ENTRANS Policy Research Group

Payments to Governments by the Canadian Mineral Sector 2003-2012

Prepared for the Mining Association of Canada

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1. Introduction

This report has been prepared by ENTRANS Policy Research Group for the Mining Association of Canada (MAC). Its purpose is to quantify the payments to federal and provincial governments by the Canadian mineral sector over the period 2003 to 2012. The report is the latest edition of earlier ENTRANS studies undertaken annually for the Mining Association of Canada[1].

The report focuses on three principal sources of direct payments by mineral sector companies and their employees:

- royalties and mining taxes paid to provincial and federal governments by virtue of their ownership of the resources,
- corporate income taxes paid by mineral sector companies to both the federal and provincial governments, and
- personal income taxes paid by employees of mineral sector companies on their employment earnings.

The report does not cover corporate income tax payments made by companies in industries that supply services to the mining industry –these are reported in their respective industries. Similarly, it does not include the personal income taxes paid by employees of such companies. Taxes levied by municipalities, such as property taxes, are also not included, although the reason here is more a practical one of data availability. Scattered evidence, however, suggests that such property tax payments may be substantial in some situations.[2] Finally, we do not include mineral-related payments made to, or collected on behalf of First Nations.

The information included in this report is derived from a variety of sources including Statistics Canada, the budget papers or public accounts of provincial governments, corporate financial statements and direct contacts with officials from provincial governments and industry associations. While royalties/mining taxes and corporate income taxes are, in most instances, reported directly, personal income taxes paid by employees of mineral sector employees are estimated using data on employment, average annual earnings and the effective tax rates faced by taxpayers in the relevant income range.

The definition of mineral sector used in this report covers both the extraction of minerals and their primary processing (e.g. smelting, upgrading and refining). This definition reflects both the general reliance of domestic smelting, upgrading and refining on the output of extraction activity and the fact that many of the companies involved in mining are integrated with both extraction and processing operations. In North American Industrial Classification System (NAICS) terms, the mineral sector as defined in this report covers mining and quarrying (industry 212), oil sands mining (a sub-set of industry 211114 – non-conventional oil extraction), non-metallic mineral manufacturing (industry 327) and primary metal manufacturing (industry 331).[3]

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1 This report is the seventh in a series of annual reports commissioned by Mining Association of Canada (MAC) on royalty and tax payments by the mineral sector. The most recent is *Revenues to Governments from the Canadian Mineral Sector: 2002-2011*, dated September 2012 which is available on the MAC website. There is a summary of the report's results included in Mining Association of Canada, *F&F 2012-Facts and Figures of the Canadian Mining Industry* at: http://www.mining.ca/www/media_lib/MAC_Documents/F&F2011-English.pdf

2 See for example, Syncrude Sustainability Report, 2008/09 at http://www.syncrude.ca/pdf/Syncrude-SD-report.pdf . The Syncrude project reports roughly $100 million in municipal taxes payments annually.

3 See Annex A for a description of the NAICS-defined industrial composition of the mineral sector.

For the three digit NAICS industries, data on corporate income taxes, financial position, employment and earnings are readily available from Statistics Canada sources. This is not the case for oil sands mining. Oil sands mining is a sub-set of non-conventional oil extraction (NAICS 211114) which, in turn, is a sub-set of the Oil and Gas Extraction Industry (NAICS 211). Statistics Canada does not publish any of the required information at this level of disaggregation. In the past, we have relied on a survey of members conducted by the Oil Sands Developers Group (OSDG) as our primary source of information on corporate taxes paid by and employment in the oil sands mining industry (royalty data are available from the Canadian Association of Petroleum Producers (CAPP)). Unfortunately, OSDG decided to discontinue this survey in 2009. We have, as an alternative, utilized a mix of available public information on the four producing oil sands mining projects, an informal survey of MAC members involved in these projects and several assumptions to develop corporate income tax and employment estimates for 2010 to 2012. While we believe the resulting estimates are reasonable, they are based on judgement and should be viewed more cautiously than the equivalent data on the other industry segments from Statistics Canada.

Following a brief context-setting overview of industry developments in 2012, the report discusses the results in each of the following sections:

- Royalties, Mining Taxes and Similar Payments
- Corporate Income Taxes Paid
- Personal Income Taxes Paid by Mineral Sector Employees
- Summary of Revenues to Governments

Annex A provides a description of the NAICS – defined industrial composition of the mineral sector. Annex B provides the full detail of and sources for the estimates of royalties/mining taxes, corporate income taxes and personal income taxes for the period 2002-2012.

2. Mining Industry Developments in 2012

Royalties, taxes and similar payments to governments can be affected by changes in the economic environment and by policy changes in the fiscal terms under which the industry operates.

On the economics side, 2012 was a challenging year for the mineral sector. As detailed in Table 1, the prices of virtually all major minerals declined, many by more than 10 percent. Only potash bucked the trend, with prices increasing 9.8 percent. The overall Scotiabank Index registered an 8.2 percent reduction. The prices of primary metal products - the output of smelters and refineries - also declined by 6.3 percent.

For some oil sands and heavy oil producers, the widening differential between the world oil prices (represented by Brent) and the price of Alberta heavy crude (Western Canada Select or WCS) was a concern. The differential has two related components. The first is the increasing spread between Brent and West Texas Intermediate (WTI), the North American marker crude –from virtual parity in 2010 to over $17 per barrel in 2012 – largely reflecting the shale oil revolution in the United States and the consequent glut of oil in the U.S. mid-west. The second is the growing differential between WTI and WCS reflecting the increasing problems associated with accessing pipeline capacity for transporting bitumen and synthetic crude to U.S. markets. The total discount of Alberta heavy crudes to international prices increased to about $36 per barrel in 2012 (up slightly from $33 per barrel in 2011).

These differentials were more than double the $14 per barrel spread that existed in 2010 and reduced revenues in 2011 and 2012.

Another factor affecting payments to governments from oil sands mining has been the increased spending on various new/expanded oil sands projects. Any additional investments generally reduce corporate income taxes and often provincial royalties when these capital deductions/allowances are claimed. It was estimated by CAPP[4] that overall spending on oil sands mining projects increased by over 30% in 2012 to a total of almost $11 billion. While these expenditures will eventually generate additional revenues and therefore additional payments to both levels of governments in future years, they can reduce payments in the near term.

Mining real output was also generally lower in 2012 relative to 2011 particularly in the mining and quarrying (down 4.4%) and non-metallic mineral products (down 2.1%) segments of the sector. Mined bitumen production did, however, increase by about 4.5% largely due to the resumption of production at CNRL's Horizon project. Overall, the value of non-bitumen mineral production fell by 7.9 percent in 2012 while that for bitumen declined slightly.

Partly reflecting these changes in prices and production, pre-tax profits for the mining sector (excluding oil sands mining) plummeted 35 percent. Despite these uniformly negative results total employment in the mining and oil sands industry grew by about 7,500 employees or 4 percent.

Table 1
Mining Industry Economic Indicators, 2012

Mineral Prices (percent change over 2011)			
Gold	6.4↓	Uranium	14.4↓
Nickel	23.4↓	Diamonds	17.8↓
Copper	9.8↓	Coking Coal	18.7↓
Iron Ore	11.6↓	Primary Aluminum Products	15.6↓
Zinc	11.1↓	Primary Metal Products	6.3↓
Potash	9.8↑	Scotiabank Metals and Minerals Price Index	8.2↓

Crude Oil ($US/bbl.)			
	2010	**2011**	**2012**
Brent	79.61	111.26	111.63
West Texas Intermediate (WTI)	79.53	95.12	94.20
Western Canada Select (WCS)	65.30	77.97	73.17
WTI-Brent Differential	(0.08)	(16.14)	(17.43)
WCS-WTI Differential	(14.23)	(17.15)	(21.03)

GDP/Production (percent change over 2011)	
• Mining and Quarrying	4.4↓
• Non-Metallic Mineral Products	2.1↓
• Primary Metal Manufacturing	1.4↑
• Total Mineral Sector	2.3↓
• Mined Bitumen Production	4.5↑

[4] Canadian Association of Petroleum Producers. http://www.capp.ca/GetDoc.aspx?DocId=219433&DT=NTV
Refer to Table 4.19b which shows capital expenditures for oil sands mining activities.

Value of Mineral Production	$ Billion - metals/non-metals/coal -mined bitumen	50.9 to 46.9 = 7.9%↓ 25.1 to 24.9 = 0.9%↓
Operating Profits (pre-tax)	$ Million	16934 to 11084 = 34.5%↓
Employment	000s	183.3 to 190.7 = 4.0%↑

Note: All percentage increases are, as far as possible, comparisons of the average value in 2012 to the average value in 2011.

Sources:

Mineral Prices – Statistics Canada (Industry Price Indexes, cat 62-011 and Raw Materials Price Indexes, CANSIM 330-0007) for iron ore and the primary metal products index; Natural Resources Canada (Estimates of Mineral Production by Province) for diamonds and potash; www.steelonthenet.com for coking coal; Scotiabank Economics, in particular its *Commodity Price Index Report*, June 2013, for gold, uranium zinc, nickel, copper, aluminum and the Metals and Minerals Price Index
Crude Oil Prices – Brent and WTI prices from US Department of Energy, Energy Information Administration; WCS prices from Baytex Energy Corporation, *Benchmark Heavy Oil Prices*, http://www.baytex.ab.ca/operations/marketing/benchmark-heavy-oil-prices.cfm
GDP/Production – Statistics Canada (http://www.statcan.gc.ca/pub/15-001-x/15-001-x2012003eng.htm), Alberta Energy Regulator.
Value of Mineral Production – Natural Resources Canada for metals/non-metals/ coal. For mined bitumen, estimates developed by ENTRANS based on production data from the Alberta energy Regulator and WCS price data from Baytex
Pre-tax Operating Profits – does not include oil sands mining. Special run from Statistics Canada, *Quarterly Financial Statistics for Enterprises*, cat 61-008
Employment –see Annex B, Table B3

On the fiscal side, a number of tax and royalty changes announced in earlier budgets took effect in 2012. Included in these changes were the reductions in the federal corporate tax rate from 16.5 percent in 2011 to 15 percent in 2012. At the provincial level there was a one point increase, to 16 percent, in Quebec's Mining Tax. The British Columbia government also increased its corporate tax rate by one percentage point, to 11 percent, as part of a package of changes relating to the reversal of its decision to harmonise its sales tax with the federal GST.

There were also other tax changes announced by both the federal and provincial governments in 2012 and those of most relevance to the mineral sector included:

- Quebec's tax holiday for large investment projects. Under its provisions, capital projects of $300 million or more in mineral processing and several other industries are eligible for a 10 year holiday from corporate tax (and contributions to the Health Services Fund)
- Also from Quebec, an extension of the investment tax credit system to 2017 and a five percentage point increase in the tax credit rates for investments in remote areas
- Headed in a different direction, the announcement in the 2012 federal budget of the phase outs of both the Mineral Exploration and Development Tax Credit and the application of the Atlantic Investment Tax Credit to mining and oil and gas. In both cases, however, the phase outs only begin taking place in 2013[5] and subsequent years.

