementing countries. It is foreseen that countries will report on progress with meeting the EITI requirements as well as efforts to achieve the objectives set out in their work plans.*

*5. **Improved EITI Validation procedures.** Changes to the EITI quality assurance process aim to improve the quality, efficiency and consistency of Validation assessments. Validation will now be procured and managed by the International Secretariat rather than by implementing countries. Countries will undertake Validation more frequently, with Compliant countries being revalidated every three years as opposed to every five years.*

*6. **Simplified and restructured.** Part one 'Implementation of the EITI Standard' includes: the EITI Principles, which have not been modified. Part two now includes the seven EITI Requirements, which set out the expectations of implementing countries in a clearer and more logical way. The requirements incorporate the majority of the provisions found in the EITI Criteria, Requirements and Policy Notes in the 2011 EITI Rules. The Validation Guide has been revised to reflect the agreement that Validation will be administered by the International Secretariat. The Civil Society Protocol - identical to Policy Note 6 in the 2011 Rules – has been retained. Part three on Governance and Management sets out how the EITI is governed and includes: slightly amended*

Articles of Association; the EITI logo policy; the EITI openness policy; and slightly amended draft EITI constituency guidelines.

*7. **Making the data machine-readable**. With the wealth of new data in future EITI Reports as well as through the new disclosure rules in the EU and the US, this vast amount of data will be of little use unless it is made available in open and accessible formats. In the revised EITI Standard, countries are encouraged to make their data available in machine-readable formats so that citizens, journalists and analysts can use the information to analyze, visualize and compare it with other data sources.*

Comment: See the proposed new Article 72 relating to use of revenues which attempts to coordinate EITI with this draft law.

VIII. Proposals for further work

There is a lot more to be done. The author does not know the tax administration in Mozambique, but would like to can offer some ideas:

- The draft law will require interpretative and procedural regulations in order to implement it smoothly. Often just have *any* interpretation, almost no matter what it is, is better than having none.
- The movement of funds needs to be embellished and hardened to assure there is no graft or "milking" of revenues.
- Anti-bribery laws need to be consulted to see if they are realistic in light of the enormous amount of money that is at play in the oil and gas sector. If they are found to be weak, they should be improved, either by regulation or legislation, as the circumstances dictate.
- EITI compliance needs to be implemented scrupulously.
- The tax administration process should be reviewed to make sure it is as impregnable as possible from corruption.
- Whistle-blower legislation should be enacted.
- Civil and criminal penalties should be reviewed to see if they are sufficient to deter impropriety.
- Investigate of entering into more tax treaties. The larger the network of treaties the better from the Concessionaire's point of view. The problem of contrived transfer prices can be reduced be entering into bilateral tax treaties because they offer mutual administrative cooperation with respect to transfer pricing for the purpose of forcing ruthful pricing on multinational corporations. There is also a recent multilateral tax enforcement treaty that goes a long way toward allowing governments to collect unpaid taxes of foreign persons in foreign courts (OECD Convention on Mutual Administrative Assistance in Tax Matters).
- Mozambique -- and every other country -- should look into this opportunity. NB: transfer pricing investigations are now apparently the most common tax examination issue that natural resources companies face.

APPENDIX A. PWC STUDY OF TOTAL MINING TAX CONTRIBUTION STUDY

This Appendix is saved separately to reduce the size of the file for purposes of posting in particular in the internet and in this way expand its access by the public.

APPENDIX B: PWC SELECTED COUNTRIES MINING TAX STUDY

This Appendix is saved separately to reduce the size of the file for purposes of posting in particular in the internet and in this way expand its access by the public.

APPENDIX C: AUTHOR'S MULTI-COUNTRY MINING TAX TABLES

Country	Fiscal Regime	Corporate Income Tax Rate	Production Sharing Contracts with Government	Royalties Tax Rate
Algeria	Depending on the date on which the petroleum contract was signed, the Algerian fiscal regime applicable to the oil and gas upstream industry is governed either by Law No. 86-14 dated 19 August 1986 or Law No. 05-07 dated 28 April 2005 (as amended by Ordinance No. 06-10 dated 19 July 2006), production sharing contract (PSC) or other similar contracts concluded between the Algerian authorities and the contractor.	38%		20% but can be reduced to 16.25% and 12.5% dependent upon territory. Ministry of finance can reduce to 10% upon discretion
Angola	There are three types of contracts, each with different tax regimes: 1. Production sharing agreement (PSA) — the most common form of arrangement 2. Partnership — applicable only to certain partnerships set up in the 1960s and 1970s, such as Block 0 and FS/FST 3. Risk service contract (RSC)	50% if operate under production sharing agreement, 65.75% if no PSA		
Argentina	Argentina is organized into federal, provincial and municipal Governments. The fiscal regime that applies to the petroleum industry principally consists of federal and provincial taxes.	35%		
Australia	The fiscal regime that applies in Australia to the petroleum industry consists of a combination of corporate income tax (CIT) and either a petroleum resource rent tax (PRRT) or royalty-based taxation.	30%		0-12.5%

