

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 8672

1033 SCOMM 28: JOINT GAS PIPELINE COMMITTEE, 1981-82

EXISTING	NEW	PETROL	PROPERTY	OTHER	ROYALTIES	ROYALTIES
DEBT	SEVERANCE	INCOME	TAX	REVENUE	X% TO PF	50% TO PF
SERVICE	TAXES					

1983	94.2	0.0	1,819.6	104.0	157.0	212.8	1,767.0	0.0
1984	91.3	0.0	2,214.1	360.0	225.0	222.4	2,145.1	0.0
1985	87.9	0.0	2,616.1	373.0	283.1	244.6	2,542.6	0.0
1986	86.0	0.0	2,970.9	400.0	304.2	269.5	2,869.6	0.0
1987	81.9	0.0	3,420.7	430.0	317.9	296.7	3,322.2	0.0
1988	78.9	0.0	3,179.9	460.0	317.9	326.7	3,629.1	0.0
1989	70.6	0.0	3,540.8	490.0	318.0	359.6	3,954.0	49.8
1990	59.5	0.0	3,300.2	520.0	318.0	395.9	3,793.3	78.1
1991	38.9	0.0	3,138.7	550.0	318.0	435.9	3,582.9	84.8
1992	38.2	0.0	3,061.4	580.0	305.0	479.9	3,389.4	255.0
1993	31.7	0.0	3,095.6	610.0	293.0	528.3	3,349.8	360.1
1994	25.8	0.0	3,092.8	640.0	281.0	581.6	3,260.1	463.2
1995	23.0	0.0	2,740.0	670.0	270.0	640.2	2,896.5	507.8
1996	21.5	0.0	2,572.1	700.0	259.0	704.9	2,670.0	606.6
1997	16.7	0.0	2,771.4	730.0	251.0	775.9	2,778.8	744.0
1998	14.4	0.0	2,799.9	730.0	238.0	854.3	2,803.6	870.0

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS

ANNUAL RATE OF INTEREST ON NEW BONDS

MATURITY PERIOD ON NEW BONDS IN YEARS

% OF OPERATING BUDGET IN G.F.F. CASH BAL

2 OF ROYALTIES TO PERMANENT FUND

OPERATING BUDGET GROWTH RATE

% OF PERMANENT FUND EARNINGS PAID

CAPITAL BUDGET GROWTH RATE

% OF GF ADDED TO CAPITAL BUDGET

INFLATION RATE

'1' IF PERMANENT FUND INCOME BASED ON 5 YEAR AVERAGE

PER CAPITA DIVIDEND

NUMBER OF PRIOR YEAR DIVIDEND RECIPIENTS

GROWTH RATE IN DIVIDEND RECIPIENTS

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100

1000

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STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL

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15-FEB-82

NO GASLINE
DEPT OF REVENUE ESTIMATES
BUDGETS AT SPENDING LIMIT

YEAR END	REVENUE	INTEREST	TOTAL REVENUE	OPERATING BUDGET	CAPITAL BUDGET	DEBT SERVICE	PERMANENT FUND DIVIDENDS	TOTAL BUDGET	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR	REVENUE REQ FOR GF BAL OF \$0 MIL
1982										4005.3	-693.4	
1983	3818.7	394.9	4213.5	1866.7	933.3	113.2	152.5	3065.6	1147.9	4771.9	454.5	0.0
1984	4630.3	708.1	5338.4	2092.6	1046.2	138.8	162.3	3439.9	1898.5	5606.2	2353.0	0.0
1985	5424.0	1157.4	6581.4	2345.8	1172.8	163.8	231.8	3914.2	2667.2	6505.0	5020.2	0.0
1986	6096.8	1682.8	7779.6	2629.6	1314.7	161.9	300.6	4406.8	3372.7	7459.1	8392.9	0.0
1987	6957.0	2305.8	9262.8	2947.8	1473.8	157.8	367.2	4946.7	4316.1	8513.6	12709.0	0.0
1988	7006.3	2976.3	9982.6	3304.5	1652.1	154.8	423.6	5535.1	4447.5	9664.3	17156.5	0.0
1989	7698.8	3715.2	11414.0	3704.3	1852.1	146.5	485.0	6187.9	5226.1	10944.2	22382.6	0.0
1990	7504.1	4507.1	12011.3	4152.5	2076.2	135.4	551.3	6915.4	5095.8	12218.7	27478.4	0.0
1991	7172.2	5282.4	12454.6	4655.0	2327.4	114.8	621.6	7718.8	4735.8	13454.1	32214.3	0.0
1992	7095.9	6033.0	13128.8	5218.3	2609.0	114.1	694.8	8636.2	4492.6	14730.3	36706.9	0.0
1993	7219.3	6775.3	13994.6	5849.7	2924.7	31.7	770.5	9576.5	4418.1	16053.9	41125.0	0.0
1994	7272.1	7501.7	14773.8	6557.5	3278.6	25.8	847.6	10709.5	4064.4	17413.3	45189.3	0.0
1995	6746.5	8147.1	14893.6	7350.9	3675.3	23.0	925.4	11974.6	2919.0	18707.8	48108.3	0.0
1996	6541.8	8667.4	15209.2	8240.4	4120.0	21.5	1003.5	13385.4	1823.8	19993.6	49932.1	0.0
1997	6984.4	9091.4	16075.8	9237.5	4618.5	16.7	1082.7	14955.3	1120.5	21377.2	51052.6	0.0
1998	7159.9	9411.3	16571.2	10755.2	5177.3	14.4	1163.3	16710.2	-139.0	22839.6	50913.6	0.0

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL
FY 1983 1

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15-FEB-82

NO GASLINE
DEPT OF REVENUE ESTIMATES
BUDGETS AT SPENDING LIMIT

YEAR END	REVENUE	INTEREST	TOTAL REVENUE	OPERATING BUDGET	CAPITAL BUDGET	DEBT SERVICE	PERMANENT FUND DIVIDENDS	TOTAL BUDGET	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR	REVENUE REQ FOR GF BAL OF \$0 MIL
1982										4005.3	-693.4	
1983	3818.7	374.9	4213.5	1866.7	933	113.2	152.5	3065.6	1147.9	4771.9	454.5	0.0
1984	4248.0	649.6	4897.6	1919.8	959.8	127.3	148.9	3155.9	1741.7	5143.3	2158.7	0.0
1985	4565.2	974.2	5539.4	1974.4	987.1	137.9	195.1	3294.5	2244.9	5475.1	4225.4	0.0
1986	4707.8	1299.4	6007.2	2030.5	1015.2	125.0	232.1	3402.9	2604.4	5759.8	6480.8	0.0
1987	4928.5	1633.5	6562.0	2088.3	1044.1	111.8	260.1	3504.3	3057.6	6031.2	7003.4	0.0
1988	4553.6	1934.4	6488.0	2147.7	1073.8	100.6	275.3	3597.4	2890.6	6281.1	11150.6	0.0
1989	4590.5	2215.2	6805.8	2208.8	1104.3	87.4	289.2	3689.6	3116.1	6525.7	13346.0	0.0
1990	4105.0	2465.6	6570.6	2271.6	1135.7	74.1	301.6	3783.0	2787.6	6684.0	15031.6	0.0
1991	3599.5	2651.1	6250.5	2336.2	1168.0	57.6	311.9	3873.8	2376.8	6752.1	16167.3	0.0
1992	3267.1	2777.7	6044.9	2402.6	1201.2	52.5	319.9	3976.3	2068.5	6782.2	16900.9	0.0
1993	3049.5	2861.9	5911.5	2471.0	1235.4	13.4	325.5	4045.2	1866.2	6781.3	17371.6	0.0
1994	2818.2	2907.2	5725.3	2541.2	1270.5	10.0	328.5	4150.3	1575.1	6748.2	17512.3	0.0
1995	2398.6	2896.6	5295.2	2613.5	1306.7	8.2	329.0	4257.4	1037.8	6651.3	17104.2	0.0
1996	2133.8	2827.1	4960.9	2687.8	1343.8	7.0	327.3	4368.0	594.9	6521.5	16286.8	0.0
1997	2090.1	2720.6	4810.6	2764.3	1382.1	5.0	324.0	4475.3	335.3	6397.1	15277.3	0.0
1998	1965.7	2583.8	4549.4	2842.9	1421.4	4.0	319.4	4587.6	-38.2	6270.3	13977.7	0.0

ASSUMPTIONS

EXISTING DEBT SERVICE	NEW DEBT	SEVERANCE TAXES	PETROL INCOME TAX	PROPERTY TAX	OTHER REVENUE	ROYALTIES X% TO PF	ROYALTIES 50% TO PF
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1983	94.2	0.0	1,819.6	304.0	157.0	212.8	1,767.0	0.0
1984	91.3	0.0	2,214.1	360.0	225.0	222.4	2,145.1	0.0
1985	87.9	0.0	2,616.1	373.0	283.1	244.8	2,542.6	0.0
1986	86.0	0.0	2,970.9	400.0	304.2	267.5	2,869.6	0.0
1987	81.9	0.0	3,420.7	430.0	317.9	296.7	3,322.2	0.0
1988	78.9	0.0	3,179.9	460.0	317.9	326.7	3,629.1	0.0
1989	70.6	0.0	3,540.8	490.0	318.0	359.6	3,954.0	49.8
1990	59.5	0.0	3,386.2	520.0	318.0	395.9	3,793.3	78.1
1991	38.9	0.0	3,138.7	550.0	318.0	435.9	3,582.9	84.8
1992	38.2	0.0	3,061.4	580.0	305.0	479.9	3,389.4	255.0
1993	31.7	0.0	3,095.6	610.0	293.0	528.3	3,349.8	360.1
1994	25.8	0.0	3,092.8	640.0	281.0	581.6	3,260.1	463.2
1995	23.0	0.0	2,740.0	670.0	270.0	640.2	2,896.5	507.8
1996	21.5	0.0	2,572.1	700.0	259.0	704.9	2,670.0	606.6
1997	16.7	0.0	2,771.4	730.0	251.0	775.9	2,778.8	744.0
1998	14.4	0.0	2,799.9	730.0	238.0	854.3	2,803.6	870.0

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS	=	0.120
ANNUAL RATE OF INTEREST ON NEW BONDS	=	0.100
MATURITY PERIOD ON NEW BONDS IN YEARS	=	10.000
% OF OPERATING BUDGET IN G.F. CASH BAL	=	0.200
% OF ROYALTIES TO PERMANENT FUND	=	0.250
OPERATING BUDGET GROWTH RATE	=	0.121
% OF PERMANENT FUND EARNINGS PAID AS DIVIDENDS	=	0.500
CAPITAL BUDGET GROWTH RATE	=	0.121
INFLATION RATE	=	0.090
'1' IF PERMANENT FUND INCOME BASED ON 5 YEAR AVERAGE	=	1.000
PER CAPITA DIVIDEND	=	50.000
NUMBER OF PRIOR YEAR DIVIDEND RECIPIENTS	=	2.966
GROWTH RATE IN DIVIDEND RECIPIENTS	=	0.028

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL

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15-FEB-82

NO GASLINE
DEPT OF REVENUE ESTIMATES
BUDGETS AT SPENDING LIMIT
SURPLUS SPENT ON CAPITAL

YEAR END	REVENUE	INTEREST	TOTAL REVENUE	OPERATING BUDGET	CAPITAL BUDGET	DEBT SERVICE	PERMANENT FUND DIVIDENDS	TOTAL BUDGET	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR	REVENUE REQ FOR GF BAL OF \$0 MIL
1982										4005.3	-693.4	
1983	3818.7	391.3	4209.9	1866.7	1384.2	113.2	152.5	3516.5	693.4	4771.9	0.0	0.0
1984	4630.3	667.6	5297.9	2092.6	2904.3	138.8	162.3	5297.9	-0.0	5606.2	0.0	0.0
1985	5424.0	981.4	6405.3	2345.8	3664.0	163.8	231.8	6405.3	0.0	6505.0	0.0	0.0
1986	6096.8	1241.8	7338.6	2629.6	4246.6	161.9	300.6	7338.6	0.0	7459.1	0.0	0.0
1987	6957.0	1476.7	8433.7	2947.8	4960.8	157.8	367.2	8433.7	0.0	8513.6	0.0	0.0
1988	7006.3	1649.5	8655.9	3304.5	4772.9	154.8	423.6	8655.9	0.0	9664.3	0.0	0.0
1989	7698.8	1806.1	9504.9	3704.3	5169.0	146.5	485.0	9504.9	0.0	10944.2	0.0	0.0
1990	7504.1	1942.5	9446.6	4152.5	4607.3	135.4	551.3	9446.6	-0.0	12218.7	0.0	0.0
1991	7172.2	2023.9	9196.1	4655.0	3804.7	114.8	621.6	9196.1	0.0	13454.1	0.0	0.0
1992	7095.9	2082.8	9178.7	5218.3	3151.5	114.1	694.8	9178.7	-0.0	14730.3	0.0	0.0
1993	7219.3	2175.2	9394.5	5849.7	2924.7	31.7	770.5	9576.5	-182.0	16053.9	0.0	182.0
1994	7272.1	2335.1	9607.2	6557.5	3278.6	25.8	847.6	10709.5	-1102.3	17413.3	0.0	1102.3
1995	6746.5	2549.2	9295.7	7350.9	3675.3	23.0	925.4	11974.6	-2678.9	18707.8	0.0	2678.9
1996	6541.8	2785.0	9326.8	8240.4	4120.0	21.5	1003.5	13385.4	-4058.6	19993.6	0.0	4058.6
1997	6984.4	3032.3	10016.7	9237.5	4618.5	16.7	1082.7	14955.3	-4938.6	21377.2	0.0	4938.6
1998	7159.9	3293.3	10453.2	10355.2	5177.3	14.4	1163.3	16710.2	-6257.0	22839.6	0.0	6257.0

