

APPENDIX O

OIL AND GAS IMPACTS MODEL

The Economic-Demographic (E/D) computer model was used for three different levels of oil and gas development near the Rocky Mountain Front. This model projects the trend of employment and population from the introduction of a development project in the economy. The three levels of development used were: two wells per year over ten years, five wells per year over ten years, and ten wells per year over ten years. An assumption was made that a different drill rig and crew would be used for each well drilled. Two wells per year are currently being drilled on federal mineral estate in the Rocky Mountain Front area. The five and ten well levels were chosen as moderate and high levels of development respectively. An analysis of the E/D model runs shows very small increases in direct employment and population, and even smaller changes in indirect employment. The trend of population and employment growth would not change significantly from the base as Table O-1 shows for Pondera and Teton counties.

The principle effect of oil and gas development on a county's economy would be fiscal. At present the oil severance tax rate in Montana is 5% of gross value. After April 1, 1983 it will be 6% of gross value. The proceeds of this tax go to the general fund and to the counties. Table O-2 shows the oil and gas produced in Teton and Pondera counties in 1979, which was taxed in 1980. These counties have the only oil and gas production in the Headwaters Resource Area at present. This production does not generally come from public land in these counties.

TABLE O-1
SUMMARY OF TRENDS FOR OIL AND GAS FOR THREE LEVELS OF EXPLORATION

County	Year	Population			Direct Employment			Indirect Employment			Total Employment		
		2 Wells	5 Wells	10 Wells	2 Wells	5 Wells	10 Wells	2 Wells	5 Wells	10 Wells	2 Wells	5 Wells	10 Wells
Teton	1980*	6,491	6,491	6,491	0	0	0	0	0	0	2,686	2,686	2,686
	1985	6,818	6,822	6,829	4	9	18	1	3	5	2,717	2,724	2,735
	1990	7,228	7,234	7,244	3	11	23	1	3	5	2,742	2,752	2,766
	2000	7,760	7,762	7,771	2	5	12	1	3	5	2,776	2,781	2,790
Pondera	1980	6,731	6,731	6,731	0	0	0	0	0	0	3,184	3,184	3,184
	1985	7,177	7,178	7,182	2	4	9	0	1	2	3,303	3,306	3,312
	1990	7,693	7,694	7,701	2	4	11	0	1	3	3,451	3,454	3,463
	2000	8,675	8,677	8,682	0	1	2	0	1	3	3,941	3,743	3,746

*Projects identified in E/D model do not begin until 1983, 1980 is shown as a base level

TABLE O-2
1979 OIL AND GAS REVENUES AND TAXES

County	Commodity	Barrels or MCF Extracted	Gross Value	Net Proceeds	Royalty Interests	Total Amount Taxable	Severance Tax ¹
Pondera	Oil	288,301 bbl	\$6,810,077	\$3,381,075	\$745,154	\$4,126,229	\$340,503.85
Pondera	Gas	384,030 mcf	\$79,995	\$42,997	\$7,470	\$50,467	\$2,119.87
Teton	Oil	129,293 bbl	\$2,717,393	\$1,524,918	\$411,974	\$1,936,892	\$135,869.65
Teton	Gas	5,138,801 mcf	\$7,073,920	\$4,487,144	\$1,036,718	\$5,523,862	\$187,458.88

¹The oil severance tax is 5%, and the gas severance tax is 2.65%