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Exempt - section 22

From: Bartley, Scott

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Cc: Mayo, Wayne; Davis, Graeme; Bastian, Bruce; Parker, David

Subject: RSPT example [SEC=IN-CONFIDENCE]

Hamish/Martin

This is a heads up that, subject to a final review, we are aiming to load this to the resource tax website on Monday as an explanatory tool and response to various requests we have for modelling assistance.

Table 1 is the accounting for the RSPT. Table 2 is intended to get across the way this tax should be viewed - as a cash flow tax and a guaranteed deferred tax asset.

Regards

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	Resource Super Profits Tax commences									
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Project cash flow before RSPT										
Revenue	0	0	0	1,113	1,986	5,418	5,744	6,089	5,965	4,736
Capital expenditure	-2,200	-1,000	-1,000	750	0	-253	0	-250	0	-250
Operating expenses	0	0	0	722	(288)	-3,803	3,834	-1,102	-4,052	-3,465
Exploration expenses	-50	-50	-50	50	50	50	50	50	50	50
Net cash flow before RSPT	-2,250	-1,050	-1,050	-409	428	1,565	3,910	736	1,905	992
Internal rate of return						12.3%				
Net present value (NPV) before RSPT at 10%						511				
Project cash flow after RSPT										
Net cash flow after RSPT	-2,250	-1,050	-1,050	-409	428	1,565	3,910	736	1,905	992
Project cash flow with RSPT as cash flow tax										
RSPT with immediate expensing and cash refunds	-800	-420	-420	194	251	834	764	694	782	867
Net cash flow after RSPT	-1,350	-630	-630	-216	377	682	3,146	1,045	1,123	655
Internal rate of return						12.3%				
Net present value at 10%						306				
NPV post-RSPT (10%) NPV pre-RSPT (10%)						0.60				
RSPT deferred tax asset cash flow										
Change in RSPT capital account	-900	-474	-502	278	122	613	911	135	137	12
Less RSPT allowance	-900	-54	82	113	126	22	91	164	76	38
Net cash flow	-900	-420	-420	164	251	632	765	197	163	79
Internal rate of return						6.0%				

Notes:

A It is assumed production commences in 2011-12 and ends in 2018-19. Revenue and operating expenses for 2011-12 are included in the company tax calculations but are excluded from the RSPT and risk decomposition analysis as the scheme commences in 2012-13. Revenue in 2019-20 is from the disposal of assets and operating costs relate to costs associated with closing down the mine. For simplicity, it is assumed that assets are disposed of at their book value and therefore the sale has no effect on company income taxation. It is assumed the company does not have other projects subject to RSPT to which RSPT losses could be transferred (and as a consequence, operating expenses for company tax calculations are identical to operating expenses for RSPT calculations).

B Pre-announcement and pre-commencement transitional exploration expenditure are capitalised into the starting capital base and new capital base, respectively, and written off over time and uplifted year by year. Exploration expenses post-commencement are expensed.

C New (pre-commencement and post-commencement) capital is depreciated under the simplifying assumption of 10-year straight-line depreciation. It is assumed that assets receive half-year depreciation in the year that they are purchased.

D The opening balance of the RSPT capital account is indexed by the allowance rate (the long term bond rate - assumed to be 6 per cent) (RSPT capital account in previous year (31) x 6%). This component can also be decomposed into its sub-components (starting base opening balance (14) x 6% + new capital opening balance (23) x 6% + RSPT loss in prior year (30) x 6%). The starting base RSPT allowance is not transferable or refundable and, in practice, would be quarantined to this project along with the RSPT starting base (see notes H and N). For the purposes of simplicity, this allowance has not been separately identified in this example.