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL
FY 1983 &

4

15-FEB-82

NO GASLINE
DEPT OF REVENUE ESTIMATES
BUDGETS AT SPENDING LIMIT
SURPLUS SPENT ON CAPITAL

YEAR			TOTAL	OPERATING	CAPITAL	DEBT	PERMANENT		SURPLUS	PERM-	GENERAL	REVENUE REQ
END	REVENUE	INTEREST	REVENUE	BUDGET	BUDGET	SERVICE	FUND	TOTAL	OR	ANENT	FUND	FOR GF BAL
							DIVIDENDS	BUDGET	DEFICIT	FUND	END OF YEAR	OF \$0 MIL
1982										4005.3	-693.4	
1983	3818.7	391.3	4209.9	1866.7	1384.2	113.2	152.5	3516.5	693.4	4771.9	0.0	0.0
1984	4248.0	612.5	4860.5	1919.8	2664.5	127.3	148.9	4860.5	-0.0	5143.3	0.0	0.0
1985	4565.2	826.0	5391.2	1974.4	3083.9	137.9	195.1	5391.2	0.0	5475.1	0.0	0.0
1986	4707.8	958.9	5666.8	2030.5	3279.1	125.0	232.1	5666.8	0.0	5759.8	0.0	0.0
1987	4928.5	1046.1	5974.6	2088.3	3514.4	111.8	260.1	5974.6	0.0	6031.2	0.0	0.0
1988	4553.6	1072.1	5625.7	2147.7	3102.1	100.6	275.3	5625.7	0.0	6281.1	0.0	0.0
1989	4590.5	1076.9	5667.5	2208.8	3082.1	87.4	289.2	5667.5	0.0	6525.7	0.0	0.0
1990	4105.0	1062.6	5167.6	2271.6	2520.4	74.1	301.6	5167.6	-0.0	6684.0	0.0	0.0
1991	3599.5	1015.7	4615.2	2336.2	1909.4	57.6	311.9	4615.2	0.0	6752.1	0.0	0.0
1992	3267.1	959.0	4226.1	2402.6	1451.0	52.5	319.9	4226.1	-0.0	6782.2	0.0	0.0
1993	3049.5	918.8	3968.3	2471.0	1235.4	13.4	325.5	4045.2	-76.9	6781.3	0.0	76.9
1994	2818.2	904.9	3723.1	2541.2	1270.5	10.0	328.5	4150.3	-427.2	6748.2	0.0	427.2
1995	2398.6	906.3	3304.9	2613.5	1306.7	8.2	329.0	4257.4	-952.4	6651.3	0.0	952.4
1996	2133.8	908.4	3042.2	2687.8	1343.8	7.0	327.3	4366.0	-1323.8	6521.5	0.0	1323.8
1997	2090.1	907.4	2997.5	2764.3	1382.1	5.0	324.0	4475.3	-1477.9	6397.1	0.0	1477.9
1998	1965.7	904.1	2869.8	2842.9	1421.4	4.0	319.4	4587.6	-1717.8	6270.3	0.0	1717.8

ASSUMPTIONS

EXISTING DEBT SERVICE	NEW DEBT	SEVERANCE TAXES	PETROL INCOME		PROPERTY TAX	OTHER REVENUE	ROYALTIES ROYALTIES	
			TAX	TAX			% TO PF	50% TO PF
1983	94.2	0.0	1,819.6	304.0	157.0	212.8	1,767.0	0.0
1984	91.3	0.0	2,214.1	360.0	225.0	222.4	2,145.1	0.0
1985	87.9	0.0	2,616.1	373.0	283.1	244.8	2,542.6	0.0
1986	86.0	0.0	2,970.9	400.0	304.2	289.5	2,869.6	0.0
1987	81.9	0.0	3,420.7	430.0	317.9	296.7	3,323.2	0.0
1988	78.9	0.0	3,179.9	460.0	317.9	326.7	3,629.1	0.0
1989	70.6	0.0	3,540.8	490.0	318.0	359.6	3,954.0	49.8
1990	59.5	0.0	3,386.2	520.0	318.0	395.9	3,793.3	78.1
1991	38.9	0.0	3,138.7	550.0	318.0	435.9	3,582.9	64.8
1992	38.2	0.0	3,061.4	580.0	305.0	479.9	3,389.4	255.0
1993	31.7	0.0	3,095.6	610.0	293.0	528.3	3,349.8	360.1
1994	25.8	0.0	3,092.8	640.0	281.0	581.6	3,260.1	463.2
1995	23.0	0.0	2,740.0	670.0	270.0	640.2	2,896.5	507.8
1996	21.5	0.0	2,572.1	700.0	259.0	704.9	2,670.0	606.6
1997	16.7	0.0	2,771.4	730.0	251.0	775.9	2,778.8	744.0
1998	14.4	0.0	2,799.9	730.0	238.0	854.3	2,803.6	870.0

ANNUAL RATE OF INTEREST ON GENERAL & PERMANENT FUNDS	=	0.120
ANNUAL RATE OF INTEREST ON NEW BONDS	=	0.100
MATURITY PERIOD ON NEW BONDS IN YEARS	=	10.000
% OF OPERATING BUDGET IN G.F. CASH BAL	=	0.200
% OF ROYALTIES TO PERMANENT FUND	=	0.250
OPERATING BUDGET GROWTH RATE	=	0.121
% OF PERMANENT FUND EARNINGS PAID AS DIVIDENDS	=	0.500
CAPITAL BUDGET GROWTH RATE	=	0.121
% OF GF ADDED TO CAPITAL BUDGET	=	1.000
INFLATION RATE	=	0.090
'1' IF PERMANENT FUND INCOME BASED ON 5 YEAR AVERAGE	=	1.000
PER CAPITA DIVIDEND	=	50.000
NUMBER OF PRIOR YEAR DIVIDEND RECIPIENTS	=	2.966
GROWTH RATE IN DIVIDEND RECIPIENTS	=	0.028

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GASLINE DEC 1986-LOW INFLATION
DEPT OF REVENUE ESTIMATES
FY82 LEVEL OF SERVICE BUDGETS

YEAR END	REVENUE	INTEREST	TOTAL REVENUE	OPERATING BUDGET	CAPITAL BUDGET	DEBT SERVICE	PERMANENT	TOTAL BUDGET	SURPLUS OR DEFICIT	PERM-	GENERAL	REVENUE REQ
							FUND DIVIDENDS			ANENT FUND	FUND END OF YEAR	FOR GF BAL OF \$0 MIL
1982										4005.3	-693.4	
1983	3837.2	400.6	4237.7	1860.6	194.6	113.2	152.5	2320.9	1916.8	4771.9	1223.4	0.0
1984	4679.0	760.3	5439.3	2141.4	240.7	138.8	162.3	2683.2	2756.2	5606.2	3979.6	0.0
1985	5593.5	1302.6	6896.0	2473.9	277.9	163.8	231.8	3147.4	3748.6	6505.0	7728.2	0.0
1986	6419.2	1968.4	8387.6	2764.1	308.0	161.9	300.6	3534.6	4853.0	7459.1	12581.2	0.0
1987	7771.5	2802.2	10573.6	3055.2	533.3	157.8	367.2	4113.5	6460.1	8513.6	19041.3	0.0
1988	7768.7	3751.6	11520.3	3308.1	390.6	154.8	423.6	4277.2	7243.2	9664.3	26284.4	0.0
1989	8420.5	4825.5	13246.0	3684.0	436.3	146.5	485.0	4751.8	8494.2	10944.2	34778.6	0.0
1990	8256.7	6020.5	14277.2	4102.5	487.4	135.4	551.4	5276.7	9000.6	12230.6	43779.2	0.0
1991	8093.4	7292.8	15386.1	4568.5	544.4	114.8	622.1	5849.8	9536.4	13514.2	53315.6	0.0
1992	8192.2	8655.3	16847.4	5087.5	608.1	114.1	696.6	6506.3	10341.1	14879.6	63656.7	0.0
1993	8451.6	10141.8	18593.4	5665.4	679.2	31.7	774.8	7151.1	11442.3	16329.9	75099.0	0.0
1994	8518.3	11756.4	20274.6	6309.0	758.7	25.8	856.1	7949.6	12325.0	17832.4	87424.1	0.0
1995	8008.8	13449.4	21458.2	7025.7	847.5	23.0	939.8	8836.0	12622.2	19285.7	100046.3	0.0
1996	7813.0	15202.1	23015.1	7823.8	946.6	21.5	1025.5	9817.4	13197.7	20745.7	113244.0	0.0
1997	8279.3	17073.1	25352.4	8712.6	1057.4	16.7	1113.6	10900.3	14452.1	22326.0	127696.1	0.0
1998	8463.5	19086.5	27552.0	9702.4	1181.1	14.4	1204.2	12102.1	15449.9	23993.5	143146.0	0.0

STATE OF ALASKA
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BUDGET FORECASTING MODEL
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GASLINE DEC 1986-LOW INFLATION
DEPT OF REVENUE ESTIMATES
FY82 LEVEL OF SERVICE BUDGETS

YEAR END	REVENUE	INTEREST	TOTAL REVENUE	OPERATING BUDGET	CAPITAL BUDGET	DEBT SERVICE	PERMANENT FUND DIVIDENDS	TOTAL BUDGET	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR	REVENUE REQ FOR GF BAL OF \$0 MIL
1982										4005.3	-693.4	
1983	3837.2	400.6	4237.7	1860.6	194.6	113.2	152.5	2320.9	1916.8	4771.9	1223.4	0.0
1984	4292.7	697.5	4990.2	1964.6	220.8	127.3	148.9	2461.6	2528.6	5143.3	3651.0	0.0
1985	4707.9	1096.4	5804.3	2082.3	233.9	137.9	195.1	2649.1	3155.1	5475.1	6504.7	0.0
1986	4956.8	1519.9	6476.7	2134.4	237.8	125.0	232.1	2729.4	3747.4	5759.8	9715.0	0.0
1987	5505.5	1985.1	7490.6	2164.4	377.8	111.8	260.1	2914.1	4576.5	6031.2	13489.3	0.0
1988	5049.1	2438.3	7487.4	2150.1	253.9	100.6	275.3	2779.9	4709.6	6281.1	17083.1	0.0
1989	5020.9	2877.3	7898.1	2196.6	260.2	87.4	289.2	2833.3	5064.8	6525.7	20737.4	0.0
1990	4516.7	3293.4	7810.1	2244.2	266.6	74.1	301.6	2886.5	4923.6	6690.6	23948.7	0.0
1991	4061.8	3660.0	7721.8	2292.8	273.2	57.6	312.2	2935.8	4786.0	6782.3	26757.3	0.0
1992	3771.9	3985.1	7757.0	2342.4	280.0	52.5	320.7	2995.7	4761.3	6851.0	29309.3	0.0
1993	3570.0	4284.0	7854.1	2393.1	286.9	13.4	327.3	3020.7	4833.4	6897.9	31722.6	0.0
1994	3301.1	4556.0	7857.1	2444.9	294.0	10.0	331.8	3080.7	4776.4	6910.6	33879.7	0.0
1995	2847.4	4781.7	7629.1	2497.9	301.3	8.2	334.1	3141.5	4487.6	6856.7	35569.9	0.0
1996	2548.4	4958.6	7507.0	2552.0	308.8	7.0	334.5	3202.2	4304.8	6766.8	36937.8	0.0
1997	2477.5	5109.1	7586.6	2607.2	316.4	5.0	333.2	3261.9	4324.7	6681.0	38212.6	0.0
1998	2323.6	5240.5	7564.1	2663.7	324.3	4.0	330.6	3322.5	4241.6	6587.1	39299.0	0.0

ASSUMPTIONS

	EXISTING DEBT SERVICE	NEW DEBT	SEVERANCE TAXES	PETROL INCOME TAX	PROPERTY TAX	OTHER REVENUE	ROYALTIES X% TO PF	ROYALTIES 50% TO PF
1983	94.2	0.0	1,819.6	304.0	169.0	219.3	1,767.0	0.0
1984	91.3	0.0	2,214.1	360.0	256.0	240.1	2,145.1	0.0
1985	87.9	0.0	2,616.1	373.0	399.0	298.4	2,542.6	0.0
1986	86.0	0.0	2,970.9	400.0	543.2	352.9	2,869.6	0.0
1987	81.9	0.0	3,420.7	641.5	857.9	359.7	3,322.2	0.0
1988	78.9	0.0	3,179.9	663.0	836.3	367.7	3,629.1	0.0
1989	70.6	0.0	3,540.8	684.6	814.8	389.9	3,954.0	49.8
1990	59.5	0.0	3,421.2	706.1	793.2	418.2	3,838.6	78.1
1991	38.9	0.0	3,256.9	747.3	771.6	453.3	3,762.5	84.8
1992	38.2	0.0	3,257.3	792.3	737.0	495.4	3,710.2	255.0
1993	31.7	0.0	3,348.7	833.7	703.4	544.0	3,789.0	360.1
1994	25.8	0.0	3,357.0	861.2	669.8	598.6	3,733.4	463.2
1995	23.0	0.0	3,014.3	889.3	637.2	658.5	3,407.5	507.8
1996	21.5	0.0	2,844.4	918.6	604.6	724.8	3,223.0	606.6
1997	16.7	0.0	3,033.1	948.2	575.0	797.6	3,404.5	744.0
1998	14.4	0.0	3,076.6	948.1	540.4	878.0	3,447.2	870.0

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS	=	0.120
ANNUAL RATE OF INTEREST ON NEW BONDS	=	0.100
MATURITY PERIOD ON NEW BONDS IN YEARS	=	10.000
% OF OPERATING BUDGET IN G.F. CASH BAL	=	0.200
% OF ROYALTIES TO PERMANENT FUND	=	0.250
% OF PERMANENT FUND EARNINGS PAID AS DIVIDENDS	=	0.500
INFLATION RATE	=	0.090
'1' IF PERMANENT FUND INCOME BASED ON 5 YEAR AVERAGE	=	1.000
PER CAPITA DIVIDEND	=	50.000
NUMBER OF PRIOR YEAR DIVIDEND RECIPIENTS	=	2,966
GROWTH RATE IN DIVIDEND RECIPIENTS	=	0.028