[5] There are two income tax changes, announced in the 2013 budget, which will be of importance to future mining investment in Canada. These are the elimination of the accelerated capital cost allowances (ACCA) on mining capital and the reduction of the 100% deduction for preproduction development costs to 30%. The ACCA change for mining

Both the Quebec and the Ontario governments used 2012 to signal their intentions to review their mining tax regimes. Quebec has followed through on its intention with a May 2013 announcement of a new tax system the main features of which are a new minimum mining tax based on revenue, a progressive tax scale for the existing profits-based tax and an increased processing allowance. These changes do not come into effect until 2014.[6] Some public discussion of Canada's mining tax system has recently taken place. One of the commentaries came from Professor Jack Mintz.[7]

3. Royalties and Similar Payments to Governments

Canadian mineral producers pay royalties, mining taxes or similar charges to provincial and federal[8] governments in their capacity as owners of the mineral resource. Chart 1 below provides an overview of such payments for the fiscal years FY2003 to FY2012 (full details and sources by jurisdiction for Chart 1 and Table 2 are provided in Annex B, Table B1).

The information available covers all mining activity in Canada including metallic minerals, non-metallic minerals (e.g. potash, gypsum), sand and aggregates and crude oil from oil sands mining operations. As noted earlier, the data reflect, as far as possible, payments made to governments in their role as resource owner. Excluded, in principle, from the revenues are payments such as licensing fees, lease acquisition and retention charges, rentals etc. Although provinces typically show such payments as revenue, they are made in return for a service for which the province must assign resources. Because of the way information is reported, however, it is sometimes not possible to separate the revenues from fees from those from royalties/mining taxes.

Finally, as noted earlier, the data do not include payments made to, or collected on behalf of First Nations[9]. Interestingly, we understand that, under a series of agreements, the Government of the Yukon collects royalties on behalf of several of its First Nations. The amounts are large relative to royalties retained by the territorial government in its budget (i.e. the amounts shown in Tables 2 and B1). How other jurisdictions approach this matter is not clear. See Annex B for further discussion.

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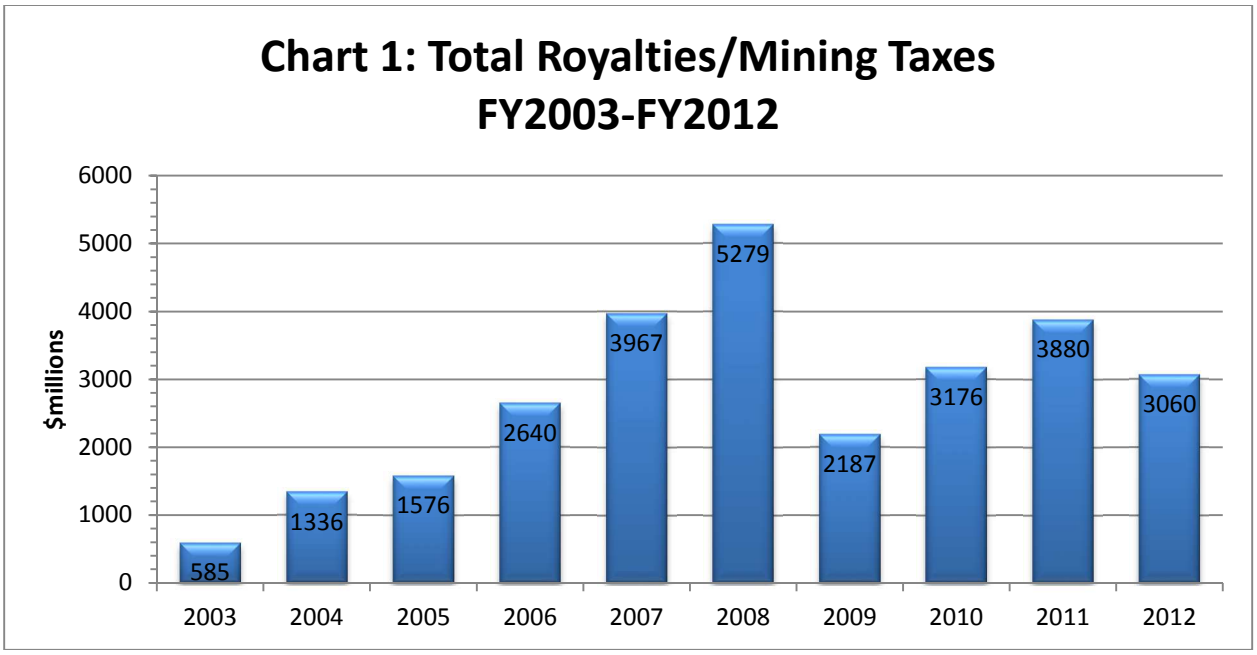
mirrors changes for oil sands mining projects that were announced several years earlier. Both of these changes for non oil sands mining projects are being phased in over several years.

6 For additional detail on all of the Quebec tax and mining royalty changes consult report prepared by PWC http://www.pwc.com/en_CA/ca/tax-insights/publications/pwc-changes-to-quebec-mining-tax-regime-2013-05-en.pdf. PWC also carries out detailed interprovincial comparisons of selected hypothetical mining projects. The most recent report, entitled *Digging Deeper: Canadian Mining Taxation 2011*. See http://www.pwc.com. We understand that the 2013 edition of the PWC report will be forthcoming shortly.

7 See "Repairing Canada's Mining Tax System To Be Less Distorting and Complex" http://policyschool.ucalgary.ca/sites/default/files/research/chen-mintz-mining.pdf

8 The federal government is currently the resource owner in Nunavut and the Northwest Territories and, via Aboriginal Affairs and Northern Development Canada, receives royalties on mineral production in these territories. As a result of the 2013 Devolution Agreement between the Government of Canada and the Government of the Northwest Territories, the GNWT will assume responsibility for resource development and collect resource royalties effective April 2014.

9 Such payments could be direct or indirect. Examples of the latter include payments under Impact and Benefit Agreements. Such agreements are often quite complex, involve payments for access to aboriginal land and are typically confidential to the parties involved.



Between FY2003 to FY2008, royalty/mining tax payments increased almost tenfold - from $585 million in to $5.3 billion. This growth reflected a combination of higher commodity prices, higher effective royalty rates and, for some minerals, significant increases in production. Two provincial jurisdictions –Alberta and Saskatchewan – were responsible for about three quarters of the increase.

The FY2009 figure mirrors the international recession which began in late 2008 and the associated steep declines in most mineral prices. In FY2009, overall royalty and mining tax payments to governments plummeted by over $3 billion or almost 60 percent compared to FY2008. All jurisdictions except Quebec recorded reductions in royalties/mining tax receipts. For most, including Newfoundland and Labrador, New Brunswick, Ontario, Manitoba, Saskatchewan[10] and Alberta – the reductions were extremely steep.

Royalties and mining taxes began their recovery in FY2010 increasing from $2.2 billion to $3.2 billion. They increased again by a further 22 percent in FY2011 to $3.9 billion. The upward trend was broken in FY 2012 with a decline of over $800 million (i.e. about 20 percent).

Table 2 below focuses more closely on the jurisdictional sources of the increases in royalties/mining taxes in recent years. Also included in Table 2 are an indication of the most important minerals by value in each jurisdiction and a noting of the legislation/regulations under which the payments are collected.

[10] For Saskatchewan, the steep decline in FY2009 in resource revenues was due to the collapse in both potash prices and volumes, exacerbated by a refund to producers of advanced royalty payments based on anticipated higher prices.

Table 2
Royalties, Mining Taxes and Similar Payments by Mineral Sector to Governments
(FY2010 to FY2012)

	Major minerals[1]	Instrument	FY2010	FY2011	FY2012
Nfld. & Labrador	Iron ore, nickel	Mining and Mineral Rights Tax	**171.9**	**287.7**	**384.6**
Nova Scotia	Cement, stone, gypsum	Gypsum tax, coal royalties	**1.4**	**1.2**	**1.3**
New Brunswick	Zinc, silver, lead	Metallic Minerals Tax	**20.0**	**48.0**	**35.0**
Quebec	Gold, nickel, stone	Mining Duties Act and Mining Act	**323.7**	**353.0**	**207.4**
Ontario[2]	Gold, copper, nickel	Mining Tax	**72.0**	**184.0**	**110.0**
Manitoba	Nickel, copper	Mining Tax	**21.0**	**35.0**	**40.0**
Saskatchewan	Potash, uranium	Potash, Uranium & Other Minerals Royalties plus mineral portion of Resource Surcharge	**649.9**	**829.3**	**860.4**
Alberta	Bitumen	Oil Sands Mining Royalties	**1409.3**	**1637**	**1216.9**
	Coal	Coal Royalties	**35.0**	**29.0**	**(2.0)**
British Columbia	Coal, copper	Mineral Tax and Mineral Land Tax	**363.9**	**357.7**	**149.6**
Yukon	Copper, gold, silver	Land and Mineral Leases and Royalties	**0.3**	**0.3**	**0.2**
NWT and Nunavut[3]	Diamonds, gold	Royalties from Mineral Resources	**108.0**	**118**	**56.4**
Total Mineral Sector			**3176.4**	**3880.2**	**3059.8**

Notes:
1. Ranked by 2012 value of production from Natural Resources Canada
2. Diamond royalties from Ontario's only producing mine (the Victor Mine) are confidential and are not available to be included in Mining Tax revenues.
3. Data for Nunavut and NWT are not provided separately to preserve confidentiality. As a consequence of the recent devolution agreement between the federal and Northwest Territories governments, the NWT will assume responsibility for resource development and royalty collection in April 2014.
Sources: See Annex B, Table B1

The overall decrease in royalties/mining taxes between FY2011 and FY2012 was $820 million (i.e. from $3880 million to $3060 million).Taken together, Alberta and Saskatchewan account for a large portion of royalties/mining taxes – 68 percent in FY2012 – so the results for these provinces strongly influence the total.

Most jurisdictions experienced reduced royalty/mining tax revenues in 2012. Only Newfoundland and Labrador, Saskatchewan and Manitoba enjoyed increases. In Newfoundland and Labrador mining tax revenues were up substantially – 34 percent - despite lower iron ore and nickel prices. Increased iron ore production appears to be the explanation. In Saskatchewan, lower uranium prices were more than offset by higher potash prices to produce a modest increase in royalties.

In absolute terms, Alberta experienced the largest reduction - $420 million – in FY2012. This 26 percent decrease in oil sands mining royalties was related to the increasing discount on Canadian heavy crude prices because of (still ongoing) problems of exporting synthetic crude and bitumen to markets in the United States.

Ontario's mining tax revenues fell by about 40 percent (from $184 million to $110 million) probably as a result of lower gold and copper prices.[11] Quebec experienced a similar decline – 41 percent – largely due to lower gold and nickel prices. In British Columbia, mineral tax revenues dropped in 2012 by $208 million (from $358 million to $150 million largely as a result of lower metallurgical coal prices.

4. Corporate Income Taxes Paid to Governments

Mineral sector companies pay corporate income taxes (CIT) to both the federal and provincial governments. Charts 2 and 3 show the trends in such payments over the past decade by jurisdiction and by industry component (for full detail on corporate income tax data, estimates and sources, see Annex B, Table B2).

