Area-Based Stumpage Rates for the Oil and Gas Industry
Backgrounder
October 2004

Introduction

The purpose of this backgrounder is to provide the history and methodology of area-based stumpage rates used to capture timber revenue from the oil and gas industry.

Background

Area-based stumpage rates were developed for the oil and gas industry during the mid-1970's.

The Ministry of Forests (MOF) had to ensure compensation for removal of forest cover through oil and gas exploration and transportation activities. The oil industry wanted a system that removed the burden of conducting a timber value appraisal for every project. This was especially critical for seismic projects that could cover hundreds of hectares and several different forest types. It was agreed that the appraisal process was time-consuming and an averaging system could better meet the needs of all parties.

The areas that the MOF considered essential for realizing fair compensation included stumpage on mature wood that was equivalent to the current average district rate, compensation for immature timber volumes removed, and some means of accounting for the removal of forested land base from future production. To this end, a formula was developed by the Ministry that would be applied across all forest types for simplicity in capturing revenue.

Basis of the Calculation

The steps for generating rates are as follows:

a) Based on the previous year's revenue in by district, the average value per cubic metre is generated by dividing the total value billed for each commercial species of conifer and deciduous by the total volume billed. The Peace District is used for the example. The Peace district includes the Fort St. John Timber Supply Area (TSA), the Dawson Creek TSA and Tree Farm Licence (TFL) 48.

Table 1

Year	Region	District	Conifer/ Deciduous	Competitive	Volume Billed (m^3)	Value Billed ($)	Average Rate ($)
2003	RNI	DPC	C	N*	1,481,722.75	10,809,663.78	7.30
2003	RNI	DPC	C	Y	463,361.52	12,298,566.99	26.54
2003	RNI	DPC	D	N*	527,328.06	263,633.73	0.50
2003	RNI	DPC	D	Y	51,845.34	82,356.68	1.59

**Non-competitive volumes have no silviculture levy.*

b) The district's trended silviculture levy is added to the conifer per cubic metre stumpage rate to capture true value. No silviculture levy is applied to the deciduous rate.

c) District subsequently generates a blended average stumpage rate by leading timber type (conifer or deciduous) for the district.

Steps:

1) From Table 1, multiply the sum of the non-competitive average stumpage rate and the silviculture rate by the volume billed to find the new value
2) Add the new non-competitive volumes and values to the competitive volumes and values
3) Divide the combined value by the combined volume to establish an average cubic metre rate for the district (Table 2).

Table 2

Conifer	Volume Billed (m^3)	Rate ($)	Silviculture Levy	Adjusted Rate ($)	Value ($)
Non - Competitive	1,481,722.8	7.30	8.1	15.4	22,862,982.03
Competitive	463,361.5	26.54		26.54	12,297,614.74
Sum	1,945,084.27			**18.08**	35,160,596.77

In Table 2, the stumpage rate is $18.08 per cubic meter ($m^3$). The process is repeated for deciduous:

d) The cubic meter value determined in steps a) through c) is then multiplied by the gross amount of timber in the district, again by timber type, to generate a gross district value of standing volume (Table 3).

Table 3

DPC	Volume	Rate	Value
Conifer	583,796,664	18.08	$10,555,043,685.12
Deciduous	129,321,104	0.60	$77,592,662.40

e) The immature value of species of for both types is generated across the district by Economics Branch.

f) These four values are then blended together to determine the total value of timber in the district (Table 4).

Table 4

DPC Forested land base	Volume (m^3)	Rate ($)	Value ($)
Conifer	264,238,166	18.08	$10,555,043,685.12
Deciduous	129,321,104	0.60	$77,592,662.40
Conifer Immature			$1,103,822,580.22
Deciduous Immature			$848,074,200.40
Total			**$12,584,533,128.14**

g) To generate the per hectare rate for the district, the total value is subsequently divided by the total hectares MOF managed in the district. For districts with multiple TSA's and/or TFL's, the numbers need to be blended. The total area in the Peace District is 7,269,754 hectares.

Table 5

DPC Forested land base	Volume (m^3)	Rate ($)	Value ($)
Conifer	583,796,664	18.08	10,555,043,685.12
Deciduous	129,321,104	0.60	77,592,662.40
Conifer Immature			1,103,822,580.22
Deciduous Immature			848,074,200.40
Total District Value			12,584,533,128.14
Average Rate/ha			**$1,731.00**
Gross District Area	7,269,754 ha		

Administration

In the past, the appraisal manual was updated every two to three years for area-based rates, and rates were based on past average stumpage values for northeastern BC. It is the Ministry's intent to issue a new rate on an annual basis to reflect the previous year's stumpage values for each district.

Previously, Fort Nelson, Fort St. John and Dawson Creek rates were blended into one rate. Rates for the future will be generated on a district basis; therefore, separate rates will be applied for each district in which oil and gas activities occur.