STATE OF ALASKA
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GASLINE DEC 1986-LOW INFLATION
DEPT OF REVENUE ESTIMATES
FY82 LEVEL OF SERVICE BUDGETS
SURPLUS SPENT ON CAPITAL

YEAR	REVENUE	INTEREST	TOTAL REVENUE	OPERATING BUDGET	CAPITAL BUDGET	DEBT SERVICE	PERMANENT FUND DIVIDENDS	TOTAL BUDGET	SURPLUS OR DEFICIT	PERMANENT FUND	GENERAL FUND	REVENUE REQ FOR GF BAL
1982	3837.2	390.9	4228.0	1860.6	1408.3	113.2	152.5	3534.6	693.4	4005.3	-693.4	0.0
1983	4679.0	670.0	5349.0	2141.4	2906.6	138.8	162.3	5349.0	0.0	5606.2	0.0	0.0
1984	5593.5	987.7	6581.1	2473.9	3711.6	163.8	231.8	6581.1	0.0	6505.0	0.0	0.0
1985	6419.2	1259.1	7678.3	2764.1	4451.7	161.9	300.6	7678.3	0.0	7459.1	0.0	0.0
1986	7771.5	1534.4	9305.8	3055.2	5725.6	157.8	367.2	9305.8	0.0	8513.6	0.0	0.0
1987	7768.7	1751.0	9519.8	3308.1	5633.2	154.8	423.6	9519.8	0.0	9664.3	0.0	0.0
1988	8420.5	1926.1	10346.6	3684.0	6031.1	146.5	485.0	10346.6	0.0	10944.2	0.0	0.0
1989	8256.7	2067.7	10324.4	4102.5	5535.1	135.4	551.4	10324.4	0.0	12230.6	0.0	0.0
1990	8093.4	2165.1	10258.5	4568.5	4953.1	114.8	622.1	10258.5	0.0	13514.2	0.0	0.0
1991	8192.2	2255.0	10447.1	5087.5	4549.0	114.1	696.6	10447.1	0.0	14879.6	0.0	0.0
1992	8451.6	2374.7	10826.3	5665.4	4354.4	31.7	774.8	10826.3	0.0	16329.9	0.0	0.0
1993	8518.3	2503.0	11021.3	6309.0	3830.3	25.8	856.1	11021.3	0.0	17832.4	0.0	0.0
1994	8008.8	2583.4	10592.2	7025.7	2603.7	23.0	939.8	10592.2	0.0	19285.7	0.0	0.0
1995	7813.0	2625.0	10437.9	7823.8	1567.1	21.5	1025.5	10437.9	0.0	20745.7	0.0	0.0
1996	8279.3	2702.4	10981.6	8712.6	1138.8	16.7	1113.6	10981.6	-0.0	22326.0	0.0	0.0
1997	8463.5	2857.4	11320.9	9702.4	1181.1	14.4	1204.2	12102.1	-781.1	23923.5	0.0	781.1

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GASLINE DEC 1986-LOW INFLATION
DEPT OF REVENUE ESTIMATES
FY82 LEVEL OF SERVICE BUDGETS
SURPLUS SPENT ON CAPITAL

YEAR			TOTAL	OPERATING	CAPITAL	DEBT	PERMANENT		SURPLUS	PERM-	GENERAL	REVENUE REQ
END	REVENUE	INTEREST	REVENUE	BUDGET	BUDGET	SERVICE	FUND		OR	ANENT	FUND	FOR GF BAL
							DIVIDENDS	BUDGET	DEFICIT	FUND	END OF YEAR	OF \$0 MIL
1982										4005.3	-693.4	
1983	3837.2	390.9	4228.0	1860.6	1408.3	113.2	152.5	3534.6	693.4	4771.9	0.0	0.0
1984	4292.7	614.7	4907.4	1964.6	2666.6	127.3	148.9	4907.4	0.0	5143.3	0.0	0.0
1985	4707.9	831.3	5539.2	2082.3	3124.0	137.9	195.1	5539.2	0.0	5475.1	0.0	0.0
1986	4956.8	972.3	5929.1	2134.4	3437.5	125.0	232.1	5929.1	0.0	5759.8	0.0	0.0
1987	5505.5	1087.0	6592.5	2164.4	4056.2	111.8	260.1	6592.5	0.0	6031.2	0.0	0.0
1988	5049.1	1138.0	6187.2	2150.1	3661.2	100.6	275.3	6187.2	0.0	6281.1	0.0	0.0
1989	5020.9	1148.5	6169.4	2196.6	3596.2	87.4	289.2	6169.4	0.0	6525.7	0.0	0.0
1990	4516.7	1131.1	5647.8	2244.2	3027.9	74.1	301.6	5647.8	0.0	6690.6	0.0	0.0
1991	4061.8	1086.6	5148.4	2292.8	2485.8	57.6	312.2	5148.4	0.0	6782.3	0.0	0.0
1992	3771.9	1038.3	4810.2	2342.4	2094.5	52.5	320.7	4810.2	0.0	6851.0	0.0	0.0
1993	3570.0	1003.1	4573.1	2393.1	1839.3	13.4	327.3	4573.1	0.0	6897.9	0.0	0.0
1994	3301.1	970.0	4271.1	2444.9	1484.4	10.0	331.8	4271.1	0.0	6910.6	0.0	0.0
1995	2847.4	918.5	3765.9	2497.9	925.7	8.2	334.1	3765.9	0.0	6856.7	0.0	0.0
1996	2548.4	856.2	3404.6	2552.0	511.2	7.0	334.5	3404.6	0.0	6766.8	0.0	0.0
1997	2477.5	808.7	3286.2	2607.2	340.8	5.0	333.2	3286.2	-0.0	6681.0	0.0	0.0
1998	2323.6	784.5	3108.0	2663.7	324.3	4.0	330.6	3322.5	-214.5	6587.1	0.0	214.5

ASSUMPTIONS

	EXISTING DEBT	NEW DEBT	SEVERANCE TAXES	PETROL INCOME TAX	PROPERTY TAX	OTHER REVENUE	ROYALTIES X% TO PF	ROYALTIES 50% TO PF
	SERVICE							
1983	94.2	0.0	1,819.6	304.0	169.0	219.3	1,767.0	0.0
1984	91.3	0.0	2,214.1	360.0	256.0	240.1	2,145.1	0.0
1985	87.9	0.0	2,616.1	373.0	399.0	298.4	2,542.6	0.0
1986	86.0	0.0	2,970.9	400.0	543.2	352.9	2,869.6	0.0
1987	81.9	0.0	3,420.7	641.5	857.9	359.7	3,322.2	0.0
1988	78.9	0.0	3,179.9	663.0	836.3	367.7	3,629.1	0.0
1989	70.6	0.0	3,540.8	684.6	814.8	389.9	3,954.0	49.8
1990	59.5	0.0	3,421.2	706.1	793.2	418.2	3,838.6	78.1
1991	38.9	0.0	3,256.9	747.3	771.6	453.3	3,762.5	84.8
1992	38.2	0.0	3,257.3	792.3	737.0	495.4	3,710.2	255.0
1993	31.7	0.0	3,348.7	833.7	703.4	544.0	3,789.0	360.1
1994	25.8	0.0	3,357.0	861.2	669.8	598.6	3,733.4	463.2
1995	23.0	0.0	3,014.3	889.3	637.2	658.5	3,407.5	507.8
1996	21.5	0.0	2,844.4	918.6	604.6	724.8	3,223.0	606.6
1997	16.7	0.0	3,033.1	948.2	575.0	797.6	3,404.5	744.0
1998	14.4	0.0	3,076.6	948.1	540.4	878.0	3,447.2	870.0

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS	=	0.120
ANNUAL RATE OF INTEREST ON NEW BONDS	=	0.100
MATURITY PERIOD ON NEW BONDS IN YEARS	=	10.000
% OF OPERATING BUDGET IN G.F. CASH BAL	=	0.200
% OF ROYALTIES TO PERMANENT FUND	=	0.250
% OF PERMANENT FUND EARNINGS PAID AS DIVIDENDS	=	0.500
% OF GF ADDED TO CAPITAL BUDGET	=	1.000
INFLATION RATE	=	0.090
'1' IF PERMANENT FUND INCOME BASED ON 5 YEAR AVERAGE	=	1.000
PER CAPITA DIVIDEND	=	50.000
NUMBER OF PRIOR YEAR DIVIDEND RECIPIENTS	=	2.966
GROWTH RATE IN DIVIDEND RECIPIENTS	=	0.028

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GASLINE DEC 1986-LOW INFLATION
DEPT OF REVENUE ESTIMATES
BUDGETS AT SPENDING LIMIT

YEAR END	REVENUE	INTEREST	TOTAL REVENUE	OPERATING BUDGET	CAPITAL BUDGET	DEBT SERVICE	PERMANENT	TOTAL BUDGET	SURPLUS	PERM-	GENERAL	REVENUE REQ
							FUND DIVIDENDS		OR DEFICIT	ANENT FUND	FUND END OF YEAR	FOR GF BAL OF \$0 MIL
1982										4005.3	-693.4	
1983	3837.2	439.0	4276.2	1904.4	952.1	113.2	152.5	3122.2	1154.0	4771.9	460.6	0.0
1984	4679.0	722.4	5401.4	2229.4	1114.7	138.8	162.3	3645.2	1756.2	5606.2	2216.8	0.0
1985	5593.5	1144.4	6737.9	2624.5	1312.2	163.8	231.8	4332.3	2405.6	6505.0	4622.4	0.0
1986	6419.2	1651.0	8070.2	2940.8	1470.3	161.9	300.6	4873.5	3196.7	7459.1	7819.1	0.0
1987	7771.5	2286.6	10058.1	3241.9	1620.8	157.8	367.2	5387.8	4670.3	8513.6	12489.3	0.0
1988	7768.7	3003.6	10772.3	3484.4	1742.1	154.8	423.6	5804.9	4967.4	9664.3	17456.7	0.0
1989	8420.5	3801.0	12221.5	3906.0	1952.9	146.5	485.0	6490.4	5731.1	10944.2	23187.8	0.0
1990	8256.7	4658.0	12914.7	4378.6	2189.2	135.4	551.4	7254.6	5660.0	12230.6	28847.9	0.0
1991	8093.4	5516.9	13610.3	4908.4	2454.1	114.8	622.1	8099.4	5510.9	13514.2	34358.8	0.0
1992	8192.2	6380.1	14572.3	5502.4	2751.0	114.1	696.6	9064.1	5508.2	14879.6	39867.0	0.0
1993	8451.6	7266.0	15717.6	6168.1	3083.9	31.7	774.8	10058.5	5659.1	16329.9	45526.0	0.0
1994	8518.3	8160.4	16678.6	6914.5	3457.0	25.8	856.1	11253.4	5425.2	17832.4	50951.2	0.0
1995	8608.8	8992.6	17001.5	7751.1	3875.3	23.0	939.8	12589.2	4412.2	19285.7	55363.4	0.0
1996	7813.0	9719.7	17532.7	8689.0	4344.3	21.5	1025.5	14080.3	3452.4	20745.7	58815.8	0.0
1997	8279.3	10371.5	18650.8	9740.4	4869.9	16.7	1113.6	15740.6	2910.2	22326.0	61726.1	0.0
1998	8463.5	10941.2	19404.7	10919.0	5459.2	14.4	1204.2	17596.8	1807.9	23993.5	63533.9	0.0

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GASLINE DEC 1986-LOW INFLATION
DEPT OF REVENUE ESTIMATES
BUDGETS AT SPENDING LIMIT

YEAR END	REVENUE	INTEREST	TOTAL REVENUE	OPERATING BUDGET	CAPITAL BUDGET	DEBT SERVICE	PERMANENT FUND DIVIDENDS	TOTAL BUDGET	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR	REVENUE REQ FOR GF BAL OF \$0 MIL
1982										4005.3	-693.4	
1983	3837.2	439.0	4276.2	1904.4	952.1	113.2	152.5	3122.2	1154.0	4771.9	460.6	0.0
1984	4292.7	662.7	4955.4	2045.4	1022.6	127.3	148.9	3344.2	1611.2	5143.3	2033.7	0.0
1985	4707.9	963.2	5671.1	2209.0	1104.4	137.9	195.1	3646.4	2024.8	5475.1	3890.5	0.0
1986	4956.8	1274.9	6231.7	2270.8	1135.3	125.0	232.1	3763.3	2468.4	5759.8	6037.7	0.0
1987	5505.5	1619.9	7125.4	2296.6	1148.3	111.8	260.1	3816.8	3308.5	6031.2	8847.8	0.0
1988	5049.1	1952.1	7001.3	2264.6	1132.2	100.6	275.3	3772.8	3228.5	6281.1	11345.7	0.0
1989	5020.9	2266.4	7287.3	2329.0	1164.4	87.4	289.2	3870.0	3417.3	6525.7	13826.2	0.0
1990	4516.7	2548.1	7064.8	2395.3	1197.6	74.1	301.6	3968.5	3096.2	6690.6	15780.8	0.0
1991	4061.8	2768.7	6830.5	2463.4	1231.6	57.6	312.2	4064.8	2765.7	6782.3	17243.5	0.0
1992	3771.9	2937.6	6709.5	2533.4	1266.6	52.5	320.7	4173.4	2536.1	651.0	18355.9	0.0
1993	3570.0	3069.2	6639.3	2605.5	1302.7	13.4	327.3	4248.8	2390.5	6897.9	19230.7	0.0
1994	3301.1	3162.4	6463.5	2679.6	1339.7	10.0	331.8	4361.1	2102.4	6910.6	19745.3	0.0
1995	2847.4	3177.2	6044.6	2755.8	1377.8	8.2	334.1	4475.9	1568.7	6856.7	19683.6	0.0
1996	2548.4	3170.4	5718.8	2834.2	1417.0	7.0	334.5	4592.7	1126.1	6766.8	19184.5	0.0
1997	2477.5	3103.6	5581.2	2914.8	1457.3	5.0	333.2	4710.3	870.9	6681.0	18471.3	0.0
1998	2323.6	3003.8	5327.3	2997.7	1498.7	4.0	330.6	4831.0	496.3	6587.1	17442.5	0.0