Before examining the results, it is important to note two important methodological issues. The first concerns the 2012 results for the Mining and Quarrying, Primary Metals Manufacturing and Non-Metallic Minerals Products Manufacturing industries. The 2003 to 2011 information on CIT payments for these industries comes from tax filer data collected by Statistics Canada and published in *Financial and Taxation Statistics for Enterprises* (FTSE –cat 61-219X)). Because of the long time required to obtain and process this information, it is only available after a considerable lag. The latest available information is for 2011. The 2012 data will not be available until March 2014.

To develop an estimate for 2012, we have utilized information on the provision for current taxes from another Statistics Canada publication, *Quarterly Financial Statistics for Enterprises* (QFSE –cat 61-008X). QFSE is a survey of the quarterly financial statements of corporations (almost all large ones and a sample of smaller companies). The data from QFSE are typically available within two months of the end of the quarter. Essentially, we have produced the estimates of 2012 CIT by applying the 2012 to 2011 percentage change in the provision for current income tax (by industry) to the 2011 data on actual taxes paid from TFSE We have used the same technique for previous editions of this report, replacing the estimates with actual in each succeeding edition.

Obviously there is a conceptual link between the provision for current taxes and actual taxes paid – corporations have an interest in trying to estimate their final tax liabilities as accurately as possible. But the link may be weakened by abrupt and/or unforeseen changes in economic circumstances over the year or by major changes in corporate organization (mergers and acquisitions). Empirically the link is close in some years but not so much in others. In 2011, for example, the provision for current tax for the three industries in total increased by 45 percent over 2010, but actual taxes paid in 2011 were essentially unchanged from 2010.[12]

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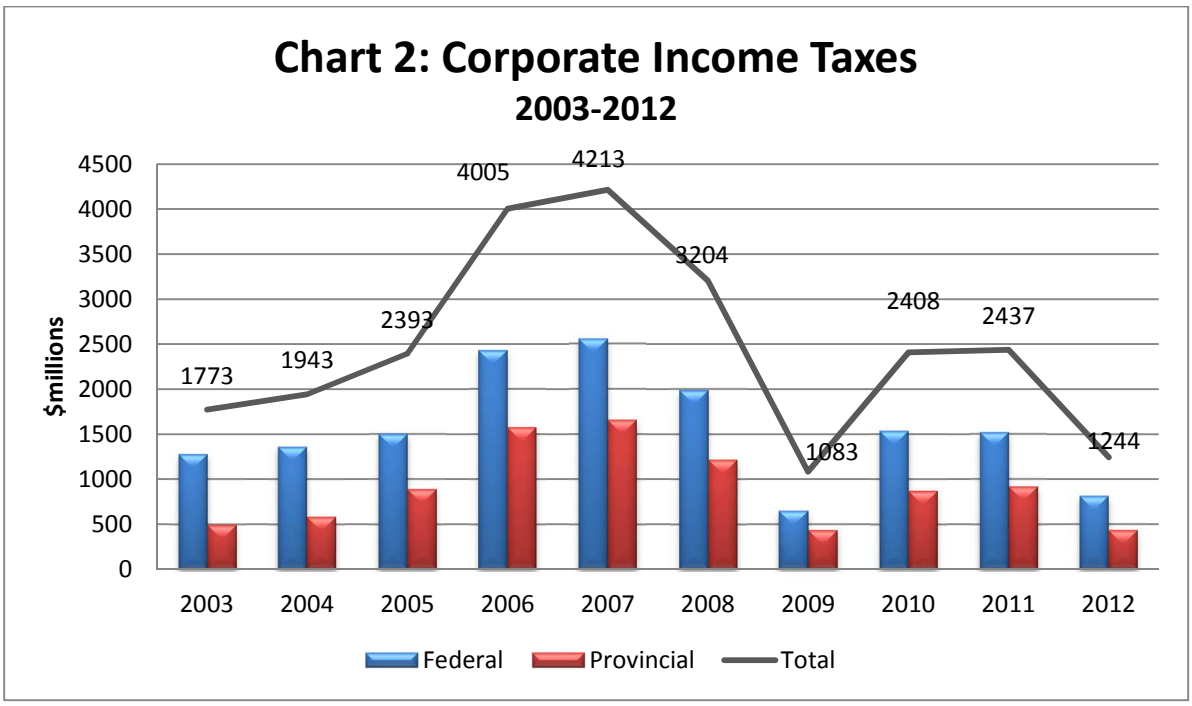
[11] The total figure for Ontario in 2012 would be larger if public information were available on the royalties paid by the Victor diamond mine operated by DeBeers. Since the royalty amounts paid by this mine are confidential they are not included in any of our data. Information from Natural Resources Canada indicates that the 2012 value of diamond production in Ontario was $387 million (about 20 percent of the Canadian total). See *Preliminary Estimate of the Mineral Production of Canada, by Province, 2012.* http://sead.nrcan.gc.ca/prod-prod/PDF/2012P%20Mineral%20Production.pdf

[12] There is also an element of the tax data not being final. Disputes and legal action between CRA and corporate tax payers can drag on for some time and, when resolved, lead to sometimes large revisions in the data. Depending on the resolution, the revision may be backdated to the years in question or simply applied in the year in which the issue was decided. One current example which may have a major impact on the CIT numbers for the mineral sector is the dispute

We dwell, somewhat tediously, on this methodological point because the estimated declines in the provision for current taxes for 2012 are large, particularly so for Mining and Quarrying. The reader should understand that, when the final 2012 CIT are published, the declines may not be as severe.

The second methodological point concerns the CIT numbers for oil sands mining. As detailed in the notes to Table B2 in Annex B, these are estimates derived from a variety of sources. For the years up to 2009 they are obtained from surveys and related analysis undertaken for the Oil Sands Developers Group (OSDG) or its predecessor organization the Athabasca Regional Issues Working Group. In 2011, OSDG decided to no longer undertake this survey. Therefore, for 2010 to 2012, the estimates are developed by ENTRANS from a variety of publicly available sources on the four producing oil sands mining projects, an informal survey of MAC members involved in these projects and several assumptions. While we believe these estimates to be reasonable, they are far less robust than those for the other component industries.



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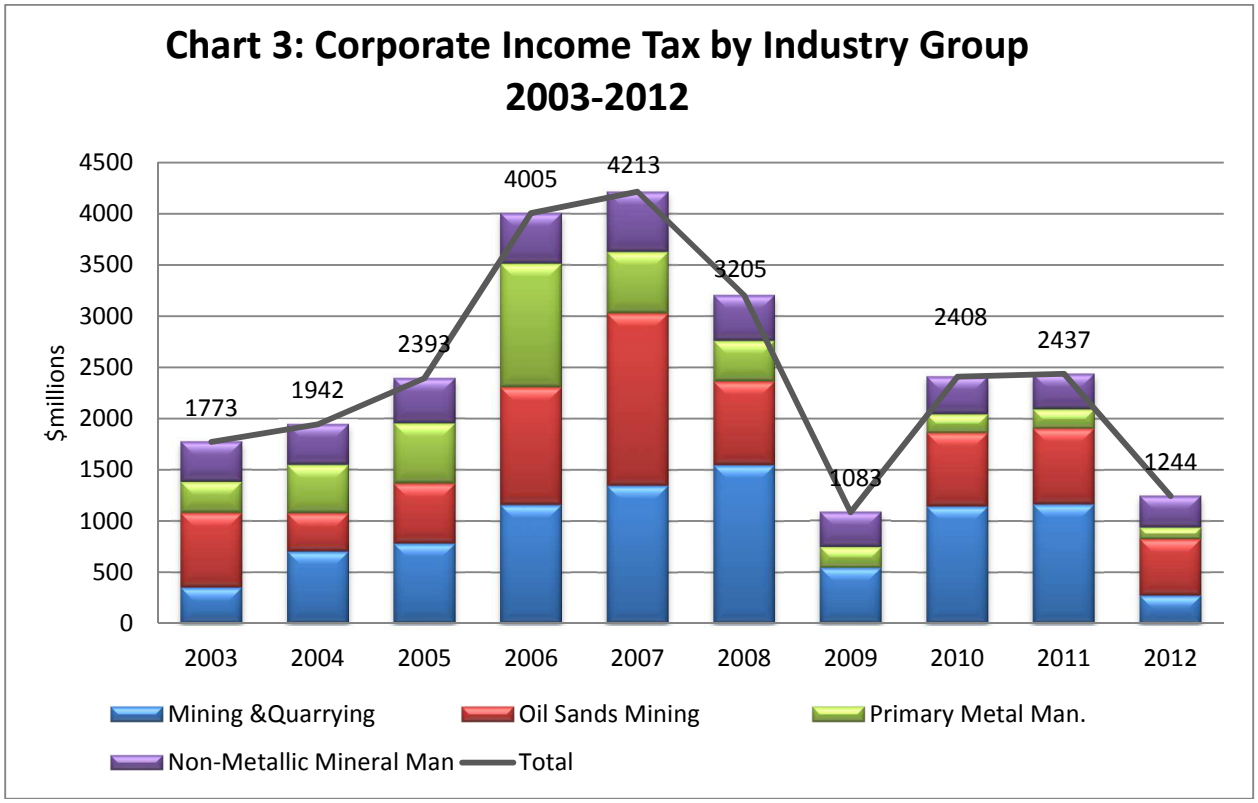
With apologies for the lengthy methodological discussion, a focus on Chart 3 indicates that total corporate income taxes paid by the mineral sector climbed significantly, from $1.8 billion to $4.2 billion between 2003 and 2007 largely reflecting the profitability of the industry during the commodity price boom. CIT payments fell about $1 billion in 2008, then plummeted a further $2.2 billion in 2009 reaching a decade low of $1.1 billion as the financial crisis and associated collapse in mineral prices took hold. Reflecting the profit sensitive nature (and resulting volatility) of the CIT system, payments by the sector increased to $2.4 billion in 2010 and maintained that level in 2011. In 2012, however, we

between Cameco and CRA over the tax consequences of a particular business arrangement involving uranium pricing. The additional tax associated with this dispute has been estimated between $400 million and $800 million See the April 2013 report prepared by Veritas on this dispute at http://www.veritascorp.com/home/Accounting%20Alerts%20-%20Cameco%20Corp.%20April%202,%202013%20Veritas.pdf

estimate, subject to the caveats noted above, that corporate income taxes from the mineral sector have again plummeted, falling by half –from $2.4 billion in 2011 to $1.2 billion 2012. We explore why this has happened in later paragraphs.

Over the decade the federal share of corporate income tax revenues has fallen from roughly 70 percent to a little over 60 percent of the total. Given the essentially similar definition of the tax base (except for Quebec), the trend in shares largely reflects changes in tax rates and selected tax credits. The reduction in the federal rate –from 19 percent in 2009 to 15 percent in 2012 is at least partly responsible for the downward trend in the federal share.

To better understand the pattern of CIT payments by the mineral sector both over the decade and in 2012, Chart 3 below disaggregates the payments by component industry.