E (If (12) < 0 in previous year, (8) = (30); otherwise (8) = 0)

F Undeducted new capital expenditure at the end of the project is deductible. (negative of (23) - (25) - (27))

G ((3) - (4) - (5) - (6) - (7) - (8) - (9))

H The starting capital base is depreciated on an accelerated basis of 36% (2012-13); 24% (2013-14); 15% (2014-15); 15% (2015-16); 10% (2016-17). As starting capital is not transferable or refundable, depreciation of this component can only be deducted to the extent that the RSPT tax base excluding starting capital depreciation (10) is non-negative. Unused starting capital depreciation is recorded in the starting base carrying balance (22) and is available for depreciation in later years. (If (10) ≤ 0; (11) = 0; otherwise (11) = minimum of (10) and depreciation profile of starting base (21) x starting base carrying balance in previous year (22)). See also note N.

I ((10) - (11))

J ((12) x 40%)

K A refundable RSPT credit arises in the final year if the RSPT tax base (12) (including (9) but excluding (11)) is negative. Pre-announcement starting capital at the close of 2009-10 income year is \$1,000. Post-announcement and pre-commencement opening balance is equal to closing balance (20) of previous year.

L Pre-commencement and pre-announcement capital is indexed by the allowance rate (long term bond rate - assumed to be 6 per cent) ((14) x 6%). It is assumed the opening balance of \$1,000 includes the RSPT allowance applying from the most recently audited accounts. (If (10) ≤ 0; (18) = 0; otherwise (18) = minimum of (10) and starting base available (21)). See also note G.

M

N Any undeducted starting capital at the end of the project can be offset against positive RSPT income base but cannot be refund (19) = minimum of (10) or (22)

O ((14) + (15) + (16) + (17) - (18))

P Depreciation profile of starting base after commencement of RSPT (closing balance 2011-12 depreciated over 5 years from 2012-13 to 2016-17 at 36%, 24%, 15%, 15%, 10%, respectively).

Q Records unused starting capital depreciation. (prior year carrying balance (22) + extra depreciation available (21) - depreciation (23) + (24) + (25) + (26) - (27) + (28))

R Pre-commencement expenditure attracts the RSPT allowance. In pre-commencement period, ((23) x 6%)

S (If (12) < 0; (30) = absolute value of (12); otherwise (30) = 0)

T ((20) + (29) + (30))

U It is assumed the company pays *ad valorem* royalties to the State Government at a rate of 7 per cent of project revenue. Follow commencement of the RSPT, the company receives a refundable credit for royalties paid (at least up to the amount of royalties I time of announcement, including scheduled increases and appropriate indexation factors).

V The Government has announced a resource exploration rebate to provide companies with a refundable tax offset at the prevailing tax rate for exploration expenditure. Once introduced, the effective net cost of \$50 exploration expense would be \$21 (\$50 of exploration, would attract \$20 RSPT refund, reduced by \$8 by the 30% company tax, plus \$15 company tax rebate). The reason has not been modelled here.

W For company tax purposes, depreciation is applied to the book value of pre-announcement investment and to capital expenditure in (1). For illustrative purposes only, depreciation does not occur until production commences in 2011-12. Depreciation is on a basis over 10 years. Assets receive half-year depreciation in the year that they are purchased. It is assumed that assets are depreciated over their written down value.

X The corporate tax rate is 30 per cent up to and including 2012-13, 29 per cent in 2013-14 and 28 per cent from 2014-15.

Y The RSPT is financially equivalent to a cash flow tax. The cash flow analysis is intended to demonstrate this, and as such, company and royalties are necessarily excluded from the analysis. Project cash flows before RSPT are cash flows in the absence of all tax ((53) - (13))

Z How project cash flow would look if all expenditure were immediately expensed and 40% of tax losses were immediately refundable ((53) - (57))

AA 40% of annual change in RSPT capital account (negative of 40% x ((31) - prior year (31)))

AB 40% of the RSPT allowance actually allowed on the previous year's RSPT capital account (prior year (31) x 6% x 40%)

AC ((62) + (63))

AD ((60) + (65))

AE ((62) + (63)) or ((56) - (58))

2013-2014	135	500	535	599
	500	535	599	675

ed. { (F(10) < 0;

2-13 to

n actually allowed

ring imposed at the

ng company successful
nce exploration

e amounts straight-line
posed of at

any taxation
ues.