ASSUMPTIONS

	EXISTING DEBT SERVICE	NEW DEBT	SEVERANCE TAXES	PETROL INCOME TAX	PROPERTY TAX	OTHER REVENUE	ROYALTIES X% TO PF	ROYALTIES 50% TO PF
1983	94.2	0.0	1,819.6	304.0	169.0	219.3	1,767.0	0.0
1984	91.3	0.0	2,214.1	360.0	256.0	240.1	2,145.1	0.0
1985	87.9	0.0	2,616.1	373.0	399.0	298.4	2,542.6	0.0
1986	86.0	0.0	2,970.9	400.0	543.2	352.9	2,869.6	0.0
1987	81.9	0.0	3,420.7	641.5	857.9	359.7	3,322.2	0.0
1988	78.9	0.0	3,179.9	663.0	836.3	367.7	3,629.1	0.0
1989	70.6	0.0	3,540.8	684.6	814.8	389.9	3,954.0	49.8
1990	59.5	0.0	3,421.2	706.1	793.2	418.2	3,838.6	78.1
1991	38.9	0.0	3,256.9	747.3	771.6	453.3	3,762.5	84.8
1992	38.2	0.0	3,257.3	792.3	737.0	495.4	3,710.2	255.0
1993	31.7	0.0	3,348.7	833.7	703.4	544.0	3,789.0	360.1
1994	25.8	0.0	3,357.0	861.2	669.8	598.6	3,733.4	463.2
1995	23.0	0.0	3,014.3	889.3	637.2	658.5	3,407.5	507.8
1996	21.5	0.0	2,844.4	918.6	604.6	724.8	3,223.0	606.6
1997	16.7	0.0	3,033.1	948.2	575.0	797.6	3,404.5	744.0
1998	14.4	0.0	3,076.6	948.1	540.4	878.0	3,447.2	870.0
ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS						=	0.120	
ANNUAL RATE OF INTEREST ON NEW BONDS						=	0.100	
MATURITY PERIOD ON NEW BONDS IN YEARS						=	10.000	
% OF OPERATING BUDGET IN G.F. CASH BAL						=	0.200	
% OF ROYALTIES TO PERMANENT FUND						=	0.250	
% OF PERMANENT FUND EARNINGS PAID AS DIVIDENDS						=	0.500	
INFLATION RATE						=	0.090	
'1' IF PERMANENT FUND INCOME BASED ON 5 YEAR AVERAGE						=	1.000	
PER CAPITA DIVIDEND						=	50.000	
NUMBER OF PRIOR YEAR DIVIDEND RECIPIENTS						=	2.966	
GROWTH RATE IN DIVIDEND RECIPIENTS						=	0.028	

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL

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GASLINE DEC 1986-LOW INFLATION
DEPT OF REVENUE ESTIMATES
BUDGETS AT SPENDING LIMIT
SURPLUS SPENT ON CAPITAL

YEAR END	REVENUE	INTEREST	TOTAL REVENUE	OPERATING BUDGET	CAPITAL BUDGET	DEBT SERVICE	PERMANENT FUND DIVIDENDS	TOTAL BUDGET	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR	REVENUE REQ FOR GF BAL OF \$0 MIL
1982										4005.3	-693.4	
1983	3837.2	435.4	4272.5	1904.4	1409.0	113.2	152.5	3579.1	693.4	4771.9	0.0	0.0
1984	4679.0	682.7	5361.7	2229.4	2831.2	138.8	162.3	5361.7	0.0	5606.2	0.0	0.0
1985	5593.5	977.8	6571.2	2624.5	3551.1	163.8	231.8	6571.2	0.0	6505.0	0.0	0.0
1986	6419.2	1240.6	7659.8	2940.8	4256.5	161.9	300.6	7659.8	0.0	7459.1	0.0	0.0
1987	7771.5	1511.0	9282.5	3241.9	5515.5	157.8	367.2	9282.5	0.0	8513.6	0.0	0.0
1988	7768.7	1726.1	9494.9	3484.4	5432.0	154.8	423.6	9494.9	0.0	9664.3	0.0	0.0
1989	8420.5	1900.1	10320.6	3906.0	5783.1	146.5	485.0	10320.6	-0.0	10944.2	0.0	0.0
1990	8256.7	2036.9	10293.6	4378.6	5228.2	135.4	551.4	10293.6	0.0	12230.6	0.0	0.0
1991	8093.4	2127.2	10220.5	4908.4	4575.2	114.8	622.1	10220.5	0.0	13514.2	0.0	0.0
1992	8192.2	2208.3	10400.5	5502.4	4087.4	114.1	696.6	10400.5	-0.0	14879.6	0.0	0.0
1993	8451.6	2317.7	10769.3	6168.1	3794.6	31.7	774.8	10769.3	0.0	16329.9	0.0	0.0
1994	8518.3	2449.8	10968.0	6914.5	3457.0	25.8	856.1	11253.4	-285.4	17832.4	0.0	285.4
1995	8008.8	2629.8	10638.6	7751.1	3875.3	23.0	939.8	12589.2	-1950.7	19285.7	0.0	1950.7
1996	7813.0	2869.0	10681.9	8689.0	4344.3	21.5	1025.5	14080.3	-3398.4	20745.7	0.0	3398.4
1997	8279.3	3139.0	11418.3	9740.4	4869.9	16.7	1113.6	15740.6	-4322.3	22326.0	-0.0	4322.3
1998	8463.5	3425.6	11889.1	10919.0	5459.2	14.4	1204.2	17596.8	-5707.7	23993.5	0.0	5707.7

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL
FY 1983 \$

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GASLINE DEC 1986-LOW INFLATION
DEPT OF REVENUE ESTIMATES
BUDGETS AT SPENDING LIMIT
SURPLUS SPENT ON CAPITAL

YEAR			TOTAL	OPERATING	CAPITAL	DEBT	PERMANENT		SURPLUS	PERM-	GENERAL	REVENUE REQ
END	REVENUE	INTEREST	REVENUE	BUDGET	BUDGET	SERVICE	FUND		OR	ANENT	FUND	FOR GF BAL
							DIVIDENDS	BUDGET	DEFICIT	FUND	END OF YEAR	OF \$0 MIL
1982										4005.3	-693.4	
1983	3837.2	435.4	4272.5	1904.4	1409.0	113.2	152.5	3579.1	693.4	4771.9	0.0	0.0
1984	4292.7	626.3	4919.0	2045.4	2597.4	127.3	148.9	4919.0	0.0	5143.3	0.0	0.0
1985	4707.9	823.0	5530.9	2209.0	2988.9	137.9	195.1	5530.9	0.0	5475.1	0.0	0.0
1986	4956.8	958.0	5914.8	2270.8	3286.8	125.0	232.1	5914.8	0.0	5759.8	0.0	0.0
1987	5505.5	1070.5	6575.9	2296.6	3907.4	111.8	260.1	6575.9	0.0	6031.2	0.0	0.0
1988	5049.1	1121.9	6171.0	2264.6	3530.4	100.6	275.3	6171.0	0.0	6281.1	0.0	0.0
1989	5020.9	1133.0	6153.9	2329.0	3448.3	87.4	289.2	6153.9	-0.0	6525.7	0.0	0.0
1990	4516.7	1114.3	5631.0	2395.3	2860.0	74.1	301.6	5631.0	0.0	6690.6	0.0	0.0
1991	4061.8	1067.6	5129.3	2463.4	2296.1	57.6	312.2	5129.3	0.0	6782.3	0.0	0.0
1992	3771.9	1016.8	4788.7	2533.4	1881.9	52.5	320.7	4788.7	-0.0	6851.0	0.0	0.0
1993	3570.0	979.0	4549.1	2605.5	1602.9	13.4	327.3	4549.1	0.0	6897.9	0.0	0.0
1994	3301.1	949.4	4250.5	2679.6	1339.7	10.0	331.8	4361.1	-110.6	6910.6	0.0	110.6
1995	2847.4	935.0	3782.4	2755.8	1377.8	8.2	334.1	4475.9	-693.5	6856.7	0.0	693.5
1996	2548.4	935.8	3484.2	2834.2	1417.0	7.0	334.5	4592.7	-1108.5	6766.8	0.0	1108.5
1997	2477.5	939.3	3416.9	2914.8	1457.3	5.0	333.2	4710.3	-1293.4	6681.0	-0.0	1293.4
1998	2323.6	940.4	3264.0	2997.7	1498.7	4.0	330.6	4831.0	-1567.0	6587.1	0.0	1567.0

ASSUMPTIONS

	EXISTING DEBT SERVICE	NEW DEBT	SEVERANCE TAXES	PETROL INCOME TAX	PROPERTY TAX	OTHER REVENUE	ROYALTIES X% TO PF	ROYALTIES 50% TO PF
1983	94.2	0.0	1,819.6	304.0	169.0	219.3	1,767.0	0.0
1984	91.3	0.0	2,214.1	360.0	256.0	240.1	2,145.1	0.0
1985	87.9	0.0	2,616.1	373.0	399.0	298.4	2,542.6	0.0
1986	86.0	0.0	2,970.9	400.0	543.2	352.9	2,869.6	0.0
1987	81.9	0.0	3,420.7	641.5	857.9	359.7	3,322.2	0.0
1988	78.9	0.0	3,179.9	663.0	836.3	367.7	3,629.1	0.0
1989	70.6	0.0	3,540.8	684.6	814.8	389.9	3,954.0	49.8
1990	59.5	0.0	3,421.2	706.1	793.2	418.2	3,838.6	78.1
1991	38.9	0.0	3,256.9	747.3	771.6	453.3	3,762.5	84.8
1992	38.2	0.0	3,257.3	792.3	737.0	495.4	3,710.2	255.0
1993	31.7	0.0	3,348.7	833.7	703.4	544.0	3,789.0	360.1
1994	25.8	0.0	3,357.0	861.2	669.8	598.6	3,733.4	463.2
1995	23.0	0.0	3,014.3	889.3	637.2	658.5	3,407.5	507.8
1996	21.5	0.0	2,844.4	918.6	604.6	724.8	3,223.0	606.6
1997	16.7	0.0	3,033.1	948.2	575.0	797.6	3,404.5	744.0
1998	14.4	0.0	3,076.6	948.1	540.4	878.0	3,447.2	870.0

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS	=	0.120
ANNUAL RATE OF INTEREST ON NEW BONDS	=	0.100
MATURITY PERIOD ON NEW BONDS IN YEARS	=	10.000
% OF OPERATING BUDGET IN G.F. CASH BAL	=	0.200
% OF ROYALTIES TO PERMANENT FUND	=	0.250
% OF PERMANENT FUND EARNINGS PAID AS DIVIDENDS	=	0.500
% OF GF ADDED TO CAPITAL BUDGET	=	1.000
INFLATION RATE	=	0.090
'1' IF PERMANENT FUND INCOME BASED ON 5 YEAR AVERAGE	=	1.000
PER CAPITA DIVIDEND	=	50.000
NUMBER OF PRIOR YEAR DIVIDEND RECIPIENTS	=	2,966
GROWTH RATE IN DIVIDEND RECIPIENTS	=	0.028

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL

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GASLINE DEC 1986-HIGH INFLATION
DEPT OF REVENUE ESTIMATES
FY82 LEVEL OF SERVICE BUDGETS

YEAR	REVENUE	INTEREST	TOTAL	OPERATING	CAPITAL	DEBT	PERMANENT	TOTAL	SURPLUS	PERM-	GENERAL	REVENUE REQ
END			REVENUE	BUDGET	BUDGET	SERVICE	FUND	BUDGET	OR	ANENT	FUND	FOR GF BAL
							DIVIDENDS		DEFICIT	FUND	END OF YEAR	OF \$0 MIL
1982										4005.3	-693.4	
1983	3837.2	416.0	4283.2	1877.9	196.5	113.2	152.5	2340.1	1943.1	4771.9	1249.7	0.0
1984	4680.1	776.0	5456.2	2224.0	249.9	138.8	162.3	2774.9	2681.2	5606.2	3931.0	0.0
1985	5604.9	1289.2	6894.0	2694.8	302.5	163.8	231.8	3392.9	3501.2	6505.0	7432.1	0.0
1986	6455.3	1920.6	8375.9	3127.3	348.2	161.9	300.6	3938.0	4438.0	7459.1	11870.1	0.0
1987	7834.1	2704.5	10538.5	3417.5	595.1	157.8	367.2	4537.6	6000.9	8513.6	17871.0	0.0
1988	7826.8	3595.9	11422.8	3700.5	436.9	154.8	423.6	4715.8	6707.0	9664.3	24578.0	0.0
1989	8474.9	4598.8	13073.7	4120.8	488.1	146.5	485.0	5240.5	7833.2	10944.2	32411.2	0.0
1990	8245.7	5703.2	13948.9	4588.9	545.2	135.4	551.3	5820.9	8128.0	12221.1	40539.2	0.0
1991	7976.9	6855.1	14832.0	5110.3	608.9	114.8	621.7	6455.7	8376.3	13474.8	48915.5	0.0
1992	8051.9	8064.8	16116.7	5690.8	680.2	114.1	695.6	7180.7	8936.1	14804.0	57851.5	0.0
1993	8353.1	9370.4	17723.5	6337.3	759.8	31.7	772.7	7901.4	9822.1	16223.2	67673.7	0.0
1994	8559.9	10782.1	19342.0	7057.2	848.7	25.8	852.7	8784.3	10557.7	17719.4	78231.3	0.0
1995	8048.4	12244.2	20292.6	7858.9	948.0	23.0	935.0	9764.9	10527.8	19168.4	88759.1	0.0
1996	7850.7	13724.4	21575.0	8751.6	1058.9	21.5	1019.6	10851.6	10723.4	20626.0	99482.5	0.0
1997	8315.0	15274.8	23589.7	9745.8	1182.8	16.7	1106.9	12052.2	11537.5	22205.2	111020.0	0.0
1998	8497.4	16913.8	25411.2	10852.9	1321.1	14.4	1197.2	13385.6	12025.6	23872.2	123045.6	0.0