It is clear that the extractive components of the sector – mining and quarrying and oil sands mining – have been responsible both for most of the increase in CIT payments over the decade and for the volatility in such payments over the period. In the early years, these two industries accounted for about 50-55 percent of total corporate income taxes paid. By 2010-2011, the share had climbed to about 75 percent. The smaller contribution of the "downstream" components of the industry reflects the secular contraction in smelting and refining over the period.[13] The volatility is best seen in the results for 2009 and 2012. In 2009, during the financial crisis and the collapse of mineral prices, corporate tax payments from the mineral sector dropped $2.1 billion. Mining and Quarrying was responsible for 47 percent of

[13] Both primary metals manufacturing and non-metallic mineral manufacturing have experienced a decline in output (as measured) by GDP over the past decade. See Statistics Canada, *Gross Domestic Product by Industry*, Cat 15-001X

that decrease with Oil Sands Mining accounting for a further 38 percent. According to the OSDG estimates, oil sands mining paid no corporate income tax in that year.

Turning to the 2012 results, we estimate that corporate income tax payments by the mineral sector fell by half or almost $1.2 billion from 2011 (i.e. from $2437 million to $1244 million). About three-quarters ($890 million) of this decline was experienced by Mining and Quarrying with another 16% ($190 million) from Oil Sands Mining. Recalling that the 2012 results are driven by the provision for current taxes in financial statements rather than what is finally paid is the estimated precipitous drop in CIT for the extractive parts of the sector warranted? We think it is for several reasons. First, as documented in Table 1, all major minerals, with the exception of potash, experienced price declines in 2012, some quite severe. In addition, real mineral output fell by 4.4%. Largely as a result of these developments, pre-tax operating profit of the Mining and Quarrying segment of the sector fell by 39 percent. At the same time, the industry increased its capital investment by almost 46 percent. These large opposing financial movements would provide the basis for a significant reduction in tax liabilities. In the case of oil sands mining, about 40 percent of the oil sands industry, as measured by bitumen production, was likely not in a cash taxable position in both 2011 and 2012[14].

5. Personal Income Taxes Paid by Mineral Sector Employees

This section provides annual estimates of the personal income taxes paid by mineral sector employees to both the federal and provincial governments for the 10 year period 2003-2012. Chart 4 shows PIT paid by employees of mining companies to both levels of government in Canada[15] while chart 5 dis-aggregates the estimates by component industry group. Full detail, methodology and data sources are provided in Annex B, Table B3.

It is important to note that the personal income tax numbers provided in this section are not reported directly. Rather they are estimates derived from statistical data. Unlike royalties and corporate income taxes, there is no reporting of the personal income tax paid by employees working in specific industries. To develop these estimates, it was necessary to combine calculated values of annual earnings, effective tax rates derived from tax filer data, and data on industry-level employment. Each of these components is grounded on solid, available data. However, several assumptions must be accepted in combining this information.[16]

The main data ingredients for the calculations and the results are shown in Annex B, Table B3. The computation begins with estimates, from Statistics Canada, of average annual earnings of employees in the four industry components of the mineral sector. For the period 2003-2012, average annual earnings

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14 In the Annual Information Form for 2013, Suncor indicates that "in 2012, Suncor --- was not cash taxable on the majority of its Canadian earnings". A similar statement was made for 2011 in Suncor's 2012 Annual Information Form. See Suncor Energy's Annual Information Form Dated March 1, 2013 at http://www.suncor.com/pdf/Suncor_AIF_2013_en.pdf, page 49.
We believe that Canadian Natural Resources Limited was also not cash taxable on its Horizon project over the same period because of fire and six month shutdown in 2011 and the very considerable investment in the phases 2 and 3 of the project in 2012. See Canadian Natural Resources Limited, 2012 Annual Report. http://www.cnrl.com/investor-information/financial-information/financial-reports/annual-report.html

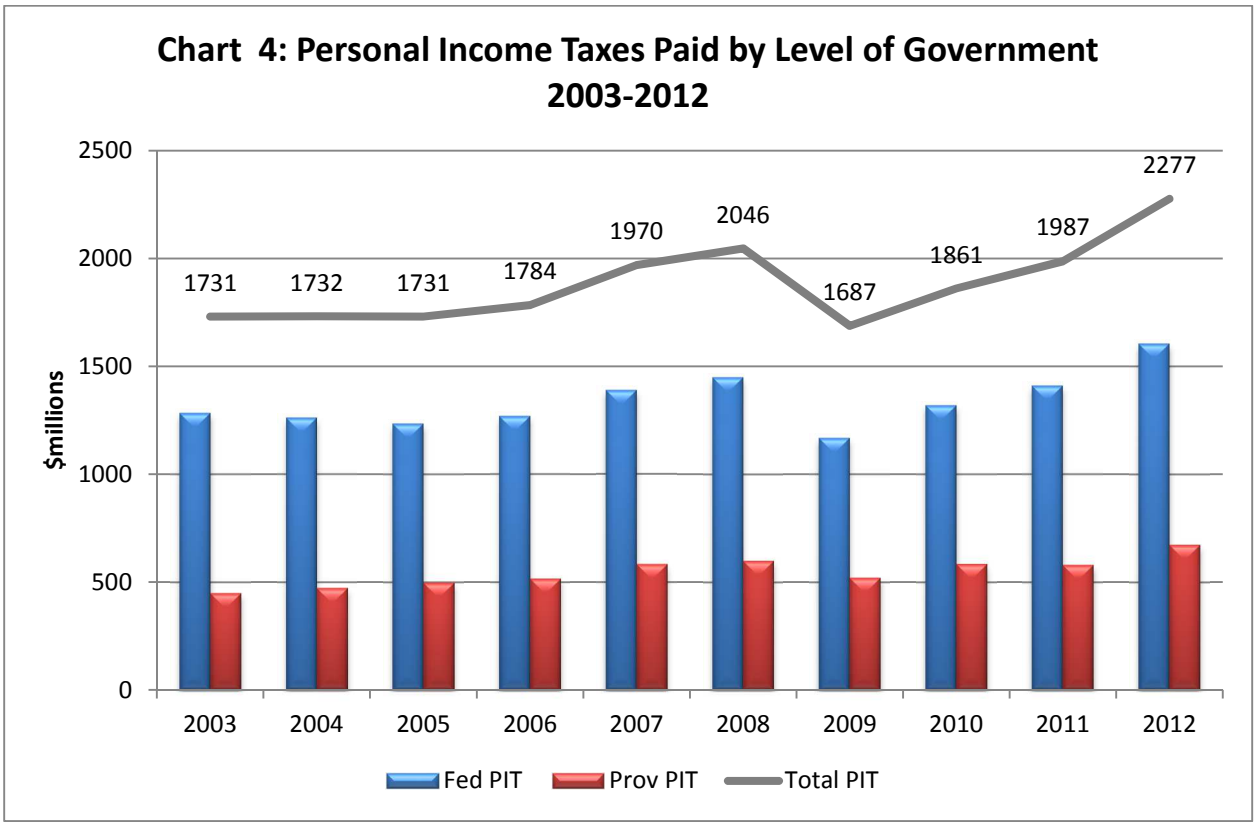
15 As noted earlier these estimates do not include *employer* contributions to either EI or CPP/QPP

16 A further caveat is that all of the PIT estimates relate only to employees who work for enterprises directly involved in the mineral sector. They do not include income taxes paid by employees from other companies providing goods or services to mining enterprises on a contract basis. Thus, for example, workers constructing mine shafts or removing overburden on a contract basis are not included in mining employment, but, rather are classified as employees of another industry.

were generally in the low $40 000 to low $50 000 range for non-metallic mineral product manufacturing (NMMP), in the upper $50 000 to mid- $60 000 for primary metals manufacturing. For the extractive components of the sector, earnings growth has been more pronounced – from $58 000 in 2003 to $84 000 in 2012 for mining and quarrying and, more spectacularly, from $79 000 to $120 000 for oil sands mining workers over the same period.[17]

The Canada Revenue Agency (CRA) publishes annual information on employment and other income earned, deductions, credits and federal and provincial income tax paid by tax filers generally in income ranges of $10 000. Utilizing the relevant ranges, one can construct an effective tax rate, defined as income tax paid as a percentage of total income, for both federal and provincial personal taxes. The assumption implicit in this approach is that an employee in each component of the mineral sector has the same "tax" characteristics – in terms of other income sources, RRSP contributions, personal deductions, etc. - as all taxpayers in the relevant income range. The most recent CRA data on tax filers is for 2010. However, the calculations for the period 2002-2010 suggest that the effective rates for the various income ranges have not changed appreciably. Thus we have assumed in the calculations that the 2010 effective rates for given income ranges also apply to 2011 and 2012.

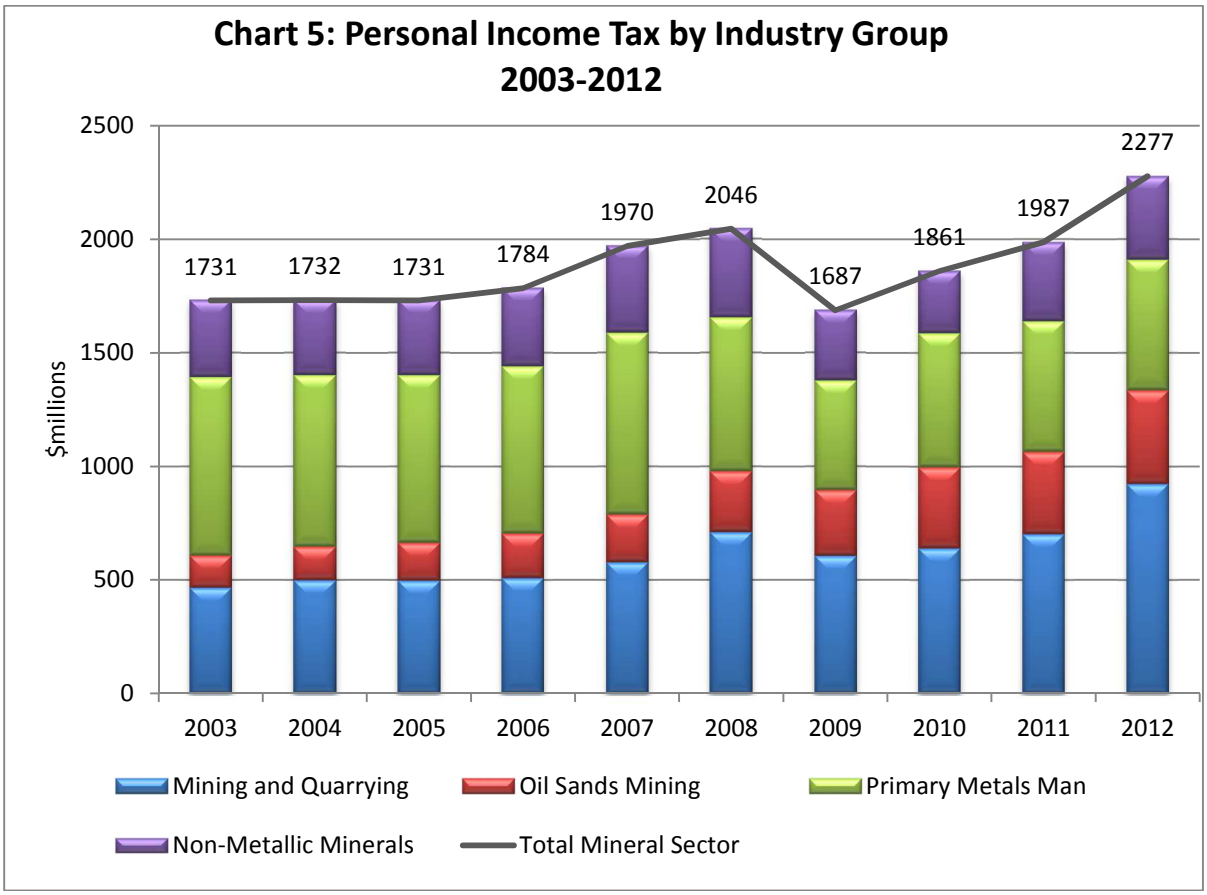
Applying these calculated average tax rates to average earnings yields estimates of federal and provincial tax payments per employee. Multiplying these estimates by the number of employees (also from Statistics Canada except for the estimates for oil sands mining) generates estimates of total personal income taxes paid by employees of companies in the mineral sector.