rd { (53) x 40% }

2009-10 2010-11 2011-12 2012-13

Depreciation (RSPT purposes)	-	-	#REF!	0	254
depreciation of starting base	-	-	#REF!	0	0
depreciation new capital	-	-	-	-	253.8

Depreciation schedule - RSPT Purposes (assumed straight-line for simplicity)

year of investment	investment		
2010-11	1113		111.3
2011-12	1050		105
2012-13	750		37.5
2013-14	0		
2014-15	250		
2015-16	0		
2016-17	250		
2017-18	0		
2018-19	250		
2019-20	0		

Bookvalue

2010-11	1113	1113	1113	1001.7		
2011-12	1050		1050	945		
2012-13	750			712.5		
2013-14	0					
2014-15	250					
2015-16	0					
2016-17	250					
2017-18	0					
2018-19	250					
2019-20	0					
Residual	3663	0	0	1113	2163	2659

Depreciation (company tax purposes)	0	0	370	457.5
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Depreciation schedule - Company Tax Purposes (assumed straight-line for simplicity)

year of investment	investment		
BV 2008-09	1000		100
2009-10	1200		120
2010-11	1000		100
2011-12	1000		50
2012-13	750		37.5
2013-14	0		
2014-15	250		
2015-16	0		
2016-17	250		
2017-18	0		
2018-19	250		
2019-20	0		

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Bookvalue

BV 2008-09	1000	1000	1000	1000	900	800
2009-10	1200		1200	1200	1080	960
2010-11	1000			1000	900	800
2011-12	1000				950	850
2012-13	750					712.5
2013-14	0					
2014-15	250					
2015-16	0					
2016-17	250					
2017-18	0					
2018-19	250					
2019-20	0					
Residual	5700	1000	2200	3200	3830	4123

2013-14 2014-15 2015-16 2016-17 2017-18 2018-19 2019-20

1338 1532 569 329 341 354 366
 1047 1228 253 - - - -
 291.3 303.8 316.3 328.8 341.3 353.8 366.3

111.3 111.3 111.3 111.3 111.3 111.3 111.3
 105 105 105 105 105 105 105
 75 75 75 75 75 75 75
 0 0 0 0 0 0 0
 12.5 25 25 25 25 25 25
 0 0 0 0 0 0 0
 12.5 25 25 25 25 25
 0 0 0 0 0 0
 12.5 25 25 25 25
 0 0 0 0 0

890.4 779.1 667.8 556.5 445.2 333.9 222.6
 840 735 630 525 420 315 210
 637.5 562.5 487.5 412.5 337.5 262.5 187.5
 0 0 0 0 0 0 0
 237.5 212.5 187.5 162.5 137.5 112.5
 0 0 0 0 0 0
 237.5 212.5 187.5 162.5
 0 0 0
 237.5 212.5
 0

2368 2314 1998 1919 1578 1474 1108

495 507.5 520 532.5 545 557.5 570

100 100 100 100 100 100 100
 120 120 120 120 120 120 120
 100 100 100 100 100 100 100
 100 100 100 100 100 100 100
 75 75 75 75 75 75 75
 0 0 0 0 0 0 0
 12.5 25 25 25 25 25 25
 0 0 0 0 0 0 0
 12.5 25 25 25 25 25
 0 0 0 0 0
 12.5 25 25 25
 0

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700	600	500	400	300	200	100
840	720	600	480	360	240	120
700	600	500	400	300	200	100
750	650	550	450	350	250	150
637.5	562.5	487.5	412.5	337.5	262.5	187.5
0	0	0	0	0	0	0
	237.5	212.5	187.5	162.5	137.5	112.5
		0	0	0	0	0
			237.5	212.5	187.5	162.5
				0	0	0
					237.5	212.5
						0
3628	3370	2850	2568	2023	1715	1445