Brazil	The Brazilian fiscal regime that applies to the oil and gas industry consists of corporate income tax (CIT) and government and third-party takes. Government and third-party takes vary depending on the type of contract. Two types of contracts are Concession contract and production sharing contract	15% plus surtax of 10% for profits over BRL 240,000 and social contribution tax of 9%. Taxation is the same for entities bearing CC or PSC contracts, or both.	Yes	10% of total production volume each month x relevant reference prices (ANP). May reduce production volume by 5% in some circumstances

Country	**Fiscal Regime**	**Corporate Income Tax Rate**	**Production Sharing Contracts with Government**	**Royalties Tax Rate**
Canada	The fiscal regime that applies to the oil and gas industry in Canada consists of a combination of royalties and income taxation	15% + 10-16% provincial rate		20% but can be reduced to 16.25% and 12.5% dependent upon territory. Ministry of finance can reduce to 10% upon discretion
Chad	Chad’s fiscal regime applicable to the upstream petroleum industry consists of: i) the Chadian Petroleum Code (Law no. 006/PR/2007 dated 2 May 2007 pertaining to hydrocarbons and Ordinance No. 001/PR/2010 dated 30 September 2010, which approves the standard production sharing contract (PSC) and modifies and completes the provisions of the above-mentioned Law regarding petroleum operations); ii) the standard production contract (hereafter referred to as the Model PSC); iii) the PSC and concession agreements (CA) concluded between the state of Chad and the contractors (the oil companies), and iii) the Chadian Tax Code.	40% under a product sharing contract	Yes	14.25-16.5 for crude, 5-10% gas

Colombia	The fiscal regime that applies in Colombia to the petroleum industry consists of a combination of corporate income tax (CIT) and royalty-based taxation.	33%		8% (up to 5000 barrels/day), 8+ [production – 5,000] * 0.10 (5001 to 125,000 barrels/day), 20% (125001 to 400,000 barrels/day), 20+ [production – 400,000]* 0.025 (400,001 to 600,000 barrels/day), 25% (more than 600,000 barrels/day)
Côte d'Ivoire	The fiscal regime applicable to the petroleum industry in Côte d'Ivoire consists of Ivorian tax law, the Ivorian petroleum code and the production sharing contracts (PSC), or the contract of service concluded between the Ivorian Government and the contractor (hereafter referred to as the Holder).	25%. In terms of the PSC, an E&P company finances all exploration and development costs and bears all costs and risks of this operation in the event that no oil and gas is found.	Yes	Depends on terms of Product sharing contract
Congo	The fiscal regime applicable to the petroleum industry in the Democratic Republic of Congo (DRC) consists of the Congolese Tax Law, the General Tax Code dated March 2003, the Reform of Tax procedures book dated 13 March 2003, the Hydrocarbon Ordinance-Law n°81-013 dated 2 April 1981, customs code and customs tariff, the relevant production sharing contract (PSC) or other similar contract concluded between the Government and the oil company, and the provincial legislation	40%	Yes	Rate depends on the terms of the PSC

Country	Fiscal Regime	Corporate Income Tax Rate	Production Sharing Contracts with Government	Royalties Tax Rate
Ecuador		23%, 22% in 2013	Yes (81.5-87.5%)	12.5% to 18.5%
Equatorial Guinea	The fiscal regime that applies to the oil and gas industry is provided by the EG Tax Code (EGTC) dated 28 October 2004, the EG Hydrocarbon Law No. 8/2006 dated 3 November 2006, the production sharing contract (PSC) or other similar contract concluded between the Equatorial Guinea (EG) Government and the contractor	35%	Yes	>13%
Indonesia	The fiscal regime applicable to oil and gas companies consists of product sharing contracts (PSCs) that are entered into between contractors and BPMIGAS, the Indonesian executive body for oil and gas upstream activities (previously Pertamina on behalf of the Government).	25%		
Iraq		15%, 35% if related to upstream oil and gas activities		
Kazakhstan	This article describes the fiscal regime in force for almost all existing and all new contracts from 1 January 2009. This regime is applicable to all contracts except production sharing agreements that became effective prior to 1 January 2009 and contracts specifically approved by the president of Kazakhstan. The generally applicable fiscal regime that applies in Kazakhstan to exploration and production (E&P) contracts in the petroleum industry consists of a combination of corporate income tax (CIT), rent tax on export, bonuses and royalty-type taxation. Oil and gas production	20% as of 2010		

	activities are ring- fenced from downstream activities and from each other (i.e., contract by contract) for tax purposes			