[17] These figures may be an under estimate for oil sands mining workers. In the absence of information on the earnings of these workers, we are using the earnings of all oil and gas industry workers in Alberta as a proxy. See the notes Table 4.

Focusing on Chart 4, income tax payments from mineral sector employees were essentially constant, at about $1.7 billion annually throughout the first half of the decade. They increased to $2.0 billion in 2008 before falling back to a little less than $1.7 billion during the economic troubles of 2009. Thereafter they recovered somewhat to slightly under $2.0 billion in 2011. In 2012, personal income taxes from the sector increased a further 15%, to almost $2.3 billion, the largest value over the decade. About 70 per cent of the payments go to the federal government reflecting, primarily, the difference in federal and provincial personal income tax rates.

Chart 5 below shows the estimates of personal income tax collected by industry segment over the same time period. Perhaps the most important long term trend is the declining percentage (and absolute) share of personal income tax accounted for by the processing industry segments of the sector. Collectively, the primary metal manufacturing and non-metallic mineral processing manufacturing groups accounted for about 60 percent of sector PIT in the early part of the decade, but only 40-45 percent in recent years. This reflects the declining economic activity in these industry groups, their smaller workforces (particularly in primary metals manufacturing) and sluggish earnings growth. In the extractive groups, although oil sands employees have higher earnings and their income tax paid has increased over the time period, it is the more numerous employees in the mining and quarrying that still contribute more in personal income tax.



From Table B3 in Annex B, it is clear that the source of the 2009 decline in personal income tax collections is the significant reduction in employment. Overall in 2009 the sector lost over 20,000 jobs (down from 192 to 174 thousand). The reductions were particularly large in primary metal manufacturing accounting for almost half of the lost jobs. By 2012, this job loss had been largely offset – employment in 2012 was 191 thousand. But virtually all the increase was in the extractive industry groups –mining and quarrying and oil sands mining.

The significant increase in sector personal income taxes in 2012 - $290 million or 15 percent – is almost totally accounted for by mining and quarrying and oil sands mining. The former, in particular, exhibited both strong employment growth (about 6700 new jobs) and equally robust annual earnings increases (about $7400 or 10 percent per employee).

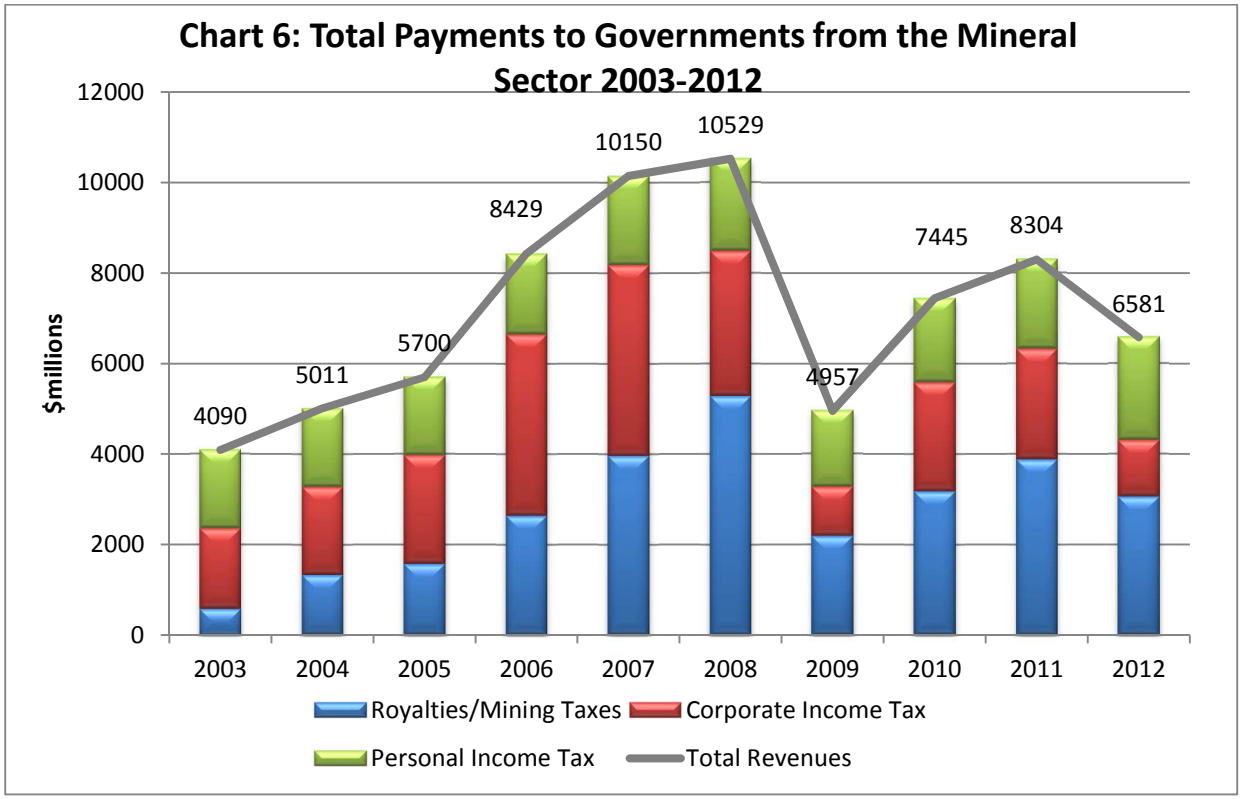
6. Summary of Payments to Governments

This section aggregates the estimates from the previous sections to provide the total revenues received by governments from the mineral sector and its employees over the past decade from royalties and mining taxes, corporate income taxes (CIT) and personal income taxes (PIT). The information is provided in both graphical (Chart 6) and tabular form (Table 3). [18]

Total mineral sector payments to governments peaked in 2008 reaching $10.5 billion. This was 2.6 times the level in 2003. About two-thirds of this increase was accounted for by increases in royalties/mining taxes with higher corporate taxes being responsible for most of the remainder.

In 2009, the situation changed dramatically. As a result of the U.S. financial crisis and generally collapsing metals, oil and potash prices, revenues to governments plummeted by more than one-half, to $4.9 billion in 2009 from $10.5 billion in 2008. A $3.1 billion drop in royalties/mining taxes accounted for about 60 percent of the overall reduction. However, corporate taxes also declined appreciably, by about $2.1 billion, and even personal income taxes fell by about 18 percent largely as a result of an employment contraction in the industry. However, the fact that royalty/mining taxes absorbed about 60 percent of this decrease underscores the profit-sensitive nature of most provincial royalty systems.

[18] Although it extends considerably beyond mineral processing, the Fabricated Metal Product Manufacturing Industry (FMPM -NAICS 332) can, for some purposes be included in the mineral sector (Natural Resources Canada refers to it as the quaternary segment of the mineral sector). Using the same approach and sources as in this report, total revenues to governments from the FMPM in 2012 are about $1.9 billion, split evenly between CIT and PIT. The federal and provincial shares are $1.2 billion and $0.7 billion respectively.



Total payments to governments recovered to $7.5 billion in 2010 and continued to increase to over $8.3 billion in 2011. The primary reasons for the increase in 2011 were economic. Buoyed by generally higher metals prices and increased production, the value of non-oil sands mineral production rose about 21 percent in 2011. Corporate pre-tax profits correspondingly increased about 24 percent.

The recovery trend was broken in 2012. Overall payments to governments fell by $1.7 billion –from $8.3 billion in 2011 to $6.6 billion in 2012 – or 20.7 percent. Lower corporate income tax receipts were the major contributor to the decline falling by almost half -$1193 million – from 2011. Most of the loss in CIT revenue appears to be concentrated in the extractive components of the sector, mining and quarrying and oil sands mining (as noted earlier, the 2012 results are estimates and subject to revision). Royalties and mining taxes were lower by 21 percent or $820 million. About half of the decrease occurred in Alberta as a result of the growing price discount on bitumen. However, British Columbia, Quebec and Ontario also experienced large percentage reductions in royalty/mining tax receipts.

Unlike royalties and corporate income taxes, personal income tax receipts rose in 2012 increasing by $290 million or roughly 15 percent. Throughout the first part of the decade, personal income tax collections from mineral sector workers have been relatively flat at around $1.7 billion annually. They increased to about $2.0 billion in 2008 on the strength of increased employment, then fell back during the financial crisis. The recent increase to just under $2.0 billion appears to reflect higher total payroll earnings in the mineral extraction and non-metallic mineral manufacturing sectors.

Table 3 below also provides information on the changing federal-provincial distribution of mineral sector revenues. The provincial share of the revenues increased significantly from 39 percent of the total in 2002 to a peak of 66 percent in 2008. This increased provincial share is not surprising given the substantial increases in royalties over that period. In 2009, the provincial share fell to about 61 percent largely as a result of the collapse in potash and oil sands mining royalties. The provincial share has

remained around this percentage in 2011 and 2012. This is despite the smaller federal share of corporate income tax revenues related to the reductions in the federal tax rate during these years.

Table 3: Total Payments to Governments from the Mineral Sector
2003 - 2012

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
	$ millions										
Royalties/Mining Taxes	586	1336	1576	2640	3967	5279	2187	3176	3880	3060	**27687**
Corporate Income Tax	1773	1943	2393	4005	4213	3204	1083	2408	2437	1244	**24702**
Personal Income Tax	1732	1732	1731	1784	1970	2047	1687	1861	1987	2277	**18808**
TOTAL	**4090**	**5011**	**5700**	**8429**	**10150**	**10529**	**4957**	**7445**	**8304**	**6581**	**71197**
-of which federal	2609	2760	2799	3707	4005	3547	1905	2963	3045	2471	**29811**
-of which provincial	1481	2251	2901	4722	6145	6982	3052	4482	5259	4110	**41385**
Provincial share (%)	**36.2**	**44.9**	**50.9**	**56.0**	**60.5**	**66.3**	**61.6**	**60.2**	**63.3**	**62.5**	**58.1**

Notes: Most royalty estimates are provided on a fiscal year basis while the estimates for corporate and personal income taxes are for calendar (taxation) years. The federal share includes federal corporate income and capital taxes, federal personal income taxes paid by mining employees and mining royalties generated in the Northwest Territories and Nunavut. The provincial share includes all royalties and mining taxes to provinces and to the Yukon, provincial corporate income and provincial personal income taxes paid by mining employees.
Sources: Annex B, Tables B1, B2, B3

Finally, with a decade long data set on revenues to government, it may be appropriate to note in conclusion that the mineral sector has contributed $71 billion to government treasuries over the past 10 years - $30 billion to federal and $41 billion to provincial coffers.[19] These are not insignificant sums representing, respectively, about 1.3 percent of federal and 1.9 percent of all own-source provincial revenues for the period.[20] For mineral-rich provinces, the percentage is likely considerably higher.