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		2009-10	2010-11	2011-12
Parameters				
RSPT rate	40%			
capital allowance rate	6%			
state royalties	7%			
company tax rate		30%	30%	30%
accelerated depreciation provisions				
Inputs				
<u>production</u>				15
<u>revenues and costs from production</u>				
	escalation factors			
sale price per unit	6%			70
cost of extraction per unit	7%			45
other fixed costs				
total revenue from production				1050
total costs from production				675
<u>investment</u>				
book value (2008-09)	1000			
capex		1200	1000	1000
exploration		50	50	50
<u>depreciation</u>				
residual asset life (pre-announcement investment)	10			
asset life (post-announcement investment)	10			

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2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
30%	29%	28%	28%	28%	28%	28%	28%
36%	24%	15%	15%	10%			
15	25	65	65	65	60	45	0
74	79	83	88	94	99	105	112
48	52	55	59	63	68	78	83
							500
1113	1966	5419	5744	6089	5958	4736	0
722	1288	3583	3834	4102	4052	3495	500
750	0	250	0	250	0	250	0
50	50						

Resource Super Profits Tax

Stylised worked example (explanatory memorandum)

This note provides a worked example of the cash flows of a hypothetical mining or petroleum project and the impact on those flows of the Government's proposed RSPT and company income taxation. The example is highly stylised to illustrate the features of the RSPT during the transition period through to cessation of a project.

The worked example illustrates, in Table 1 (Operational Features of the RSPT), the operation of the main features of the RSPT and, in Table 2 (Risk Decomposition Analysis), the close relationship between the RSPT and a 'pure' cash flow tax.

The operational features of the RSPT in Table 1 of the worked example include:

- treatment of pre-announcement expenditure (starting capital) and pre-commencement expenditure (part of new capital);
- treatment of ongoing post-commencement expenditure (operating expenses, exploration expenditure and new capital expenditure); and
- application of the long term bond rate (LTBR) to uplift from year to year both the written-down value of capital expenditure and annual RSPT losses (via the RSPT allowance).

The RSPT allowance is crucial to an understanding of the financial equivalence of the RSPT and cash flow taxation. Table 2 analyses the overall cash flows of the project, highlighting the relationship between the RSPT and cash flow taxation. This is intended to show the impact of the RSPT on project returns and risk.

Some features incorporated in the example are subject to consultation. Some simplifying assumptions have been made to facilitate presentation of the key features of the RSPT. For example:

- Assets are depreciated on a straight-line basis over 10 years. It is assumed that assets receive half-year depreciation in the year they are purchased. Disposal of assets is also assumed to be at their written down value.
- The project's company pays *ad valorem* royalties to the State Government at a rate of 7 per cent of project revenue.
- The LTBR (the allowance rate) is assumed to be 6 per cent.
- The company does not have other projects subject to RSPT to which RSPT losses could be transferred.

Numbers in brackets throughout the text refer to line item numbers in Tables 1 and 2. Further explanatory detail is provided in the footnotes to the example.

TABLE 1: OPERATIONAL FEATURES OF THE RSPT

RSPT calculations

- The RSPT tax base (12) is calculated as assessable revenue (3) less operating expenses (4), less exploration expenses (5), less depreciation of new capital (6), less the RSPT allowance (7), less any prior year RSPT loss (8), less depreciation of any starting capital (11).
 - As starting capital is not transferable or refundable, depreciation of this component can only be deducted to the extent the RSPT tax base excluding starting capital depreciation (10) is non-negative.

- The RSPT payable (13) is calculated as 40 per cent of the RSPT tax base (12). In the final year (when the project closes down), if the RSPT tax base is negative (including any undeducted new capital but excluding deductions for any starting capital), an amount equal to 40 per cent of this RSPT loss is refunded.
- The RSPT Allowance (7) is calculated by multiplying the allowance rate (at an assumed 6 per cent LTBR) by the prior year RSPT capital account (31). This consists of three components: the starting base component (14 x 6 per cent); the new capital component (23 x 6 per cent); and the prior year loss component (30 x 6 per cent).