Rates for the September 1, 2004, through August 31, 2005, period became effective on September 1, 2004. It is the MOF' intent to generate new rates effective September 1st on an annual basis.

District-specific rates for the period from September 1, 2004, through August 31, 2005, are:

Fort Nelson:	$1,040 per hectare
Peace:	$1,731 per hectare
Mackenzie:	$2,122 per hectare
Cranbrook:	$1,663 per hectare

Operating Policy and Procedures for Stumpage, Utilization and Billing For the period September 1, 2004 through August 31, 2005

Stumpage

For geophysical exploration, well sites, plant sites and/or access right-of way to well and plant sites; area-based stumpage will be assessed for the gross area of the project.

Separate area-based rates for each district are identified in the Interior Appraisal Manual (IAM). Please refer to the backgrounder for information on area-based stumpage rates and methodology.

New area-based rates were included in the fall amendment of the IAM, effective September 1, 2004.

One significant change is opportunity for a stumpage reduction to the area-based rate for **minimal impact seismic *** operations. Operations that meet the criteria for minimal impact seismic will be billed at half of the district rate. The gross area cleared as "minimal impact seismic" line is divided by 2 as defined by the Geophysical Final Plan Cover Sheet and the appropriate per ha rate from the table applied to adjusted area. This amendment to the IAM came into effect on November 1, 2004.

Stumpage reduction criteria

In order for a geophysical operation to qualify for the 50% reduction all of the following criteria must be met:

- an average line construction width of 4.0 metre (meandering avoidance) or less as determined in the Oil and Gas Commission's Geophysical Final Plan Cover Sheet;
- the line-of-site for wildlife management is minimized to a maximum of 200 hundred metres; and
- overall avoidance of merchantable timber occurs with a tolerance of up to 7 m^3 per hectare of impacted timber, averaged over the area submitted for stumpage reduction.

In situations where the entire geophysical program does not meet above criteria, only those sections of the program meeting these criteria will receive the 50% reduction.

Auditing will be conducted on areas where stumpage reduction operations have been identified in final plan submissions. In those instances where the audit indicates that low impact operations were not conducted as planned, the full per hectare rate will be applied.

Where pipeline development removes less than 2000 m^3 the holder of the Master Licence to Cut has the option of choosing a cruise and appraisal method for determining stumpage, or the area-based 'Reserve Stumpage Rate' methodology. Both of these methodologies are defined in Chapter 6 of the MOF Interior Appraisal Manual (IAM).

All wood where area based reserve rates are applied must be disposed of, and as the stumpage is paid, waste billing will not be applied.

Pipeline development that removes coniferous volumes between 2,000 to 5,000 m^3 must undertake a full appraisal using on-site data or data from a comparable cutting authority. Pipeline development that removes coniferous volumes greater than 5,000 m^3 require a full appraisal with on-site data. Merchantable timber that is not utilized under either of these methods must be scaled on-site and scale returns submitted to the MOF. A licensed and authorized scaler must be used. Waste billing will be charged on the basis of the scale returns. Auditing will occur to assess the accuracy of submissions.

For those projects that cross district administrative boundaries, rates for the portion within each district will apply. This will be based on Geophysical Final Plans or Wellsite and Pipeline as cleared plans.

Utilization

Utilization of wood will not be a requirement. Stumpage will be paid through the area assessment or the scale returns and, accordingly, it is the licensee's business decision on whether they will salvage the wood. However, in the practice of good forest management and public relations, the MOF strongly encourages licensees to salvage wood and market to milling facilities wherever possible. In those instances where the licensee deems that salvage is not feasible, opportunities for third party salvage shall be considered.

In all cases where the wood will not be salvaged, it must have complete disposal to MOF' standards due to forest health issues. Disposal may include, and is not limited to, lop, buck and scatter, chipping on-site, and burning.

The MOF requires the project operator to submit information for each project on the volume of merchantable wood not utilized and the gross area of plantation or immature stands (please refer to the attached form). Further changes to the billing system are being contemplated and the Ministry of Forest needs to have accurate estimates on volumes removed from mature, immature and reforested plantations that have been impacted. It is suggested that a qualified assessor be used for accuracy. Some auditing will take place.

Billing Generation

Billing will be generated upon submission of Geophysical Final Plans or as Cleared Plans for other projects. Geophysical Final Plans or as Cleared Plans are to be submitted 60 days after project completion. For those projects where MOF inspectors determine completion has concluded interim billing may be issued 60 days after the winter season ends. The billing rate will be the rate in the Interior Appraisal Manual as of the project or as cleared completion date reported in the final or as cleared plan. Area billed will be the gross project area reported in the final plan. Projects for which no Geophysical Final Plans or as Cleared Plans or cancellation has been received by the MOF will be billed at expiry date for the area in the proposal and any subsequent amendments.

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