Country	**Fiscal Regime**	**Corporate Income Tax Rate**	**Production Sharing Contracts with Government**	**Royalties Tax Rate**
Kenya		30%		
Libya	In Libya, the fiscal regime that applies to the petroleum industry consists of a combination of corporate income tax (CIT) and a surtax. Under the production sharing contract (PSC) regime, taxes are deemed to be paid by the This is National Oil Company (NOC), and the tax computation is notional.	20% plus an adjustment for 4% royalty		16.67%
Mexico	There are no special tax rules applicable to the petroleum industry. It should be noted that oil activities are reserved for the Mexican Government, and Petróleos Mexicanos (PEMEX) is the responsible agency. PEMEX, as a government agency, has a particular taxation regime, which is not covered by this guide. The intention of this guide is to provide an overview of the tax rules applicable to companies that provide services to PEMEX or are engaged in the oil industry in Mexico. However, PEMEX subcontracts an extensive variety of services to domestic and international providers, among them: drilling, supply, engineering and construction.	30% (29% in 2013 and 28% in 2014		

Country	Fiscal Regime	Corporate Income Tax Rate	Production Sharing Contracts with Government	Royalties Tax Rate
Namibia	The fiscal regime that applies to the petroleum industry in Namibia consists of a combination of petroleum income tax (PIT) under the Petroleum (Taxation) Act 3 of 1991 (the PTA), the administrative provisions as contained in the Income Tax Act 24 of 1981 (the Income Tax Act) and royalties levied on sales under the Petroleum (Exploration and Production) Act 2 of 1991 (the Petroleum Act).	35%		5% of gross revenues
Nigeria	Companies carrying on petroleum operations are deemed to be in the upstream regime and taxed under the Petroleum Profits Tax Act. Nigeria operates on both a licensing and contractual regime. Under licensing regime there are two arrangements. These are joint ventures between the fed gov't and the international oil company and the sole risk operator. The contractual regime arrangements are the risk service contracts and the production sharing contracts.	65.75% (first 5 years), 85% (first 5 years existing companies),85% (Subsequent years for all companies) and gov't share based on production		0-20%
Peru	Oil and gas exploration and production (E&P) activities are conducted under license or service contracts granted by the Government. The Government guarantees that the tax law in effect on the agreement date will remain unchanged during the contract term.	30%. Prepay of final income tax @ 2% per month		5% (<5 barrels per day), 5-20% (5-100bpd), 20% (>100bpd)
Tanzania		25% or 30%		

Venezuela	The fiscal regime that applies to the petroleum industry in Venezuela consists of a combination of corporate income tax (CIT), royalty tax, indirect taxes and special contributions.	50% of net profits		33.33% on the value of the crude oil extracted

APPENDIX D: TOTAL TAX TAKE

Corporate Income Tax Rates – Overall it seems that all countries hover within a 10% rate of taxation with the exception of very few outliers. Developing countries tend to have higher rates, but also have clauses to allow for reduction at their discretion or taxation at a rate according to the held production-sharing contract with the government.

Africa as a whole tends to have reasonable tax rates on their face, similar to that of western developed countries, but has other taxes that increase the rate over that of the developed countries such as import/export taxation and on average higher withholding rates. Royalty rates tend to be lower in African countries compared to developed countries, but royalty rates are often subject to the production-sharing contract with the government. Most African countries have clauses that allow for taxes to be determined at a later time by the appropriate authority, something that countries with a developed oil and gas industry do not allow.

Peru and Kazakhstan subject companies to the most categories of taxation, but the overall rate is not higher than any others. They contrast developing African countries well b/c such countries have fewer categories of taxation, but at higher rates.

Venezuela on the other hand is by far the highest tax jurisdiction, not only taking 50% tax on net profits, but also royalties at the rate of 1/3 the value of the crude oil extracted and extreme withholding amounts for non-resident individuals and corporations.

Iraq is the outlier on the low-end because taxation is capped around 35% for oil and gas related activities with reasonably low withholding amounts. Developing African countries tend to have higher withholding rates in any category, if there is withholding.

Investment incentives tend to be given mostly by countries with developed oil and gas industries. With such development also comes more advanced formed of incentives and more restrictions on such incentives, e.g. specific areas promoted for extraction for which credits are given as well as specific timing for write-offs (forces the companies to choose between taking the deduction or starting extraction).