GASLINE DEC 1986-HIGH INFLATION
DEPT OF REVENUE ESTIMATES
FY82 LEVEL OF SERVICE BUDGETS

YEAR	REVENUE	INTEREST	TOTAL	OPERATING	CAPITAL	DEBT	PERMANENT	TOTAL	SURPLUS	PERM-	GENERAL	REVENUE REQ
END			REVENUE	BUDGET	BUDGET	SERVICE	FUND	BUDGET	OR	ANENT	FUND	FOR GF BAL
							DIVIDENDS		DEFICIT	FUND	END OF YEAR	OF \$0 MIL
1982										4005.3	-693.4	
1983	3837.2	446.0	4283.2	1877.9	196.5	113.2	152.5	2340.1	1943.1	4771.9	1249.7	0.0
1984	4293.7	712.0	5005.7	2040.3	229.3	127.3	148.9	2545.8	2459.8	5143.3	3606.4	0.0
1985	4717.5	1085.1	5802.6	2268.1	254.6	137.9	195.1	2855.7	2946.9	5475.1	6255.5	0.0
1986	4984.7	1483.1	6467.8	2414.8	268.9	125.0	232.1	3040.8	3426.9	5759.8	9165.9	0.0
1987	5549.8	1915.9	7465.8	2421.0	421.6	111.8	260.1	3214.6	4251.2	6031.2	12660.3	0.0
1988	5086.9	2337.1	7424.0	2405.0	284.0	100.6	275.3	3064.9	4359.1	6281.1	15974.0	0.0
1989	5053.3	2742.1	7795.4	2457.1	291.0	87.4	289.2	3124.7	4670.7	6525.7	19325.7	0.0
1990	4510.7	3119.9	7630.5	2510.3	298.2	74.1	301.6	3184.2	4446.3	6685.3	22176.3	0.0
1991	4003.3	3440.4	7443.7	2564.7	305.6	57.6	312.0	3239.9	4203.8	6762.5	24549.0	0.0
1992	3707.3	3713.3	7420.6	2620.2	313.2	52.5	320.3	3306.2	4114.4	6816.2	26636.5	0.0
1993	3528.5	3958.2	7486.6	2676.9	320.9	13.4	323.4	3337.6	4149.0	6852.8	28586.1	0.0
1994	3317.2	4178.4	7495.7	2734.9	328.9	10.0	330.4	3404.2	4091.4	6866.8	30317.2	0.0
1995	2861.5	4353.2	7214.7	2794.1	337.0	8.2	332.4	3471.7	3743.0	6815.0	31556.9	0.0
1996	2560.7	4476.6	7037.3	2854.6	345.4	7.0	332.6	3539.6	3497.8	6727.8	32449.1	0.0
1997	2488.2	4570.9	7059.1	2916.4	353.9	5.0	331.2	3606.6	3452.6	644.8	33222.4	0.0
1998	2332.9	4643.5	6976.3	2979.5	362.7	4.0	328.7	3674.9	3301.5	6553.8	33780.7	0.0

ASSUMPTIONS

EXISTING DEBT SERVICE	NEW DEBT	SEVERANCE TAXES	PETROL INCOME TAX	PROPERTY TAX	OTHER REVENUE	ROYALTIES X% TO PF	ROYALTIES 50% TO PF
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1983	94.2	0.0	1,819.6	304.0	169.0	219.3	1,767.0	0.0
1984	91.3	0.0	2,214.1	360.0	257.0	240.2	2,145.1	0.0
1985	87.9	0.0	2,616.1	373.0	409.0	299.8	2,542.6	0.0
1986	86.0	0.0	2,970.9	400.0	572.8	359.4	2,869.6	0.0
1987	81.9	0.0	3,420.7	642.7	911.9	367.1	3,322.2	0.0
1988	78.9	0.0	3,179.9	664.2	888.1	372.8	3,629.1	0.0
1989	70.6	0.0	3,540.8	685.7	864.5	393.5	3,954.0	49.8
1990	59.5	0.0	3,386.2	707.2	840.7	420.8	3,802.3	78.1
1991	38.9	0.0	3,193.1	730.0	817.0	455.3	3,652.1	84.8
1992	38.2	0.0	3,186.3	772.4	780.2	497.3	3,584.3	255.0
1993	31.7	0.0	3,295.9	818.4	744.4	545.9	3,691.3	360.1
1994	25.8	0.0	3,357.0	862.0	708.7	600.5	3,733.4	463.2
1995	23.0	0.0	3,014.3	890.1	673.9	660.6	3,407.5	507.8
1996	21.5	0.0	2,844.4	919.3	639.2	727.2	3,223.0	606.6
1997	16.7	0.0	3,033.1	948.9	607.4	800.2	3,404.5	744.0
1998	14.4	0.0	3,076.6	948.9	570.6	880.9	3,447.2	870.0

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS	=	0.120
ANNUAL RATE OF INTEREST ON NEW BONDS	=	0.100
MATURITY PERIOD ON NEW BONDS IN YEARS	=	10.000
% OF OPERATING BUDGET IN G.F. CASH BAL	=	0.200
% OF ROYALTIES TO PERMANENT FUND	=	0.250
% OF PERMANENT FUND EARNINGS PAID AS DIVIDENDS	=	0.500
INFLATION RATE	=	0.090
'1' IF PERMANENT FUND INCOME BASED ON 5 YEAR AVERAGE	=	1.000
PER CAPITA DIVIDEND	=	50.000
NUMBER OF PRIOR YEAR DIVIDEND RECIPIENTS	=	2,966
GROWTH RATE IN DIVIDEND RECIPIENTS	=	0.028

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL

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GASLINE DEC 1986-HIGH INFLATION
DEPT OF REVENUE ESTIMATES
FY82 LEVEL OF SERVICE BUDGETS
SURPLUS SPENT ON CAPITAL

YEAR	REVENUE	INTEREST	TOTAL REVENUE	OPERATING BUDGET	CAPITAL BUDGET	DEBT SERVICE	PERMANENT FUND DIVIDENDS	TOTAL BUDGET	SURPLUS OR DEFICIT	PERMANENT FUND	GENERAL FUND	REVENUE REQ FOR OF BAL
1982	3837.2	436.2	4273.3	1877.9	1436.3	113.2	152.5	3579.9	693.4	4005.3	-693.4	0.0
1983	4680.1	684.9	5365.0	2224.0	2839.9	138.8	162.3	5365.0	-0.0	4771.9	0.0	0.0
1984	5604.9	977.6	6582.4	2694.8	3492.1	163.8	231.8	6582.4	-0.0	6505.0	0.0	0.0
1985	6455.3	1233.0	7688.3	3127.3	4098.5	161.9	300.6	7688.3	0.0	7459.1	0.0	0.0
1986	7834.1	1496.6	9330.6	3417.5	5388.1	157.8	367.2	9330.6	0.0	8513.6	0.0	0.0
1987	7826.8	1710.0	9536.8	3700.5	5257.9	154.8	423.6	9536.8	-0.0	9664.3	0.0	0.0
1988	8474.9	1881.3	10356.2	4120.8	5603.8	146.5	485.0	10356.2	-0.0	10944.2	0.0	0.0
1989	8245.7	2013.0	10258.6	4588.9	4982.9	135.4	551.3	10258.6	0.0	12221.1	0.0	0.0
1990	7976.9	2092.2	10069.1	5110.3	4222.3	114.8	621.7	10069.1	0.0	13474.8	0.0	0.0
1991	8051.9	2161.8	10213.7	5690.8	3713.2	114.1	655.6	10213.7	0.0	14804.0	0.0	0.0
1992	8353.1	2267.7	10620.8	6337.3	3479.2	31.7	772.7	10620.8	0.0	16223.2	0.0	0.0
1993	8559.9	2393.5	10953.4	7057.2	3017.7	25.8	852.7	10953.4	-0.0	17719.4	0.0	0.0
1994	8048.4	2472.0	10520.4	7858.9	1703.6	23.0	935.0	10520.4	0.0	19168.4	0.0	0.0
1995	7850.7	2529.7	10380.3	8751.6	1058.9	21.5	1019.6	10851.6	-471.3	20626.0	0.0	471.3
1996	8315.0	2661.6	10976.6	9745.8	1182.8	16.7	1166.9	12052.2	-1075.6	22205.2	0.0	1075.6
1997	8497.4	2869.9	11367.3	10852.9	1321.1	14.4	1197.2	13385.6	-2018.3	23872.2	0.0	2018.3

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL
FY 1983 \$

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GASLINE DEC 1986-HIGH INFLATION
DEPT OF REVENUE ESTIMATES
FY82 LEVEL OF SERVICE BUDGETS
SURPLUS SPENT ON CAPITAL

YEAR		TOTAL		OPERATING	CAPITAL	DEBT	PERMANENT	TOTAL	SURPLUS	PERM-	GENERAL	REVENUE REQ
END	REVENUE	INTEREST	REVENUE	BUDGET	BUDGET	SERVICE	FUND	BUDGET	OR	ANENT	FUND	FOR GF BAL
							DIVIDENDS		DEFICIT	FUND	END OF YEAR	OF \$0 MIL
1982										4005.3	-693.4	
1983	3837.2	436.2	4273.3	1877.9	1436.3	113.2	152.5	3579.9	693.4	4771.9	0.0	0.0
1984	4293.7	628.3	4922.0	2040.3	2605.4	127.3	148.9	4922.0	-0.0	5143.3	0.0	0.0
1985	4717.5	822.8	5540.3	2268.1	2939.2	137.9	195.1	5540.3	-0.0	5475.1	0.0	0.0
1986	4984.7	952.1	5936.8	2414.8	3164.8	125.0	232.1	5936.8	0.0	5759.8	0.0	0.0
1987	5549.8	1060.2	6610.0	2421.0	3817.1	111.8	260.1	6610.0	0.0	6031.2	0.0	0.0
1988	5086.9	1111.4	6198.3	2405.0	3417.3	100.6	275.3	6198.3	-0.0	6281.1	0.0	0.0
1989	5053.3	1121.7	6175.0	2457.1	3341.4	87.4	289.2	6175.0	-0.0	6525.7	0.0	0.0
1990	4510.7	1101.2	5611.8	2510.3	2725.8	74.1	301.6	5611.8	0.0	6685.3	0.0	0.0
1991	4003.3	1050.0	5053.3	2564.7	2119.0	57.6	312.0	5053.3	0.0	6762.5	0.0	0.0
1992	3707.3	995.3	4702.7	2620.2	1709.7	52.5	320.3	4702.7	0.0	6816.2	0.0	0.0
1993	3528.5	957.9	4486.4	2676.9	1469.7	13.4	326.4	4486.4	0.0	6852.8	0.0	0.0
1994	3317.2	927.6	4244.8	2734.9	1169.5	10.0	330.4	4244.8	-0.0	6866.8	0.0	0.0
1995	2861.5	878.9	3740.4	2794.1	605.7	8.2	332.4	3740.4	0.0	6815.0	0.0	0.0
1996	2560.7	825.1	3385.8	2854.6	345.4	7.0	332.6	3539.6	-153.7	6727.8	0.0	153.7
1997	2488.2	796.5	3284.7	2916.4	353.9	5.0	331.2	3606.6	-321.9	6644.8	0.0	321.9
1998	2332.9	787.9	3120.8	2979.5	362.7	4.0	328.7	3674.9	-554.1	6553.8	0.0	554.1

ASSUMPTIONS

	EXISTING DEBT SERVICE	NEW DEBT	SEVERANCE TAXES	PETROL INCOME TAX	PROPERTY TAX	OTHER REVENUE	ROYALTIES X% TO PF	ROYALTIES 50% TO PF
1983	94.2	0.0	1,819.4	304.0	169.0	219.3	1,767.0	0.0
1984	91.3	0.0	2,214.1	360.0	257.0	240.2	2,145.1	0.0
1985	87.9	0.0	2,616.1	373.0	409.0	299.8	2,542.6	0.0
1986	86.0	0.0	2,970.9	400.0	572.8	359.4	2,869.6	0.0
1987	81.9	0.0	3,420.7	642.7	911.9	367.1	3,322.2	0.0
1988	78.9	0.0	3,179.9	664.2	888.1	372.8	3,629.1	0.0
1989	70.6	0.0	3,540.8	685.7	864.5	393.5	3,954.0	49.8
1990	59.5	0.0	3,386.2	707.2	840.7	420.8	3,802.3	78.1
1991	38.9	0.0	3,193.1	730.0	817.0	455.3	3,652.1	84.8
1992	38.2	0.0	3,186.3	772.4	780.2	497.3	3,584.3	255.0
1993	31.7	0.0	3,295.9	818.4	744.4	545.9	3,691.3	360.1
1994	25.8	0.0	3,357.0	862.0	708.7	600.5	3,733.4	463.2
1995	23.0	0.0	3,014.3	890.1	673.9	660.6	3,407.5	507.8
1996	21.5	0.0	2,844.4	919.3	639.2	727.2	3,223.0	606.6
1997	16.7	0.0	3,033.1	948.9	607.4	800.2	3,404.5	744.0
1998	14.4	0.0	3,076.6	948.9	570.6	880.9	3,447.2	870.0

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS	=	0.120
ANNUAL RATE OF INTEREST ON NEW BONDS	=	0.100
MATURITY PERIOD ON NEW BONDS IN YEARS	=	10.000
% OF OPERATING BUDGET IN G.F. CASH BAL	=	0.200
% OF ROYALTIES TO PERMANENT FUND	=	0.250
% OF PERMANENT FUND EARNINGS PAID AS DIVIDENDS	=	0.500
% OF GF ADDED TO CAPITAL BUDGET	=	1.000
INFLATION RATE	=	0.090
'1' IF PERMANENT FUND INCOME BASED ON 5 YEAR AVERAGE	=	1.000
PER CAPITA DIVIDEND	=	50.000
NUMBER OF PRIOR YEAR DIVIDEND RECIPIENTS	=	2.966
GROWTH RATE IN DIVIDEND RECIPIENTS	=	0.028