RSPT capital account

- The RSPT capital account tracks undeducted capital expenditure and any unutilised losses from previous years. Due to the differing treatment of starting capital and new capital, it is necessary to separately identify these amounts in the capital account.
 - The RSPT capital account (31) is the sum of the starting capital (20) and new capital (29) closing balances, and any undeducted prior year losses (30).
- During the pre-commencement period, the starting capital, new capital and exploration expenditure are uplifted by the allowance rate to ensure their real value is maintained. Post-commencement of the RSPT, the capital uplift is included as a deductible expense in the RSPT calculation (7).
 - The capital base is not depreciated prior to commencement of the RSPT. Post-commencement, starting and new capital are reduced by depreciation (which is included in the RSPT calculations as a deductible expense). Capital spending within the year (less any depreciation) is added to the base to arrive at the closing balance.
 - The commencement value of the starting capital base is depreciated on an accelerated basis of 36 per cent (2012-13); 24 per cent (2013-14); 15 per cent (2014-15); 15 per cent (2015-16); 10 per cent (2016-17). Due to the non-transferability of the starting base, depreciation deductions are limited to the positive value of the RSPT tax base excluding starting capital depreciation (10). Any undeducted starting capital depreciation is added to the RSPT starting base carrying balance (22). This balance is deductible in later years to the extent that the RSPT tax base excluding starting capital depreciation (10) is non-negative.
- Where the RSPT tax base is negative, the RSPT loss for that year is uplifted by the allowance rate in the following year to compensate investors for the deferred, but guaranteed, tax credit.

Company Taxation Calculations

- The RSPT is a deductible expense for income tax purposes. Following commencement of the RSPT, resource entities receive a refundable credit (33) for state royalties paid (34).
- The company tax paid (44) is determined from taxable income (43) which is calculated as revenue (32), plus credit for State royalties (33), less State royalties paid (34), less operating expenses (35), less exploration expenses (36), less depreciation for income tax purposes (37), plus RSPT cash refund for losses in the final year (39), less RSPT payments (40), less prior year income tax loss (42).

TABLE 2: RISK DECOMPOSITION ANALYSIS

This table looks at the internal rate of return and net present value of four categories of cash flows from the project – cash flows before RSPT (53), cash flows after RSPT (56) and the cash flows from a disaggregation of the post-RSPT flows into:

- cash flows that would result (58) if the RSPT operated as a ‘pure’ cash flow tax (that is, a tax incorporating immediate expensing of all expenditures and immediate cash refunds of 40 per cent of any annual RSPT losses); and

- the residual cash flows (64) reflecting the RSPT deferred tax asset comprising losses and the depreciated value of project assets uplifted annually at the LTBR. The deferred tax asset is reduced as losses are offset against RSPT income, as capital is depreciated or when 40 per cent of the capital balance is refunded at the end of the project.

Project cash flow before RSPT

- Overall cash flow before RSPT (53) is calculated as revenue (49), less exploration expenditure (52), less other capital expenditure (50), less operating expenses (51).
- Before all taxes, the hypothetical project's internal rate of return (54) is 12.3 per cent and its net present value (NPV) is \$511 (55) with discounting at 10 per cent.

Project cash flow after RSPT

- Cash flow after RSPT (56) is calculated as cash flow before RSPT (53) less year-by-year RSPT payments and refunds (13).