[19] As noted earlier these estimates do not include the employer's portion of CPP/QPP and EI payments, excise taxes, any non-harmonized provincial sales taxes or other taxes on business inputs. The B.C. carbon tax is also not included.

[20] Federal and provincial revenues from Finance Canada, Fiscal Reference Tables, October 2012 and Fiscal Monitor, March 2013 available on the Finance Canada website (www.fin.gc.ca)

ANNEX A:

INDUSTRIAL COMPOSITION OF THE MINERAL SECTOR

For its corporate and personal tax estimates, this report relies heavily on financial and employment and earnings data generated by Statistics Canada. These data are organized by industry using the North American Industrial Classification System (NAICS). The objective of this annex is briefly to describe the NAICS industrial composition of the mineral sector as defined in this report. It also touches on the reasons for the somewhat different approaches to obtaining corporate and personal tax estimates for oil sands mining.

NAICS Background[21]

The NAICS system is organized as a numeric hierarchical code in which additional digits indicate further disaggregation. The one digit level – e.g. 3 for manufacturing, 4 for trade, 5 for a grouping of communications and financial services activities, is for highly aggregated information. The two digit level – e.g. 21 for mining, quarrying and oil and gas extraction industries, 31 to 33 for various broad categories of manufacturing, 61 for educational services – allows further disaggregation. Most familiar is the 3 digit level which, for example, breaks down manufacturing into 21 separate industries e.g.: Food Manufacturing (NAICS 311), Paper Manufacturing (NAICS 322), Computer and Electronics Manufacturing (NAICS 334). There are further dis-aggregations possible within the NAICS system to the 4^{th}, 5^{th} and for certain industries a 6^{th} digit. For example, Food Manufacturing (NAICS 311) is further divided, to the four digit level, into animal food manufacturing, grain and oilseed milling, sugar and confectioneries, fruit and vegetable processing, dairy products, meat and meat products, seafood products, bakeries and other.

The four and higher digit dis-aggregations are mostly for description. While some industrial data are available from various censuses (e.g. Census of Manufacturing) and specialty publications at the 4 digit level, annual time series data – in particular financial data – for industries are only reported at the 3 digit level.

As indicated in the text, our NAICS definition of the mineral sector comprises NAICS 212 –Mining and Quarrying, NAICS 327 -Non-Metallic Mineral Manufacturing and NAICS 331 – Primary Metal Manufacturing and the oil sands mining sub-set of NAICS 211114 – Non-conventional Oil Extraction As discussed below, however, oil sands mining is a subset of the oil and gas industry (NAICS 211) and the tax, employment and earnings data for this subset must be obtained by other means.

The definition of mineral sector captures both the extraction (NAICS 212) and the smelting, refining and processing of minerals (NAICS 331 for metals and NAICS 327 for non-metals). The definition also addresses the assignment issue for integrated companies. The statistical unit for the financial data is the enterprise. Within the context of this report, an enterprise may operate a mine and a smelter (and either as separate corporations or as establishments). Statistics Canada determines the NAICS category for each of these sub-entities, then assigns the reporting enterprise (and all of its data) to one industry based on the greatest value added (i.e. to NAICS 212 or NAICS 331/327) depending on which of the extraction or the smelting activities contribute more to net firm output. Combining the extraction and

[21] For additional information on NAICS, see Statistics Canada, *North American Industrial Classification System 2007*, http://www.statcan.gc.ca/subjects-sujets/standard-norme/naics-scian/2007/list-liste-eng.htm

smelting/refining industries ensures (or, at least, makes much more likely) that all of the data for integrated mining minerals companies are included.

Table A1 below lists the 4 and 5 digit (and occasionally 6 digit) sub-components of, respectively, NAICS 212, NAICS 327, NAICS 331 and the oil sands mining subset of NAICS 211114. As can be seen, the mineral coverage of the NAICS extraction industry, which includes both established producers and junior exploration companies, is very complete. Similarly, the coverage of metal smelting and refining in NAICS 331 seems comprehensive. NAICS 327 (Non-Metallic Mineral Products Manufacturing) does appear to move somewhat far into fabrication and transformation (e.g. glass, clay products). It is, however, the smallest of the three industries and includes the important processing activity of cement and concrete products manufacturing.

One mineral activity not included in this definition is support activities to mining. NAICS separately identifies industry 213 – Support Activities for Mining and Oil and Gas Extraction. At the 5 and 6 digit level, NAICS 213 covers a number of activities – contract drilling (for prospecting, testing, etc.) for metals and non-metals, excavation, pumping, overburden removal on a contract basis – which logically are associated with mining. Statistics Canada, however, does not report financial and employment/earnings data for NAICS 213. Instead, it groups the information for NAICS 213 with NAICS 211 (Oil and Gas Extraction) presumably because the bulk of support activities are related to oil and natural gas.

As noted earlier, financial and employment/earnings data for oil sands mining are not available via Statistics Canada. Such data are provided only for the 3 digit industry Oil and Gas Extraction (NAICS 211 plus, as noted above, the support activities in NAICS 213). NAICS 211 is divided into only two sub-categories: conventional oil and gas extraction and non-conventional oil extraction. Oil sands mining is a subset of the latter, the other being in-situ extraction via (typically) drilling techniques (currently oil sands production is evenly split between mining and in-situ methods).

Because financial and employment/earnings data for oil sands mining are not available from Statistics Canada, we have used other sources to develop the estimates. As noted in the text (particularly the notes to the tables in Annex B), these included corporate financial reports, surveys and analysis carried out for the Oil Sands Developers Group and informal surveys of MAC members involved in oil sands mining.

TABLE A1:
SUB-COMPONENTS OF NAICS THREE DIGIT INDUSTRIES

NAICS 212: MINING AND QUARRYING (EXCEPT OIL AND GAS)

2121 Coal Mining (including Bituminous, Sub-bituminous, Lignite)
2122 Metal Ore Mining
- 21221 Iron Ore Mining
- 21222 Gold and Silver Ore Mining
- 21223 Copper, Nickel, Lead and Zinc Ore Mining
- 212291 Uranium Ore Mining
- 212299 All Other Metal Ore Mining

2123 Non-Metallic Mineral Mining and Quarrying
- 21231 Stone Mining and Quarrying
- 21232 Sand, Gravel, Clay and Ceramic and Refractory Mining and Quarrying
- 212392 Diamond Mining
- 212393 Salt Mining
- 212394 Asbestos Mining
- 212395 Gypsum Mining
- 212396 Potash Mining
- 212397 Peat Extraction
- 212398 All Other Non-Metallic Mineral Mining and Quarrying

SUBSET OF NAICS 211114 NON-CONVENTIONAL OIL EXTRACTION: Oil Sands Mining

NAICS 327: NON-METALLIC MINERAL PRODUCTS MANUFACTURING

3271 Clay Product and Refractory Manufacturing
- 32711 Pottery, Ceramics and Plumbing Fixture Manufacturing
- 32712 Clay Building Material and Refractory Manufacturing

3272 Glass and Glass Product Manufacturing
3273 Cement and Concrete Product Manufacturing
- 32731 Cement Manufacturing
- 32732 Ready-Mix Concrete Manufacturing
- 32733 Concrete Pipe, Brick and Block Manufacturing
- 32739 Other Concrete Product Manufacturing

3274 Lime and Gypsum Product Manufacturing
- 32741 Lime Manufacturing
- 32742 Gypsum Product Manufacturing

3279 Other Non-Metallic Mineral Product Manufacturing
- 32791 Abrasive Product Manufacturing
- 32799 All Other Non-Metallic Mineral Product Manufacturing

NAICS 331: PRIMARY METAL MANUFACTURING

3311 Iron and Steel Mills and Ferro-Alloy Manufacturing
3312 Steel Product Manufacturing from Purchased Steel
- 33121 Iron and Steel Pipes and Tubes Manufacturing from Purchased Steel
- 33122 Rolling and Drawing of Purchased Steel (includes cold-rolled steel shape manufacturing and steel wire drawing)

3313 Alumina and Aluminum Production and Processing
- 33131 Alumina and Aluminum Production and Processing (includes primary production, rolling, drawing, extruding and alloying)

3314 Non-Ferrous Metal (except Aluminum) Production and Processing
- 33141 Non-Ferrous Metal (except Aluminum) Smelting and Refining
- 33142 Copper Rolling, Drawing, Extruding and Alloying
- 33149 Non-Ferrous Metal (except Copper and Aluminum) Rolling, Drawing, Extruding and Alloying

3315 Foundries
- 33151 Ferrous Metal Foundries (includes both iron and steel)
- 33152 Non-Ferrous Metal Foundries (includes die-casting foundries

ANNEX B:
FULL HISTORICAL DATA AND SOURCES 2003-2012

Table B1
Royalties, Mining Taxes and Similar Payments by Mineral Sector to Governments
(2003/04 to 2012/13)

		2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	10 Year Total
Newfoundland & Labrador	Mining and Mineral Rights Tax	16.0	14.4	21.0	53.1	276.6	302.7	138.9	171.9	287.7	384.6	**1667**
Nova Scotia	Gypsum tax, coal royalties	1.6	2.0	2.1	2.7	3.1	3.0	2.2	1.4	1.2	1.3	**21**
New Brunswick	Metallic Minerals Tax	2.2	2.8	10.5	120.2	119.7	137.7	43.8	20.0	48.0	35.0	**540**
Quebec	Mining Duties Act and Mining Act	13.5	26.1	55.3	55.7	102.1	31.3	114.2	323.7	353.0	207.4	**1282**
Ontario	Mining Tax	51.0	29.0	51.0	147.0	231.0	73.0	16.0	72.0	184.0	110.0	**964**
Manitoba	Mining Tax	17.7	57.9	57.9	41.1	107.1	65.0	10.0	21.0	35.0	40.0	**453**
Saskatchewan	Potash, Uranium & Other Minerals Royalties plus mineral portion of Resource Surcharge	242.6	442.3	482.0	328.8	518.9	1895.3	86.5	649.9	829.3	860.4	**6336**
Alberta	Oil Sands Mining Royalties	114.0	501.0	591.0	1563.0	2330.0	2302.9	1366.0	1409.3	1637	1216.9	**13031**
	Coal Royalties	9.0	11.0	11.0	16.0	14.0	34.0	27.0	35.0	29.0	-2.0	**184**
British Columbia	Mineral Tax and Mineral Land Tax	69.6	109.4	229.3	303.5	202.5	324.4	292.1	363.9	357.7	149.6	**2402**
Yukon	Land and Mineral Leases and Royalties	0.3	0.3	0.2	0.2	0.3	0.1	0.3	0.3	0.3	0.2	**3**
NWT and Nunavut	Royalties from Mineral Resources	47.9	139.6	64.3	8.6	61.9	110.0	90.4	108.0	118	56.4	**805**
Total		**585.4**	**1335.8**	**1575.6**	**2639.9**	**3967.2**	**5279.4**	**2187.4**	**3176.4**	**3880.2**	**3059.8**	**27688**

Sources of Information for Table B1

Newfoundland and Labrador:
For 2003/04 to 2007/08, Government of Newfoundland and Labrador, Public Accounts, vol. 2 Consolidated Revenue Fund Financial Statement for the year ended March 31, 2008 (http://www.fin.gov.nl.ca/ComptrollerGeneral/pubaccounts/2008/VolumeII-2007-08.pdf). For 2008/09, 2009/10, and 2010/11 estimates are from Government of Newfoundland and Labrador, Budget, Estimates, Consolidated Revenue Fund, Statement II. See http://www.budget.gov.nl.ca/budget2011/ for the 2011 and earlier budgets. For FY2011 and FY2012 refer to: http://www.budget.gov.nl.ca/budget2012/estimates/estimates2012.pdf and

http://www.budget.gov.nl.ca/budget2013/estimates/estimatesbook2013.pdf respectively.
Figure for FY 2012 includes Mining Tax and Royalties as well as Mining Permits and fees. The mining tax and royalties is the main category with revenues of $379.4 million.