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL

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GASLINE DEC 1986-HIGH INFLATION
DEPT OF REVENUE ESTIMATES
BUDGETS AT SPENDING LIMIT

YEAR END	REVENUE	INTEREST	TOTAL REVENUE	OPERATING BUDGET	CAPITAL BUDGET	DEBT SERVICE	PERMANENT	TOTAL BUDGET	SURPLUS	PERM-	GENERAL	REVENUE REQ
							FUND DIVIDENDS		OR DEFICIT	ANENT FUND	FUND END OF YEAR	FOR GF BAL OF \$0 MIL
1982										4005.3	-693.4	
1983	3837.2	438.2	4275.4	1922.2	961.0	113.2	152.5	3148.9	1126.5	4771.9	433.1	0.0
1984	4680.1	715.9	5396.0	2315.7	1157.8	138.8	162.3	3774.5	1621.5	5606.2	2054.6	0.0
1985	5604.9	1117.8	6722.7	2859.2	1429.5	163.8	231.8	4684.3	2038.4	6505.0	4093.0	0.0
1986	6455.3	1584.0	8039.3	3205.4	1602.6	161.9	300.6	5270.5	2768.8	7459.1	6861.8	0.0
1987	7834.1	2170.1	10004.1	3493.9	1746.8	157.8	367.2	5765.8	4238.3	8513.6	11100.1	0.0
1988	7826.8	2830.7	10657.5	3755.2	1877.5	154.8	423.6	6211.2	4446.3	9664.3	15546.4	0.0
1989	8174.9	3560.5	12035.4	4209.6	2104.7	146.5	485.0	6945.8	5089.6	10944.2	20636.0	0.0
1990	8245.7	4331.1	12576.8	4719.0	2359.4	135.4	551.3	7765.1	4811.7	12221.1	25447.7	0.0
1991	7976.9	5074.4	13051.3	5290.0	2644.8	114.8	621.7	8671.4	4379.9	13474.8	29827.6	0.0
1992	8051.9	5790.3	13842.2	5930.1	2964.9	114.1	695.6	9704.6	4137.6	14804.0	33965.1	0.0
1993	8353.1	6501.5	14854.7	6647.6	3323.6	31.7	772.7	10775.6	4079.1	16223.2	38044.2	0.0
1994	8559.9	7200.4	15760.2	7452.0	3725.8	25.8	852.7	12056.2	3704.0	17719.4	41748.2	0.0
1995	8048.4	7810.0	15858.4	8353.7	4176.6	23.0	935.0	13488.3	2370.2	19168.4	44118.4	0.0
1996	7850.7	8273.9	16124.5	9364.5	4682.0	21.5	1019.6	15087.5	1037.0	20626.0	45155.4	0.0
1997	8315.0	8615.6	16930.6	10497.6	5248.5	16.7	1106.9	16867.7	60.9	22205.2	45216.3	0.0
1998	8497.4	8920.6	17318.0	11767.8	5883.5	14.4	1197.2	18862.9	-1544.9	23872.2	43671.4	0.0

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL
FY 1983 \$

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GASLINE DEC 1986-HIGH INFLATION
DEPT OF REVENUE ESTIMATES
BUDGETS AT SPENDING LIMIT

YEAR END	REVENUE	INTEREST	TOTAL REVENUE	OPERATING BUDGET	CAPITAL BUDGET	DEBT SERVICE	PERMANENT FUND DIVIDENDS	TOTAL BUDGET	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR	REVENUE REQ FOR GF BAL OF \$0 MIL
1982										4005.3	-693.4	
1983	3837.2	438.2	4275.4	1922.2	961.0	113.2	152.5	3148.9	1126.5	4771.9	433.1	0.0
1984	4293.7	656.8	4950.5	2124.5	1062.2	127.3	148.9	3462.9	1487.6	5143.3	1884.9	0.0
1985	4717.5	940.9	5658.3	2406.5	1203.2	137.9	195.1	3942.6	1715.7	5475.1	3445.0	0.0
1986	4984.7	1223.2	6207.8	2475.2	1237.5	125.0	232.1	4069.8	2138.0	5759.8	5298.6	0.0
1987	5549.8	1537.3	7087.2	2475.2	1237.5	111.8	260.1	4084.6	3002.5	6031.2	7863.6	0.0
1988	5086.9	1839.8	6926.7	2440.7	1220.3	100.6	275.3	4036.9	2889.8	6281.1	10104.1	0.0
1989	5053.3	2123.0	7176.3	2510.1	1255.0	87.4	289.2	4141.6	3034.7	6525.7	12304.6	0.0
1990	4510.7	2369.3	6879.9	2581.5	1290.6	74.1	301.6	4247.8	2632.2	6685.3	13920.8	0.0
1991	4003.3	2546.7	6550.0	2654.9	1327.4	57.6	312.0	4351.9	2198.1	6762.5	14969.5	0.0
1992	3707.3	2666.0	6373.3	2730.4	1365.1	52.5	320.3	4468.3	1905.0	6816.2	15638.5	0.0
1993	3528.5	2746.3	6274.8	2808.0	1403.9	13.4	326.4	4551.7	1723.0	6852.8	16070.3	0.0
1994	3317.2	2790.4	6107.6	2887.9	1443.9	10.0	330.4	4672.2	1435.4	6866.8	16178.8	0.0
1995	2861.5	2776.7	5638.2	2970.0	1484.9	8.2	332.4	4795.5	842.7	6815.0	15685.6	0.0
1996	2560.7	2698.8	5259.5	3054.5	1527.2	7.0	332.6	4921.2	338.3	6727.8	14728.7	0.0
1997	2488.2	2578.2	5066.4	3141.4	1570.6	5.0	331.2	5048.2	18.2	6644.8	13530.8	0.0
1998	2332.9	2421.6	4754.4	3230.7	1615.3	4.0	328.7	5178.6	-424.1	6553.8	11989.5	0.0

ASSUMPTIONS

	EXISTING DEBT SERVICE	NEW DEBT	SEVERANCE TAXES	PETROL INCOME TAX	PROPERTY TAX	OTHER REVENUE	ROYALTIES X% TO PF	ROYALTIES 50% TO PF
1983	94.2	0.0	1,819.6	304.0	169.0	219.3	1,767.0	0.0
1984	91.3	0.0	2,214.1	360.0	257.0	240.2	2,145.1	0.0
1985	87.9	0.0	2,616.1	373.0	409.0	299.8	2,542.6	0.0
1986	86.0	0.0	2,970.9	400.0	572.8	359.4	2,869.6	0.0
1987	81.9	0.0	3,420.7	642.7	911.9	367.1	3,322.2	0.0
1988	78.9	0.0	3,179.9	664.2	888.1	372.8	3,629.1	0.0
1989	70.6	0.0	3,540.8	685.7	864.5	393.5	3,954.0	49.8
1990	59.5	0.0	3,386.2	707.2	840.7	420.8	3,802.3	78.1
1991	38.9	0.0	3,193.1	730.0	817.0	455.3	3,652.1	84.8
1992	38.2	0.0	3,186.3	772.4	780.2	497.3	3,584.3	255.0
1993	31.7	0.0	3,295.9	818.4	744.4	545.9	3,691.3	360.1
1994	25.8	0.0	3,357.0	862.0	708.7	600.5	3,733.4	463.2
1995	23.0	0.0	3,014.3	890.1	673.9	660.6	3,407.5	507.8
1996	21.5	0.0	2,844.4	919.3	639.2	727.2	3,223.0	606.6
1997	16.7	0.0	3,033.1	948.9	607.4	800.2	3,404.5	744.0
1998	14.4	0.0	3,076.6	948.9	570.6	880.9	3,447.2	870.0

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS	=	0.120
ANNUAL RATE OF INTEREST ON NEW BONDS	=	0.100
MATURITY PERIOD ON NEW BONDS IN YEARS	=	10.000
% OF OPERATING BUDGET IN G.F. CASH BAL	=	0.200
% OF ROYALTIES TO PERMANENT FUND	=	0.250
% OF PERMANENT FUND EARNINGS PAID AS DIVIDENDS	=	0.500
INFLATION RATE	=	0.090
'1' IF PERMANENT FUND INCOME BASED ON 5 YEAR AVERAGE	=	1.000
PER CAPITA DIVIDEND	=	50.000
NUMBER OF PRIOR YEAR DIVIDEND RECIPIENTS	=	2.966
GROWTH RATE IN DIVIDEND RECIPIENTS	=	0.028

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL

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GASLINE DEC 1986-HIGH INFLATION
DEPT OF REVENUE ESTIMATES
BUDGETS AT SPENDING LIMIT
SURPLUS SPENT ON CAPITAL

YEAR END	REVENUE	INTEREST	TOTAL REVENUE	OPERATING BUDGET	CAPITAL BUDGET	DEBT SERVICE	PERMANENT FUND DIVIDENDS	TOTAL BUDGET	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR	REVENUE REQ FOR GF BAL OF \$0 MIL
1982										4005.3	-693.4	
1983	3837.2	434.8	4272.0	1922.2	1390.7	113.2	152.5	3578.6	693.4	4771.9	0.0	0.0
1984	4680.1	678.8	5359.0	2315.7	2742.2	138.8	162.3	5359.0	0.0	5606.2	0.0	0.0
1985	5604.9	964.6	6569.4	2859.2	3314.7	163.8	231.8	6569.4	0.0	6505.0	0.0	0.0
1986	6455.3	1215.7	7671.0	3205.4	4003.1	161.9	300.6	7671.0	-0.0	7459.1	0.0	0.0
1987	7834.1	1483.2	9317.3	3493.9	5298.3	157.8	367.2	9317.3	0.0	8513.6	0.0	0.0
1988	7826.8	1699.7	9526.5	3755.2	5192.8	154.8	423.6	9526.5	0.0	9664.3	0.0	0.0
1989	8474.9	1871.8	10346.7	4209.6	5505.6	146.5	485.0	10346.7	0.0	10944.2	0.0	0.0
1990	8245.7	2000.5	10246.2	4719.0	4840.4	135.4	551.3	10246.2	-0.0	12221.1	0.0	0.0
1991	7976.9	2074.3	10051.2	5290.0	4024.6	114.8	621.7	10051.2	0.0	13474.8	0.0	0.0
1992	8051.9	2137.1	10189.0	5930.1	3449.3	114.1	695.6	10189.0	-0.0	14804.0	0.0	0.0
1993	8353.1	2244.7	10597.8	6647.6	3323.6	31.7	772.7	10775.6	-177.8	16223.2	0.0	177.8
1994	8559.9	2423.7	10983.6	7452.0	3725.8	25.8	852.7	12056.2	-1072.7	17719.4	0.0	1072.7
1995	8048.4	2658.0	10706.4	8353.7	4176.6	23.0	935.0	13488.3	-2781.8	19168.4	0.0	2781.8
1996	7850.7	2917.5	10768.1	9364.5	4682.0	21.5	1019.6	15087.5	-4319.4	20626.0	0.0	4319.4
1997	8315.0	3193.3	11508.3	10497.6	5248.5	16.7	1106.9	16869.7	-5361.4	22205.2	0.0	5361.4
1998	8497.4	3487.3	11984.7	11767.8	5883.5	14.4	1197.2	18862.9	-6878.2	23872.2	0.0	6878.2

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL
FY 1983 \$

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GASLINE DEC 1986-HIGH INFLATION
DEPT OF REVENUE ESTIMATES
BUDGETS AT SPENDING LIMIT
SURPLUS SPENT ON CAPITAL

YEAR							PERMANENT			SURPLUS	PERM-	GENERAL	REVENUE REQ
END	REVENUE	INTEREST	TOTAL REVENUE	OPERATING BUDGET	CAPITAL BUDGET	DEBT SERVICE	FUND DIVIDENDS	TOTAL BUDGET	OR DEFICIT	ANENT FUND	END OF YEAR	OF \$0 MIL	
1982											4005.3	-693.4	
1983	3837.2	434.8	4272.0	1922.2	1390.7	113.2	152.5	3578.6	693.4	4771.9	0.0	0.0	
1984	4293.7	622.8	4916.5	2124.5	2515.8	127.3	148.9	4916.5	0.0	5143.3	0.0	0.0	
1985	4717.5	811.9	5529.3	2406.5	2789.9	137.9	195.1	5529.3	0.0	5475.1	0.0	0.0	
1986	4984.7	938.7	5923.4	2475.2	3091.1	125.0	232.1	5923.4	-0.0	5759.8	0.0	0.0	
1987	5549.8	1050.8	6600.6	2475.2	3753.5	111.8	260.1	6600.6	0.0	6031.2	0.0	0.0	
1988	5086.9	1104.7	6191.6	2440.7	3375.0	100.6	275.3	6191.6	0.0	6281.1	0.0	0.0	
1989	5053.3	1116.1	6169.4	2510.1	3282.8	87.4	289.2	6169.4	0.0	6525.7	0.0	0.0	
1990	4510.7	1094.3	5605.0	2581.5	2647.9	74.1	301.6	5605.0	-0.0	6685.3	0.0	0.0	
1991	4003.3	1041.0	5044.3	2654.9	2019.8	57.6	312.0	5044.3	0.0	6762.5	0.0	0.0	
1992	3707.3	984.0	4691.3	2730.4	1588.1	52.5	320.3	4691.3	-0.0	6816.2	0.0	0.0	
1993	3528.5	948.2	4476.6	2808.0	1403.9	13.4	326.4	4551.7	-75.1	6852.8	0.0	75.1	
1994	3317.2	939.3	4256.5	2887.9	1443.9	10.0	330.4	4672.2	-415.7	6866.8	0.0	415.7	
1995	2861.5	945.0	3806.5	2970.0	1484.9	8.2	332.4	4795.5	-989.0	6815.0	0.0	989.0	
1996	2560.7	951.6	3512.3	3054.5	1527.2	7.0	332.6	4921.2	-1408.9	6727.8	0.0	1408.9	
1997	2488.2	955.6	3443.8	3141.4	1570.6	5.0	331.2	5048.2	-1604.4	6644.8	0.0	1604.4	
1998	2332.9	957.4	3290.3	3230.7	1615.3	4.0	328.7	5178.6	-1888.3	6553.8	0.0	1888.3	