TABLE SHOWING INTERNAL RATES OF RETURN TENDS TO SHOW 18% INTERNAL RATE OF RETURN USED FOR CASH FLOW TESTING IS GENEROUS RATE IF NOT ALL TAXES ARE CONSIDERED

Fiscal Terms Index (Un-weighted Score)

Fiscal System	Gov Take	Index Score	PI	Index Score	IRR	Index Score	Progressivity/ Regressivity	Index Score
Algeria onshore	86%	4.32	1.83	0.00	25%	0.43	-9%	1.50
Angola offshore	78%	3.70	1.32	1.93	16%	2.27	2%	0.17
Australia (Queensland) coalbed gas	40%	0.89	1.41	1.60	15%	2.56	-10%	1.67
Australia offshore	71%	3.18	1.57	0.99	20%	1.50	-8%	1.33
Brazil offshore	72%	3.28	1.62	0.80	14%	2.78	-22%	3.67
Canada (Alberta) conventional oil	61%	2.49	1.32	1.93	16%	2.45	-30%	5.00
Canada (Alberta) oil sands	67%	2.91	1.10	2.78	9%	3.85	-19%	3.17
Canada (British Columbia)	40%	0.87	1.17	2.52	13%	2.97	1%	0.16
China offshore	80%	3.88	1.46	1.41	12%	3.20	8%	1.21
Colombia onshore	82%	4.03	1.20	2.40	16%	2.35	-4%	0.67
Germany onshore	61%	2.46	0.80	3.92	6%	4.49	-11%	1.83
India offshore	57%	2.16	1.23	2.28	15%	2.56	-16%	2.67
Indonesia coalbed gas	79%	3.78	1.35	1.81	23%	0.76	-12%	2.00
Indonesia conventional gas offshore	82%	4.00	1.07	2.91	11%	3.38	-13%	2.17
Kazakhstan offshore	78%	3.73	1.17	2.51	13%	2.99	9%	1.33
Libya onshore	91%	4.66	1.43	1.51	17%	2.09	4%	0.52
Malaysia offshore	93%	4.85	0.93	3.42	7%	4.27	-12%	2.00
Norway offshore	79%	3.79	1.04	3.02	12%	3.28	27%	4.50
Poland onshore	28%	0.00	1.50	1.26	16%	2.35	-8%	1.33
Russia onshore	73%	3.36	1.26	2.17	14%	2.78	-22%	3.67
United Kingdom offshore	62%	2.53	1.13	2.66	12%	3.20	0%	0.00
U.S. Alaska onshore	76%	3.59	1.09	2.81	11%	3.36	-18%	3.00
U.S. GOM deepwater	64%	2.65	1.04	3.01	10%	3.64	-18%	3.00
U.S. GOM shelf	79%	3.77	0.72	4.23	4%	4.83	-16%	2.67
U.S. Louisiana onshore gas	85%	4.27	1.03	3.05	27%	0.00	-9%	1.50
U.S. Texas onshore	76%	3.55	0.95	3.35	11%	3.42	-17%	2.83
U.S. Wyoming gas	66%	2.85	1.22	2.33	14%	2.81	-17%	2.67
Venezuela conventional gas	84%	4.18	0.98	3.22	9%	3.78	-13%	2.17
Venezuela heavy oil	95%	5.00	0.52	5.00	4%	5.00	-5%	0.83

Alternative Federal Fiscal Systems								
U.S. GOM deepwater 12.5% royalty	55%	2.01	1.11	2.74	11%	3.32	-14%	2.33
U.S. GOM deepwater 20% royalty	65%	2.76	1.02	3.08	10%	3.68	-17%	2.83
U.S. GOM deepwater 25% royalty	72%	3.28	0.96	3.31	8%	3.93	-18%	3.00
U.S. GOM deepwater sliding scale royalty	65%	2.79	1.02	3.08	10%	3.71	-7%	1.17
U.S. GOM shelf 12.5% royalty	70%	3.13	0.77	4.03	5%	4.58	-13%	2.17

Fiscal System	Gov Take	Inde x Score	PI	Index Score	IRR	Index Score	Progresivity/ Regressivity	Index Score
U.S. GOM shelf 20% royalty	80%	3.88	0.71	4.27	4%	4.84	-17%	2.83
U.S. GOM shelf 25.5% royalty	85%	4.25	0.66	4.44	3%	5.00	-18%	3.00
U.S. GOM shelf sliding scale royalty	81%	3.92	0.69	4.33	4%	4.87	-6%	1.00
U.S. Wyoming gas 18.75% royalty	71%	3.24	1.14	2.63	13%	3.00	-17%	2.67
U.S. Wyoming gas 20% royalty	72%	3.31	1.12	2.71	13%	3.06	-17%	2.50
U.S. Wyoming gas 25% royalty	77%	3.62	1.05	2.96	11%	3.30	-16%	2.67
U.S. Wyoming gas sliding scale royalty	68%	2.96	1.19	2.45	13%	2.88	-13%	1.83

Source: IHS CERA