Project cash flow with RSPT operating as a cash flow tax

- The project's tax payments and refund flows that would result from the RSPT operating as a cash flow tax (58) are calculated by applying the 40 per cent RSPT tax rate to before-RSPT flows (53). Cash flow taxation results in a 40 per cent reduction in year-by-year pre-RSPT flows because a cash flow tax incorporates immediate write-off of all expenditures and immediate cash refunds for annual losses. Thus, with cash flow taxation:
 - annual negative cash flow (revenue less than expenditure) would be reduced by 40 per cent (the RSPT tax rate) via cash refunds; and
 - annual positive cash flow (revenue greater than expenditure) would be reduced by 40 per cent via RSPT tax payments.
- Cash flow with the RSPT operating as a cash flow tax (58) is obtained by subtracting the stream of tax refunds and tax payments (57) from before-RSPT flows (53).
- This 40 per cent reduction of all pre-RSPT cash flows means that a project's internal rate of return is not affected by the tax. Moreover, the project's pre-RSPT NPV, with discounting at any investor's discount rate, is reduced by exactly the RSPT rate of 40 per cent. Project risk is reduced in a balanced way with minimal effect on investment decision-making. Thus, with the RSPT operating as a cash flow tax:
 - the project's internal rate of return (59) is 12.3 per cent, the same as that before RSPT (54); and
 - with discounting at 10 per cent, for example, the post-RSPT NPV is \$306 (60), again representing a 40 per cent reduction (61) in the project's pre-RSPT NPV of \$511 (55).

Cash flow of RSPT deferred tax asset

- The RSPT deferred tax asset is the sum of:
 - 40 per cent of the annual change in the RSPT capital account, which reflects the written-down values of assets and any RSPT losses (62);
 - less 40 per cent of the RSPT allowance payable on the previous year's RSPT capital account (63); and
 - less any RSPT refund payable at project closure.

- New capital spending and within-year losses add to the deferred tax asset while depreciation, loss utilisation and the final year refund reduce the deferred tax asset. The RSPT allowance maintains the real (net present) value of the deferred tax asset.
- The cash flow of the deferred tax asset matches the difference between the post-RSPT flows (56) and the flows consistent with cash flow taxation (58).

FINANCIAL EQUIVALENCE OF RSPT WITH CASH FLOW TAXATION

Though the RSPT design incorporates different features to a cash flow tax, it is financially equivalent to such a tax. The design of the RSPT achieves the effect of taxing RSPT profits and providing an immediate credit for all expenditure and annual losses, the central operational features of cash flow taxation. The RSPT design achieves the equivalence through: (1) the application of the RSPT allowance to the written-down value of capital expenditure and annual RSPT losses; plus (2) the guaranteed cash refund of 40 per cent of any RSPT losses (incorporating a deduction for the closing balance of new capital) in the final year of a project. Table 1 explains this.

Table 1: Equivalence of RSPT with immediate expensing plus cash refund

	Year 1 (\$)	Year 2 (\$)
Capital expenditure	-1,000	0
Revenue	0	2,000
Operating costs	0	-500
Cash flow before tax	-1,000	1,500
NPV @ 10% to start Year 1	331	
Cash flow taxation	400	-600
Cash flow after cash flow tax	-600	900
NPV @ 10% (60% of pre-tax NPV)	198	
Deferred tax asset	-400	400
6% RSPT allowance		24
Cash flow deferred tax asset	-400	424
NPV @ 6%	0	
Cash flow after RSPT	-1,000	1,324

Table 1 illustrates the hypothetical situation where \$1,000 of capital expenditure in Year 1 produces a positive cash flow of \$1,500 (\$2,000 revenue less \$500 operating costs) in Year 2. The project ends at the end of Year 2.

Under cash flow taxation, immediate expensing of the \$1000 of capital expenditure would result in a \$1000 loss and a consequent cash refund of \$400 in Year 1. In Year 2, a 40 per cent tax on the \$1,500 positive cash flow would result in \$600 in tax payments. The neutrality properties of cash flow taxation are evident in the before-tax NPV of the project, being reduced by exactly 40 per cent after tax.

Under the proposed RSPT, relative to cash flow taxation, a deferred credit of \$400 is created in Year 1 (40 per cent of the \$1,000 of capital expenditure). In Year 2 the value of that credit, increased by the 6 per cent uplift to \$424, is recovered. The NPV of the cash flow of the deferred tax asset is zero when discounted at the 6 per cent long term bond rate (the appropriate rate for the risk-free asset), which preserves the financial equivalence of the RSPT design to cash flow taxation. Adding the cash flows of this risk-free asset to those of the project after the application of cash flow taxation gives the project's post-RSPT cash flows.