ASSUMPTIONS

	EXISTING DEBT SERVICE	NEW DEBT	SEVERANCE TAXES	PETROL INCOME TAX	PROPERTY TAX	OTHER REVENUE	ROYALTIES X% TO PF	ROYALTIES 50% TO PF
1983	94.2	0.0	1,819.6	304.0	169.0	219.3	1,767.0	0.0
1984	91.3	0.0	2,214.1	360.0	257.0	240.2	2,145.1	0.0
1985	87.9	0.0	2,616.1	373.0	409.0	299.8	2,542.6	0.0
1986	86.0	0.0	2,970.9	400.0	572.8	359.4	2,869.6	0.0
1987	81.9	0.0	3,420.7	642.7	911.9	367.1	3,322.2	0.0
1988	78.9	0.0	3,179.9	664.2	888.1	372.8	3,629.1	0.0
1989	70.6	0.0	3,540.8	685.7	864.5	393.5	3,954.0	49.8
1990	59.5	0.0	3,386.2	707.2	840.7	420.8	3,802.3	78.1
1991	38.9	0.0	3,193.1	730.0	817.0	455.3	3,652.1	84.8
1992	38.2	0.0	3,186.3	772.4	780.2	497.3	3,584.3	255.0
1993	31.7	0.0	3,295.9	818.4	744.4	545.9	3,691.3	360.1
1994	25.8	0.0	3,357.0	862.0	708.7	600.5	3,733.4	463.2
1995	23.0	0.0	3,014.3	890.1	673.9	660.6	3,407.5	507.8
1996	21.5	0.0	2,844.4	919.3	639.2	727.2	3,223.0	606.6
1997	16.7	0.0	3,033.1	948.9	607.4	800.2	3,404.5	744.0
1998	14.4	0.0	3,076.6	948.9	570.6	880.9	3,447.2	870.0

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS	=	0.120
ANNUAL RATE OF INTEREST ON NEW BONDS	=	0.100
MATURITY PERIOD ON NEW BONDS IN YEARS	=	10.000
% OF OPERATING BUDGET IN G.F. CASH BAL	=	0.200
% OF ROYALTIES TO PERMANENT FUND	=	0.250
% OF PERMANENT FUND EARNINGS PAID AS DIVIDENDS	=	0.500
% OF GF ADDED TO CAPITAL BUDGET	=	1.000
INFLATION RATE	=	0.090
'1' IF PERMANENT FUND INCOME BASED ON 5 YEAR AVERAGE	=	1.000
PER CAPITA DIVIDEND	=	50.000
NUMBER OF PRIOR YEAR DIVIDEND RECIPIENTS	=	2.966
GROWTH RATE IN DIVIDEND RECIPIENTS	=	0.028

APPENDIX B

Mr. Edwin (Al) Kuhn, Director
Government & Environmental Affairs
Northwest Alaskan Pipeline Company
1801 K Street, N.W.
Washington, D. C. 20006

Dear Mr. Kuhn:

In accordance with our ongoing discussions regarding Northwest Pipeline impact on the State highway system, our Department has prepared an estimate of what the expected cost of that impact will be. We have made every effort to fairly discriminate between the effects of non-pipeline related use and those impacts which can be related to the pipeline construction effort.

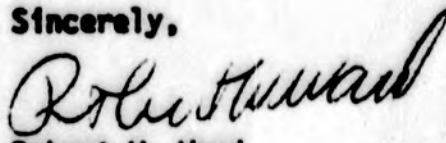
As can be seen in the attached report, pipeline related use will be equivalent to many years of expected normal usage, necessitating repair and reconstruction of these routes much sooner than would be normally anticipated.

In addition, certain maintenance costs which are directly related to traffic volume can be expected to increase substantially.

In order to properly protect other highway users and our taxpayers' investment in our present roadway system, gas pipeline project costs must include \$300 Million for reimbursement to the State of Alaska to repair pipeline-related damages to our highway system.

We would like to meet with you at your earliest convenience to discuss this proposal.

Sincerely,



Robert W. Ward
Commissioner

Enclosure.

RWN:JCB:rm

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
Division of Planning and Programming

NORTHWEST ALASKAN PIPELINE COMPANY HIGHWAY IMPACT REPORT

June 27, 1980

The following analysis has been undertaken to determine the relative impact construction of the Northwest-Alaskan Natural Gas Pipeline will have on the Alaska Road System.

Information received from Northwest Alaskan Pipeline Company officials concerning their line hauling operations (pipe, insulation, equipment and POL products) were analysed to determine the expected traffic in terms of volume and equivalent axle loadings (EAL's). Equivalent axle loadings are used by our Department to develop the design parameters for highway construction, the physical characteristics being directly related to the requirements to sustain a projected number of EAL's over a 20 year design life. The more EAL's in those 20 years, the stronger the road will need to be.

In addition to the line haul traffic, the impact of support traffic for the pipeline, including camp mobilization, hauling from staging areas, and the shipment of foodstuffs and other commodities, will be very substantial. It has been estimated from experience with the Alyeska Pipeline that this will equal approximately 50% of the line haul traffic.

Non-pipeline traffic on roads south of Fairbanks have historically experienced volume increases of 7% to 8% per year, a trend which is expected to continue. North of Fairbanks there is a lack of historical data, but it can be assumed that truck traffic there would level out near the volumes experienced in the past two years. These years should represent the amount of traffic necessary to sustain current levels of activity and should not contain significant levels of pipeline construction traffic.

Assuming an average age of 10 years for these roads, the number of EAL's which could normally be expected in a 20 year life was computed. This 20 year EAL expectancy has been compared in Table 1 to the number of EAL's generated by pipeline related traffic. The comparative usage was then used to allocate estimated highway rebuilding costs to pipeline impact, as shown in Tables 2 and 4. Results of that investigation indicate that the Northwest construction effort will expend between 19% and 96% of the traffic loadings we would normally expect on the routes studied. Applying this to the repair and reconstruction estimates prepared by our Design section results in a cost of \$84,700,000 in today's dollars attributable to pipeline related traffic.

Northwest Alaskan Pipeline Company Highway Impact Report
Page 2.

This excludes areas where pipeline related gravel hauling is to be done on public highways. These areas total approximately 42 miles. Determination of traffic volumes and equivalent axle loadings in these areas is very difficult due to lack of information on the hauling units which will be utilized. This is complicated by the fact that these areas are isolated sections where enforcement of legal loading regulations will be inhibited by lack of weigh stations. It may be possible to treat these areas as construction haul roads allowing the use of off road equipment, detours and other forms of traffic control. Repair of these sections would become the total responsibility of Northwest Alaskan Pipeline Company and should be done immediately after hauling is finished. Repair cost of these sections is estimated at \$4,116,000 in today's dollars.

Another important factor which is left out of this discussion is impact on bridges. Our computations indicate that the 80 ft. pipe hauling units will have one axle group (tri-axle) grossing over 58 kips, or approximately a 40% overload. This problem must be analyzed by our Bridge Design section to determine the impact in this area.

Past research has also indicated that increased frequency of loading may accelerate roadway damage; however, this information is not available in a quantifiable form which could be applied to the situation at hand.

Pipeline related traffic has also been compared on an annual basis to normal traffic in order to determine expected additional maintenance costs. These comparisons are shown in Tables 3-C through 3-D. This information has been analysed by our Maintenance section and applied to historical maintenance costs to arrive at an estimate of increased costs due to pipeline impact. These costs are shown in Table 4. The resulting estimate of pipeline related maintenance costs is nearly \$67,000,000 in 1980 dollars. This estimate is based upon the assumption that reasonable load restrictions will continue to be imposed during breakup, periods of excessively wet weather, or other conditions which could lead to extensive sub-base damage.

In summary, our recapitulation of estimated costs for the known impacts of pipeline construction includes the following:

Roadway & bridge repair and reconstruction-----	\$112,588,000
Roadway repair in areas impacted by	
gravel haul-----	4,100,000
Additional maintenance costs during	
pipeline construction-----	<u>66,800,000</u>
TOTAL:	<u>\$184,488,000</u>

This cost is given in 1980 dollars.

Northwest Alaskan Pipeline Company Highway Impact Report
Page 3.

The effect of inflation on these figures is substantial. Using a 10% inflationary constant with 1980 as the base year, the estimated costs for the known impacts of pipeline construction would be:

Roadway repair and reconstruction (1986)-----	\$199,822,000
Roadway repair in areas impacted by	
gravel haul (1986) -----	7,300,000
Additional maintenance costs	
during pipeline construction:	
1982 -----	8,400,000
1983 -----	25,700,000
1984 -----	31,100,000
1985 -----	31,000,000
<u>96,200,000</u> -----	<u>96,200,000</u>
TOTAL:	<u><u>\$303,422,000</u></u>

APPENDIX C

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
DEPUTY COMMISSIONER - PLANNING AND PROGRAMMING

JAY S. HAMMOND, GOVERNOR

POUCH 2
JUNEAU, ALASKA 99811
PHONE:

January 28, 1982

Honorable Vic Fischer
Alaska State Senator
Pouch V
Juneau, AK 99811

Dear Senator Fischer:

Re: Construction Costs Escalation

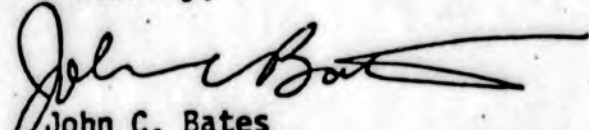
Mr. Bob Williams of your staff contacted my office on January 18, 1982, requesting a brief explanation of the reasons behind the great increases in construction costs as compared to the consumer price index.

At the current time, the demand for construction-related materials is out-stripping overall population increases. The current availability of low-interest loan programs has greatly stimulated construction associated with smaller development projects, especially housing. Large-scale capital funding by the State and the oil industry has further increased demand for the limited supply of materials.

In a survey conducted by HMS, Inc. of Anchorage during October of 1981, it was found that basic material costs for steel, copper, aluminum, etc., as well as manufactured items, have been increasing at a 30% annual rate. It was also found that some items, such as concrete, have shown surprising price stability. HMS, Inc., determined that the overall annual inflation rate for materials is approaching 20% annually. Material cost increases combined with union contract wage increases could easily result in a construction escalation rate of 2% per month (24% per year) in 1982.

I hope this information helps clarify your observation that construction prices are rising at a much faster rate than the overall consumer price index. If I can be of further help, please contact me.

Sincerely,


John C. Bates
Deputy Commissioner

APPENDIX D

MEMORANDUM

State of Alaska

Department of Revenue

TO: Joe Donohue
Deputy Commissioner

DATE: February 18, 1982

FILE NO:

TELEPHONE NO:

FROM: Chuck Logsdon
Petroleum Economist
Petroleum Revenue Division

SUBJECT: Gasline Analysis

Subsequent to my memorandum to you on January 25, 1982 I reworked the input assumptions to reflect the possibility of zero wellhead price for the first several years of ANGTS operation.

Milt Barker provided me with numbers published from U.S. Senate Hearings on the ANGTS waiver recommendation. The numbers included Northwest's current cost estimates and wellhead prices from the Federal Inspectors cost of service simulation model.

I ran three cases:

1. Center point cost estimate and Federal ceiling price @ wellhead.
2. Center point cost estimate and cost of service model wellhead (0 for the 1st three years).
3. 40% cost overrun and cost of service model wellhead prices (0 for the 1st four years).

These runs are attached for your information.

I telecopied these numbers to Milt on February 12, 1982 as he needed them for input into his cost-benefit projections which were presented February 16, 1982.

These revenue projections should take care of the problems mentioned in Mary Halloran's memo to you February 8, 1982. As nearly as I can tell the cost of the conditioning plant is handled by the cost of service model as allocated entirely to the consumers through the tariff.

CLL:il

cc: Fred Boetsch, Petroleum Revenue
Mary Halloran, Dept. of Natural Resources
Milt Barker, Legislative Finance

MEMORANDUM

State of Alaska

Department of Revenue

TO: Joseph K. Donohue
Deputy Commissioner

DATE: January 25, 1982

FILE NO:

TELEPHONE NO:

FROM: Charles L. Logsdon
Petroleum Economist
Petroleum Revenue Division

SUBJECT: Prudhoe Bay Gas
Revenue Projections

Attached you will find several tables which lay out projected gas revenues under varying assumptions concerning wellhead price, actual construction cost of the Northwest Alaska ANGTS segment, and property tax methodology.

~~For comparative purposes, I have run out the numbers for the following cases:~~

Case 1 - High price, \$27 B construction cost, and trended depreciation for property tax purposes;

Case 2 - High price, \$24 B construction cost, and trended depreciation;

Case 3 - Low price, \$27 B construction cost, st. line depreciation for property tax;

~~Case 4 - Low price, \$24 B construction cost, st. line depreciation~~

The other assumptions regarding key variables such as number of wells and assumed inflation appear with each output.

Since the algorithm for revenue projection is computerized further sensitivity analyses could be performed.

The various input assumptions are as follows:

ASSUMPTIONS

Column

1. Volume (bcf/day) is assumed to be the amount delivered from conditioning plant; actual production volume will be closer to 2.4 bcf/d at the wellhead.
2. ~~High price is calculated by inflating the FERC ceiling price of \$1.78/Mcf (1.63/MMbtu) in December 1978 by 7% per annum. All conditioning costs are passed forward to consumer in tariff. Low price is assumed to be \$1.25/Mcf in 1986 inflated at the rate of 7% annually. This is to account for downward pressure on wellhead price to assure marketability downstream~~
3.
$$ELF = \frac{[1 - (300 * \text{wells} * \text{days})]}{\text{daily prod.} * \text{days}} \exp \left[\frac{460}{300} \right]$$

NOTE: The price and inflation assumptions in this memo were modified to those in the February 18, 1982 memo of Charles Logsdon for use in the benefits analysis.

4.

5.

6. Two Ways

7.

8.

9.

