MyProject®

PROJECT: **Marginal depreciating asset**

KEY RESULTS

Rate of return (after 47% tax)	**5.41%**	Net present value (discounted at 5.3%)	**3.9**
Total income tax paid	**183.3**	Present value of tax (discounted at 5.3%)	**155.7**
Total royalties paid	0	PV royalties (discounted at 5.3%)	0
Total tax and royalties paid	183.3	PV tax and royalties (discounted at 5.3%)	155.7
Rate of return (before tax)	10%	Before tax NPV (discounted at 10%)	0
Effective tax rate (nominal)	45.9%		
Total investment	1000.0	Total depreciation (after balancing adjust)	485.6

TABLE 1: CASH FLOW SUMMARY

Period	Net receipts	Invest't & sale	Deprec -iation	Debt interest	Debt Princ'l	No-prof royals	Prof royals	AdVal royals	Unit royals	Annual loss	Accum loss	Tax income	Tax payable	Cash flow
0	0	1000	0	0	0	0	0	0	0	0	0	0	0	-1000
1	224.5	0	150	0	0	0	0	0	0	0	0	74.5	35	189.5
2	196.6	0	127.5	0	0	0	0	0	0	0	0	69.1	32.5	164.1
3	172.1	0	108.4	0	0	0	0	0	0	0	0	63.7	29.9	142.1
4	150.7	0	92.1	0	0	0	0	0	0	0	0	58.5	27.5	123.1
5	131.9	-514.4	7.6	0	0	0	0	0	0	0	0	124.3	58.4	587.9

(1) Inflation (i) is 3%, post-inflation 'going' interest rate (r) is 10% and constant decline in asset value with no inflation (s) is 15%.

(2) With asset costing $1000 at start of Year 1, Net Receipts at end Year 1 = $1000x[r-(i-s(1+i))] = $224.5. See Mayo (1984), Appendix 2.

(3) Net Receipts decline at the rate i-s(1+i) per year or [0.1-0.15x(1+0.03)] or 12.45%. See Mayo (1984), Appendix 2.

(4) Declining balance depreciation is allowed at the rate s.

(5) With nominal interest in the tax base, the investor's after-tax discount rate equals the 10% interest rate reduced by the 47% tax rate to 5.3%.

(6) With declining balance depreciation allowed, effective tax rate is 45.9%, after-tax NPV is positive and after-tax return is 5.4%.