MyProject®

PROJECT: **Marginal depreciating asset**

KEY RESULTS

Rate of return (after 47% tax)	**6.71%**	Net present value (discounted at 6.71%)	**0**
Total income tax paid	**128.3**	Present value of tax (discounted at 6.71%)	**107.9**
Total royalties paid	0	PV royalties (discounted at 6.71%)	0
Total tax and royalties paid	128.3	PV tax and royalties (discounted at 6.71%)	107.9
Rate of return (before tax)	10%	Before tax NPV (discounted at 10%)	0
Effective tax rate (real)	47%		
Total investment	1000.0	Total depreciation (after balancing adjust)	485.6

Annual real value loss shown in 'No-prof royals' column

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	124.5	0	0	30	0	0	0	0	0	70	32.9	191.6
2	196.6	0	109	0	0	26.3	0	0	0	0	0	61.3	28.8	167.7
3	172.1	0	95.4	0	0	23	0	0	0	0	0	53.7	25.2	146.9
4	150.7	0	83.6	0	0	20.1	0	0	0	0	0	47	22.1	128.6
5	131.9	-514.4	73.1	0	0	17.6	0	0	0	0	0	41.1	19.3	627

(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) Asset value also declines at the rate rate i-s(1+i) per year, so Depreciation in Year 1 = $1000x0.1245, in Year 2 = $(1000-124.5)x0.1245, etc.

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