Nova Scotia:
Government of Nova Scotia, Budget 2009 Estimates page 2.10 Consolidated Funds: Ordinary Revenue Items 68-72 inclusive for 2007/08 to 2010/11 and same citation in earlier budgets for 2002/03 to 2006/07.
For the 2010/11 estimates see
http://www.gov.ns.ca/finance/site-finance/media/finance/budget2011/Estimates_And_Supp_detail.pdf
For 2011/12 estimates see
http://www.novascotia.ca/finance/site-finance/media/finance/budget2012/Estimates_And_Supplementary_Detail.pdf
For 2012-13 estimates see
http://www.novascotia.ca/finance/site-finance/media/finance/budget2013/Estimates_and_Supplementary_Detail.pdf

New Brunswick:
For 2003/04 to 2005/06, Government of New Brunswick, Office of the Comptroller, Public Accounts, Volume 2, Supplementary Information, Statement 14 (http://www.gnb.ca/0087/pubacct/PA06v2.pdf) . For 2006/07 and 2007/08, Office of the Comptroller, Public Accounts for the Year ended March 31, 2008, Volume 1, Financial Statements to 2008 (http://www.gnb.ca/0087/pubacct/PA08v1e.pdf). For 2008/09 , 2009/10 and 2010/11 estimates, Department of Finance, Budget , Main Estimates, Comparative Statement of Estimated Gross Revenue, p205. For 2010/11 see http://www.gnb.ca/0160/budget/buddoc2011/ME2011-12.pdf . See also http://www.gnb.ca/0024/Fiscal_Update_2010-e.pdf , http://www.gnb.ca/0024/Fiscal_Update_2011-e.pdf and http://www.gnb.ca/0160/budget/buddoc2010/ME2010-11 Final.pdf
For the revised 2011/12 estimate see
http://www2.gnb.ca/content/dam/gnb/Departments/fin/pdf/Budget/2012-2013/ME2012-13.pdf
For 2012-13 estimates see
http://www.novascotia.ca/finance/site-finance/media/finance/budget2013/Estimates_and_Supplementary_Detail.pdf

Quebec:
Government of Quebec data are for net mining duties under the Mining Duties Act (duties on sub-surface minerals) and royalties under the Mining Act (royalties on surface mineral substances) and associated revenues. The data in the table are provided in personal communication by the Direction de l'imposition minère, Ministère des ressources naturelles et faune. The FY2012 data are preliminary.

Ontario:
Information is provided, via personal communication, by the Mines and Minerals Division, Ministry of Northern Development and Mines. The figure for FY 2012 is an estimate. The figure is for mining taxes and does not include royalties/mining taxes on diamonds for the only one diamond mine (Victor) operating in Ontario since that information is considered confidential.

Manitoba:
Information obtained from Government of Manitoba Budgets, various years. Data are typically found in Estimates of Expenditure and Revenue: Detailed Estimates of Revenue Table or Revenue Estimates for Core Government and are the forecast for the year just ending at the time the budget is brought down (e.g. forecast for 2011/12 as of 2012 budget brought down in April 2012) See http://www.gov.mb.ca/finance/provincialbudgets.html for access the individual budgets. For the most recent estimates see http://www.gov.mb.ca/finance/budget11/papers/r_and_e.pdf http://www.gov.mb.ca/finance/budget12/papers/r_and_e.pdf http://www.gov.mb.ca/finance/budget13/papers/r_and_e.pdf

Saskatchewan:
The estimates in Table 2 cover both royalties on potash, uranium, coal and other (non-oil and gas) minerals and the portion of the Surcharge on Resource Corporations levied on these minerals. The Resource Surcharge is assessed on the sale value of potash, uranium, coal, other non-oil and gas minerals, crude oil; and natural gas. The surcharge rate as applied to non-oil and natural gas sales was 3.6% of sales until 2005 declining to 3.0% by 2008 and remaining at the rate until the present. The amount of this resource surcharge attributed to potash, uranium and other non-petroleum resources was calculated based on applying these rates to the value of mineral sales from these non- renewable resources in each year. The value of mineral sales was obtained from the Saskatchewan Bureau of Statistics, Provincial Accounts. For 2012/13, for example, royalties on potash, uranium, coal and non-oil and gas minerals were $531.8 million. The total resource surcharge was $633.9 million. The combined value of production of potash, uranium, coal, and other non-oil and gas minerals in that year was $7549 million. Multiplying that number by 0.03 yields the portion of the surcharge levied on potash, uranium, coal and other non-oil and gas production of $226.5 million for total mineral revenues to the Saskatchewan government of $860.4 million ($531.8 million + $226.5 million).
For the royalty and total resource surcharge data see Government of Saskatchewan, Provincial Budgets 2002-03 to 2012/13, Estimates for the Fiscal Year, Sources of Revenue for the Year Ending ... (refer to http://www.gov.sk.ca/finance/budget).
The value of mineral sales data used to apportion the resource surcharge is from the Saskatchewan Bureau of Statistics (SBS), Provincial Accounts, Table 1 (see http://www.stats.gov.sk.ca/pea/) with preliminary 2012 data kindly provided by SBS.

Alberta:
Royalties for oil sands mining for 2003/04 to 2012/13 are from Canadian Association of Petroleum Producers (CAPP), *Statistical Handbook*, Canada Oil Sands Expenditures: 1997-2012, Table 4.16b (see http://www.capp.ca/GetDoc.aspx?DocId=184463&DT=NTV) and are for calendar years.
Coal royalties in Alberta are available in the Budget Fiscal Plan Revenue tables which can be accessed at
http://www.finance.alberta.ca/publications/budget/estimates/est2010/energy.pdf
http://www.finance.alberta.ca/publications/budget/budget2011/fiscal-plan-revenue.pdf and
http://www.finance.alberta.ca/publications/budget/budget2013/fiscal-plan-tables.pdf

British Columbia
Information obtained from the Government of British Columbia, Ministry of Finance, Minerals, Oil and Gas Revenue Branch, Mineral Tax Section. The key document is identified below:
(http://www.sbr.gov.bc.ca/business/Natural_Resources/Mineral_Tax/minrev_collected.pdf)

Note that starting in 2008/09 the data were adjusted to reflect the introduction of a three month instalment accrual system. The Mineral Tax accounts for almost all the revenues. Coal accounted for about 40 percent of annual Mineral Tax revenues in the early 2000's. Since 2008-09, however, revenues from coal have become the most important source of mineral tax revenues accounting for roughly 85% annually.

Nunavut and NWT:
Information provided each year by Aboriginal Affairs and Northern Development Canada, Mineral Resources Directorate. Note that data for Nunavut and NWT are not provided separately to preserve confidentiality.

Yukon:
For 2002/03 and 2003/04, Yukon Government, Public Accounts, Comparative Schedule of Revenue, (http://www.finance.gov.yk.ca/ For 2004/05 to 2005/06, Yukon Government, Comparative Schedules of Revenues Schedule 2 for year ending March 31, 2006, page 2. See http://www.finance.gov.yk.ca/publications/budgets/budget05-06/2005-06pub_s01.pdf . For subsequent years see Yukon Department of Finance, Budgetary Income Summary by Source, Financial Information. For actual 2011/12 and estimated 2012/13 data see http://www.finance.gov.yk.ca/pdf/budget/2013_2014_fininfo_e.pdf

Royalties to First Nations (Yukon Example)

The data in this report show royalties paid to governments which become part of general government revenue. Subsequent to the release of this report last year officials of the Government of the Yukon, noted that the territorial government also collects mineral (and other) royalties on behalf of First Nations for activities on First Nations Settlement Land. In the case of minerals the same formulae as set out in the Quartz Mining Royalty and Placer Mining Royalty Acts is used to assess royalties payable. The collected funds are remitted to the First Nations. These arrangements for the payment of mineral royalties have been in place for minerals since April 1, 2003 and are governed by a set of First Nation Financial Agreements.

Information provided by the Yukon Department of Energy Mines and Resources indicates that the royalties collected on behalf of the First Nations are, in some years, considerably larger than those due to the territory (i.e. the amounts in Tables 2 and B1) reaching $6 million in 2009/10 and $2 million in 2011/12. This reflects the fact that, for a period, the only operating mine in the territory was located on First Nations Category A Settlement Land (which includes the mines and minerals thereunder).

We have not included these First Nations royalties in our payments to governments, in part, because there is no information about the situation in other jurisdictions. Their inclusion would, in addition, raise some fundamental definitional issues. Should, for example, royalty payments made directly to a First Nation be treated the same as those collected on behalf of First Nations by a provincial or territorial government? Such a situation is likely to be increasingly common with the negotiation of impact and benefit agreements (IBAs) and with the devolution of authority to the other territorial governments. Second, if royalty payments to First Nations are not distinguished by the collection mechanism, should all such payments by the mining industry be viewed as received by a third level of government? Third, should only financial transfers to First Nations be considered or should investments in social infrastructure pursuant to an IBA also be included?

Assuming these definitional issues are resolved, there remains the problem of finding the information. To our knowledge, there is, except in the Yukon, no systematic collection and presentation of information on resource royalty payments to First Nations. Given that First Nations are increasingly important participants in resource development, there is, we believe, some urgency to producing solid estimates of the magnitude of such financial payments.

Table B2
Corporate Taxes Paid by the Mineral Sector to Federal and Provincial Governments
(2003-2012 $ millions)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012E	Total
Mining and Quarrying											
Federal Tax	268	495	536	806	866	909	321	644	627	*143*	**5615**
Provincial Tax	83	209	245	352	478	636	220	497	535	*131*	**3386**
Total Tax	351	703	781	1158	1344	1545	541	1142	1163	*274*	**9002**
Oil Sands Mining											
Federal Tax	529	278	280	476	887	550	0	563	*575*	*429*	**4567**
Provincial Tax	195	92	303	671	794	264	0	155	*166*	*121*	**2761**
Total Tax	724	370	583	1147	1681	814	0	718	*741*	*550*	**7328**
Primary Metal Manufacturing											
Federal Tax	213	318	395	822	414	245	121	109	110	*63*	**2810**
Provincial Tax	92	153	191	383	187	152	80	73	77	*49*	**1437**
Total Tax	305	471	586	1205	601	397	201	182	187	*112*	**4247**
Non-Metallic Mineral Manufacturing											
Federal Tax	268	269	291	326	389	285	206	221	206	*176*	**2637**
Provincial Tax	124	129	152	169	198	163	135	146	140	*132*	**1488**
Total Tax	393	398	443	495	587	449	341	367	346	*308*	**4125**
Total for Mineral Sector											
Federal Tax	**1278**	**1360**	**1502**	**2430**	**2556**	**1989**	**648**	**1537**	**1519**	***811***	**15630**
Provincial Tax	**494**	**583**	**891**	**1575**	**1657**	**1215**	**435**	**871**	**918**	***433***	**9072**
Total Tax	**1773**	**1943**	**2393**	**4005**	**4213**	**3204**	**1083**	**2408**	**2437**	***1244***	**24702**

Notes

1. Federal Tax includes corporate income taxes and certain other direct taxes such as the Large Corporation Tax in applicable years. The Provincial Tax data cover only corporate income tax. They do not include provincial capital taxes.
2. Numbers in italics are estimates

Sources:

Non-Oil Sands Mining

For the years 2003 to 2011, Statistics Canada data from *Financial and Taxation Statistics for Enterprises 2010(61-219X*). For 2012, the estimates for total tax payable are derived by applying, for each industry segment, the percentage increase in current tax between 2011 and 2012 from Statistics Canada, *Quarterly Financial Statistics for Enterprises (61-008X)*, to the total tax payable from 61-219X in 2010. The data from 61-008X for each industry segment –Mining and Quarrying (except oil and gas), Non-Metallic Mineral Products Manufacturing and Primary Metal Manufacturing - are obtained from special runs of the database purchased from Statistics Canada. The distribution between federal and provincial tax payable in 2012 is estimated by applying a slightly lower ratio of federal to total tax than that in 2011 reflecting the reduction in the federal corporate tax rate in 2012 (from 16.5% in 2011 to 15% in 2012 compared to no or very modest reductions in the corresponding provincial rates. Note that the mining –related changes in the 2012 federal budget –the phase outs of the Mineral Exploration and Development Tax Credit and the application of the Atlantic Investment Tax Credit to resource investments – do not come into effect in 2012.

Oil Sands Mining

For 2002 to 2009, the estimates for both federal and provincial corporate income tax (CIT) were provided by the Oil Sands Developers Group (OSDG), previously known as the Athabasca Regional Issues Working Group (RIWG). The estimates are from a survey of members conducted by a consultant (Nichols Applied Management) for OSDG/RIWG. The survey results were used by the consultant to develop projections of oil sands production, revenue employment and fiscal payments to governments. See their surveys for various years on the OSDG website at (http://www.oilsandsdevelopers.ca/index.php/library/). OSDG decided in 2011 to discontinue this survey.

The estimates of corporate income tax from oil sands mining for 2010 to 2012 were developed by ENTRANS based on a variety of information sources related to the four producing oil sands mining projects. These include: Syncrude's 2012 Sustainability Report , Suncor's 2012 Sustainability Report (*Perspectives: Creating Our Energy Future Together* available at http://www.suncor.com/pdf/ROS12_E_final.pdf) and the annual reports and Annual Information Forms of several companies – Suncor Energy Inc., Canadian Oil Sands Limited, Canadian Natural Resources Limited - involved in oil sands mining. We also benefited from discussions with officials of MAC member companies involved in oil sands mining operations.

Essentially our approach was to apply the estimates of the tax position of the part of the industry for which we had information to the part for which we did not. For 2010 to 2012, the parts for which information was available accounted for about 70 percent of the industry measured by production of bitumen. The bitumen production data, which provide the weights, are from Alberta Energy Resources Conservation Board, Alberta *Mineable Oil Sands Plant Statistics, ST 39-2010 Monthly Supplement*, ercb.ca/data-and-publications/statistical-reports/st39. The federal –provincial distribution of corporate income tax for 2010 and 2011 was developed from information provided by one of the projects. Unfortunately this information is not available for 2012. Therefore we have imposed the average distribution for 2010-2011 to the total CIT estimate for 2012.

Table B3:
Estimates of Personal Income Tax Revenues
Paid by Employees of Companies Involved in the Mineral Sector (2003-2012)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
Average Annual Earnings -$											
Mining & Quarrying	57823	60388	60853	60210	67612	70656	71384	75132	76384	83823	
Primary Metals Man.	54006	56714	58039	57550	62780	61599	59100	64936	62459	63656	
NMMP*	43930	43376	46198	47068	50017	52441	50379	48019	50766	53129	
Oil Sands Mining	78950	81276	83364	88096	92176	98122	106143	116479	115469	120343	
Effective Tax Rates: Federal- %											
Mining & Quarrying	12.64	13.08	12.51	12.36	11.42	12.19	11.35	11.56	11.56	12.20	
Primary Metals Man.	12.64	12.21	11.50	11.29	11.42	11.31	9.14	10.60	10.60	10.60	
NMMP	11.32	10.82	10.03	9.73	10.18	10.06	9.14	8.17	9.88	9.88	
Oil Sands Mining	14.36	13.66	13.96	14.06	13.41	15.65	13.94	14.10	14.10	14.10	
Effective Tax Rates: Provincial-%											
Mining & Quarrying	4.37	4.86	4.99	4.94	4.76	4.98	4.85	4.65	4.65	5.16	
Primary Metals Man.	4.37	4.50	4.62	4.56	4.76	4.60	4.04	4.26	4.26	4.26	
NMMP	3.76	3.97	3.98	3.90	4.29	4.14	4.04	3.35	4.04	4.04	
Oil Sands (Alberta)	6.20	5.98	6.18	6.29	5.94	7.01	6.50	6.30	6.30	6.30	
Employment											
Mining & Quarrying	47391	45986	46689	48830	52877	58506	52429	52532	56669	63418	
Primary Metals Man.	85402	79703	78731	80681	78802	69107	59413	61098	61845	60734	
NMMP	51329	51403	51304	53701	52807	52707	48711	49687	49405	49820	
Oil Sands	8666	9286	9859	10863	11732	12000	13300	15000	15386	16738	
Total	**192788**	**186378**	**186583**	**194075**	**196218**	**192320**	**173853**	**178317**	**183305**	**190710**	
Estimated Personal Income Tax by Level of Government -$ millions											
Federal	**1283**	**1260**	**1233**	**1268**	**1387**	**1448**	**1167**	**1318**	**1408**	**1604**	**13376**
Provincial	**449**	**472**	**498**	**516**	**583**	**599**	**520**	**543**	**579**	**673**	**5432**
Total	**1732**	**1732**	**1731**	**1784**	**1970**	**2047**	**1687**	**1861**	**1987**	**2277**	**18808**
Estimated Personal Income Tax by Industry Group -$ millions											
Mining & Quarrying	**466**	**498**	**497**	**509**	**578**	**710**	**606**	**640**	**702**	**923**	**6129**
Primary Metals Man.	**785**	**755**	**737**	**736**	**800**	**677**	**482**	**590**	**574**	**575**	**6711**
NMMP*	**340**	**330**	**332**	**345**	**382**	**392**	**310**	**275**	**349**	**368**	**3423**
Oil Sands Mining	**141**	**148**	**166**	**195**	**209**	**267**	**289**	**356**	**362**	**411**	**2544**
Total	**1732**	**1732**	**1731**	**1784**	**1970**	**2046**	**1687**	**1861**	**1987**	**2277**	**18807**

Notes and Data Sources for Table B3

NMMP is an acronym for the Non-Metallic Mineral Products Manufacturing Industry (NAICS code 327).

Average weekly earnings and employment data (other than for oil sands), from Statistics Canada, *Employment, Earnings and Hours*, Cat 72-002 and Statistics Canada, CANSIM database, Tables 281-0024 and 281-0027. The employment and earnings data are for all employees and the earnings data include overtime. Annual average earnings are 52X average weekly earnings.

Oil sands mining employment estimates to 2007 are from the Athabasca Regional Issues Working Group (RIWG) and, for 2008 to 2010, from the successor organization the Oil Sands Developers Group (OSDG). They reflect direct

employment on oil sands projects in the Wood Buffalo Region (where all of the operational projects are located) Employment information at estimates http://www.oilsandsdevelopers.ca/wp-content/uploads/2009/03/OSDG-Fact-Sheet-Social.pdf. For 2011 and 2012, estimates are obtained from the annual reports, annual information forms or other public documents of organizations involved in the four producing oil sands mining projects as of 2012 (Syncrude, Suncor/Millennium, Canadian Natural Resources/Horizon and Shell et al/ Athabasca Oil Sands Project) and refer to direct full time employment.

For average weekly earnings for oil sands workers, a proxy, average weekly earnings in the oil and gas industry in Alberta was used. This proxy is also obtained from Statistics Canada, CANSIM database, Table 281-0027.

Effective tax rates are derived from Canada Revenue Agency (CRA), *Final Statistics for various tax years*. See http://www.cra-arc.gc.ca/agency/stats/final-e.html. The effective tax rate is the ratio of net federal (or net provincial) taxes paid to total income assessed for the relevant income class. The income class is determined by the average annual earnings. Since the most recent CRA data only provides personal tax filer information for 2010 in consistent aggregations, the effective rates for 2011 and 2012 have been assumed to be the same as 2010 (although they have been adjusted upwards to reflect income categories where necessary). The 2010 tax filer data, which were released in 2012 are accessible at http://www.cra-arc.gc.ca/gncy/stts/gb10/pst/ntrm/pdf/table2a-eng.pdf

Note that there have been minor changes to the PIT collection number reported last year for both 2010 and 2011. This is due to the fact that PIT rates were estimated at that time on the basis of the 2009 rates which were the most recently released. The new preliminary data released in 2012 (based on over 90% of processed 2010 T1 returns) is available at http://www.cra-arc.gc.ca/gncy/stts/gb10/pst/ntrm/menu-eng.html

The personal tax data for Alberta was used for the calculation of PIT paid by Alberta oil sands mining employees for years up to 2009. The Alberta tables are located at http://www.cra-arc.gc.ca/gncy/stts/gb08/pst/fnl/html/t02ab-eng.html. The aggregations available this year did not permit the calculation of an Alberta-specific rate to apply to income earned in oil sands mines for the relevant income classes for 2010. A Canada-wide rate was used. The difference may result in a minor overestimate of PIT collected in 2010 and the projections for 2011 and 2012.

The tax estimates in the lower panel are calculated by multiplying average annual earnings by the relevant tax rate for the specific tax bracket then multiplying that result by the number of employees. These results produce total tax paid for each mining industry segment. The figures are then summed across the industry segments to produce the estimates for total personal income taxes paid by employees of mining companies.