10.

$$\begin{aligned} R &= [(17.5) \times (1.3) + 8 \left(\frac{24.0}{20.77} - 1.3 \right)] / \frac{24.0}{20.77} \\ &= [22.75 - 1.16] / 1.16 \\ &= 18.61\% \end{aligned}$$

cc: Vincent Wright
Milt Barker

INPUT ASSUMPTIONS FOR THE NORTHWEST ALASKA SEGMENT OF ANGTS

RATE OF INFLATION (PERCENT): 8.0%
 COST OF CONSTRUCTION: 27000
 ECONOMIC LIFE: 25
 PERCENT EQUITY: 25.00%
 DISCOUNT RATE: 10.00%
 CNTR PT RATE OF RETURN: 17.5%
 AD VALOREM: ORIGINAL COST

*Rate Base = Cost of Construction = Sponsor
 Estimate for Centerpoint Rate of Return.
 Wellhead Price @ FERC ceiling
 8% Inflation*

FISCAL YEAR	VOLUME	PRICE	WELLS	ELF	PROD. EXPENSE	FIELD COST
1987	2.000	3.060	550.000	0.840	500.000	0.200
1988	2.000	3.305	555.000	0.839	530.450	0.216
1989	2.000	3.569	560.000	0.837	546.360	0.233
1990	2.000	3.855	540.000	0.843	562.450	0.252
1991	2.000	4.163	520.000	0.826	579.640	0.272
1992	2.000	4.496	500.000	0.805	597.030	0.294
1993	2.000	4.856	490.000	0.773	614.940	0.317
1994	2.000	5.244	480.000	0.748	633.390	0.343
1995	2.000	5.664	470.000	0.719	652.390	0.370
1996	2.000	6.117	460.000	0.660	671.960	0.400
1997	2.000	6.606	450.000	0.589	692.120	0.432
1998	2.000	7.135	440.000	0.576	712.880	0.466
1999	2.000	7.706	430.000	0.535	734.270	0.504
2000	2.000	8.322	420.000	0.511	756.300	0.544
2001	2.000	8.988	410.000	0.461	778.980	0.587
2002	2.000	9.707	400.000	0.406	802.350	0.634
2003	2.000	10.483	390.000	0.359	826.420	0.685
2004	2.000	11.322	380.000	0.314	851.220	0.740
2005	1.600	12.228	370.000	0.260	850.000	0.799
2006	1.280	13.206	360.000	0.229	850.000	0.863
2007	1.020	14.263	350.000	0.212	850.000	0.932
2008	0.820	15.404	340.000	0.193	850.000	1.007
2009	0.660	16.636	330.000	0.172	850.000	1.087
2010	0.520	17.967	320.000	0.149	850.000	1.174
2011	0.420	19.404	310.000	0.167	850.000	1.268
2012	0.340	20.956	300.000	0.186	850.000	1.370
2013	0.270	22.633	300.000	0.186	850.000	1.479
2014	0.210	24.443	300.000	0.186	850.000	1.598
2015	0.210	26.399	300.000	0.186	850.000	1.725
2016	0.210	28.511	300.000	0.186	850.000	1.863

PROJECTED STATE OF ALASKA NATURAL GAS REVENUES FROM
PRUDHOE BAY EXTRACTION & SALE THROUGH ANGTS

FISCAL YEAR	SEV. TAX	ROYALTY	AD VALOREM	PRODUCTION INCOME TAX	PIPELINE INCOME TAX	TOTAL GAS REVENUE	DISCOUNTED CASHFLOW
1987	164.182	260.975	540.000	33.828	211.500	1210.485	621.170
1988	177.018	281.853	518.400	36.789	203.040	1217.101	1188.957
1989	190.859	304.401	496.800	40.426	194.580	1227.066	1709.353
1990	207.514	328.753	475.200	44.339	186.120	1241.928	2188.170
1991	219.718	355.054	453.600	48.718	177.660	1254.749	2627.952
1992	231.137	383.458	432.000	53.524	169.200	1269.319	3032.396
1993	239.619	414.135	410.400	58.836	160.740	1283.730	3404.246
1994	250.591	447.265	388.800	64.550	152.280	1303.486	3747.495
1995	260.199	483.047	367.200	70.802	143.820	1325.068	4064.706
1996	257.799	521.690	345.600	77.910	135.360	1338.360	4355.972
1997	248.396	563.425	324.000	85.787	126.900	1348.509	4622.767
1998	262.564	608.499	302.400	93.693	118.440	1385.596	4871.979
1999	263.269	657.179	280.800	102.634	109.980	1413.862	5103.157
2000	271.410	709.754	259.200	112.128	101.520	1454.011	5319.286
2001	264.477	766.534	237.600	122.816	93.060	1484.487	5519.086
2002	251.762	827.857	216.000	134.524	84.600	1514.743	5705.966
2003	240.268	894.085	194.400	147.141	76.140	1552.034	5879.294
2004	227.061	965.612	172.800	160.818	67.680	1593.972	6041.123
2005	162.696	834.289	151.200	136.852	59.220	1344.256	6165.193
2006	123.863	720.826	129.600	115.683	50.760	1140.722	6260.906
2007	98.504	620.361	108.000	96.707	42.300	965.871	6334.581
2008	77.824	538.619	86.400	81.268	33.840	817.952	6391.366
2009	60.305	468.204	64.800	67.961	25.380	686.651	6434.586
2010	44.452	398.399	43.200	54.730	16.920	557.702	6466.547
2011	43.442	347.527	21.600	44.815	8.460	465.844	6490.817
2012	42.219	303.838	0.000	36.310	0.000	382.366	6508.927
2013	36.209	260.586	0.000	28.013	0.000	324.908	6522.912
2014	30.416	218.892	0.000	20.015	0.000	269.323	6533.454
2015	32.849	236.403	0.000	23.374	0.000	292.626	6543.867
2016	35.477	255.315	0.000	27.002	0.000	317.794	6554.147

INPUT ASSUMPTIONS FOR THE NORTHWEST ALASKA SEGMENT OF ANGTS

RATE OF INFLATION (PERCENT): 8.0%
 COST OF CONSTRUCTION: 27000
 ECONOMIC LIFE: 25
 PERCENT EQUITY: 25.00%
 DISCOUNT RATE: 10.00%
 CNIR PT RATE OF RETURN: 17.5%
 AD VALOREM: ORIGINAL COST

*Wellhead Price from 'Cost of Service' Model
 for ANGTS, Federal Inspector for ANGTS,
 October 19, 1981*

FISCAL YEAR	VOLUME	PRICE	WELLS	ELF	PROD. EXPENSE	FIELD COST
1987	2.000	0.000	550.000	0.840	500.000	0.200
1988	2.000	0.000	555.000	0.839	530.450	0.216
1989	2.000	0.000	560.000	0.837	546.360	0.233
1990	2.000	0.650	540.000	0.843	562.450	0.252
1991	2.000	2.240	520.000	0.826	579.640	0.272
1992	2.000	3.810	500.000	0.805	597.030	0.294
1993	2.000	5.130	490.000	0.773	614.940	0.317
1994	2.000	5.530	480.000	0.748	633.390	0.343
1995	2.000	5.970	470.000	0.719	652.390	0.370
1996	2.000	6.460	460.000	0.660	671.960	0.400
1997	2.000	6.960	450.000	0.589	692.120	0.432
1998	2.000	7.520	440.000	0.576	712.880	0.466
1999	2.000	8.050	430.000	0.535	734.270	0.504
2000	2.000	8.610	420.000	0.511	756.300	0.544
2001	2.000	9.210	410.000	0.461	778.980	0.587
2002	2.000	9.860	400.000	0.406	802.350	0.634
2003	2.000	10.550	390.000	0.359	826.420	0.685
2004	2.000	11.290	380.000	0.314	851.220	0.740
2005	1.600	12.080	370.000	0.260	850.000	0.799
2006	1.280	12.920	360.000	0.229	850.000	0.863
2007	1.020	13.830	350.000	0.212	850.000	0.932
2008	0.820	14.790	340.000	0.193	850.000	1.007
2009	0.660	15.830	330.000	0.172	850.000	1.087
2010	0.520	16.940	320.000	0.149	850.000	1.174
2011	0.420	18.120	310.000	0.167	850.000	1.268
2012	0.340	19.390	300.000	0.186	850.000	1.370
2013	0.270	20.750	300.000	0.186	850.000	1.479
2014	0.210	22.200	300.000	0.186	850.000	1.598
2015	0.210	23.750	300.000	0.186	850.000	1.725
2016	0.210	25.420	300.000	0.186	850.000	1.863

PROJECTED STATE OF ALASKA NATURAL GAS REVENUES FROM
PRUDHOE BAY EXTRACTION & SALE THROUGH ANGSTS

FISCAL YEAR	SEV. TAX	ROYALTY	AD VALOREM	PRODUCTION INCOME TAX	PIPELINE INCOME TAX	TOTAL GAS REVENUE	DISCOUNTED CASHFLOW
1987	0.000	0.000	540.000	0.000	211.500	751.500	385.638
1988	0.000	0.000	518.400	0.000	203.040	721.440	722.195
1989	0.000	0.000	496.800	0.000	194.580	691.380	1015.408
1990	34.992	36.323	475.200	0.000	186.120	732.635	1297.871
1991	118.222	179.571	453.600	19.588	177.660	948.641	1630.363
1992	195.864	320.847	432.000	43.106	169.200	1161.017	2000.299
1993	253.148	439.152	410.400	63.014	160.740	1326.453	2384.526
1994	264.243	473.335	388.800	68.914	152.280	1347.572	2739.383
1995	274.264	510.983	367.200	75.494	143.820	1371.761	3067.772
1996	272.257	552.993	345.600	83.201	135.360	1389.411	3370.148
1997	261.695	595.700	324.000	91.284	126.900	1399.578	3647.047
1998	276.739	643.648	302.400	99.686	118.440	1440.913	3906.208
1999	275.035	688.606	280.800	108.017	109.980	1462.438	4145.329
2000	280.801	736.029	259.200	116.640	101.520	1494.190	4367.430
2001	271.015	786.809	237.600	126.316	93.060	1514.799	4572.126
2002	255.735	841.833	216.000	136.950	84.600	1535.118	4760.709
2003	241.795	900.164	194.400	148.201	76.140	1560.700	4935.005
2004	226.419	962.687	172.800	160.306	67.680	1589.891	5096.420
2005	160.729	823.498	151.200	134.950	59.220	1329.597	5219.136
2006	121.180	704.121	129.600	112.730	50.760	1118.390	5312.975
2007	95.517	600.232	108.000	93.142	42.300	939.190	5384.615
2008	74.725	515.665	86.400	77.195	33.840	787.825	5439.245
2009	57.384	443.939	64.800	63.646	25.380	655.149	5480.545
2010	41.912	374.041	43.200	50.388	16.920	526.462	5510.716
2011	40.568	322.922	21.600	40.437	8.460	433.987	5533.326
2012	39.064	279.540	0.000	31.994	0.000	350.598	5549.931
2013	33.197	237.391	0.000	23.894	0.000	294.482	5562.611
2014	27.624	197.397	0.000	16.198	0.000	241.219	5572.053
2015	29.553	211.023	0.000	18.867	0.000	259.443	5581.285
2016	31.631	225.701	0.000	21.743	0.000	279.075	5590.313

INPUT ASSUMPTIONS FOR THE NORTHWEST ALASKA SEGMENT OF ANGTS

RATE OF INFLATION (PERCENT): 8.0%
 COST OF CONSTRUCTION: 29700
 ECONOMIC LIFE: 25
 PERCENT EQUITY: 25.00%
 DISCOUNT RATE: 10.00%
 CNTR PT RATE OF RETURN: 17.5%
 AD VALOREM: ORIGINAL COST

40% Cost Overrun Case.
 Rate of Return = 16.00%
 Wellhead Price from Federal Inspector
 Cost of Service Model

FISCAL YEAR	VOLUME	PRICE	WELLS	ELF	PROD. EXPENSE	FIELD COST
1987	2.000	0.000	550.000	0.840	500.000	0.200
1988	2.000	0.000	555.000	0.839	530.450	0.216
1989	2.000	0.000	560.000	0.837	546.360	0.233
1990	2.000	0.000	540.000	0.843	562.450	0.252
1991	2.000	1.030	520.000	0.826	579.640	0.272
1992	2.000	2.430	500.000	0.805	597.030	0.294
1993	2.000	4.060	490.000	0.773	614.940	0.317
1994	2.000	5.530	480.000	0.748	633.390	0.343
1995	2.000	5.970	470.000	0.719	652.390	0.370
1996	2.000	6.460	460.000	0.660	671.960	0.400
1997	2.000	6.960	450.000	0.589	692.120	0.432
1998	2.000	7.520	440.000	0.576	712.880	0.466
1999	2.000	8.050	430.000	0.535	734.270	0.504
2000	2.000	8.610	420.000	0.511	756.300	0.544
2001	2.000	9.210	410.000	0.461	778.980	0.587
2002	2.000	9.860	400.000	0.406	802.350	0.634
2003	2.000	10.550	390.000	0.359	826.420	0.685
2004	2.000	11.290	380.000	0.314	851.220	0.740
2005	1.600	12.080	370.000	0.260	850.000	0.799
2006	1.280	12.920	360.000	0.229	850.000	0.863
2007	1.020	13.830	350.000	0.212	850.000	0.932
2008	0.820	14.790	340.000	0.193	850.000	1.007
2009	0.660	15.830	330.000	0.172	850.000	1.087
2010	0.520	16.940	320.000	0.149	850.000	1.174
2011	0.420	18.120	310.000	0.167	850.000	1.268
2012	0.340	19.390	300.000	0.186	850.000	1.370
2013	0.270	20.750	300.000	0.186	850.000	1.479
2014	0.210	22.200	300.000	0.186	850.000	1.598
2015	0.210	23.750	300.000	0.186	850.000	1.725
2016	0.210	25.420	300.000	0.186	850.000	1.863

PROJECTED STATE OF ALASKA NATURAL GAS REVENUES FROM
PRUDHOE BAY EXTRACTION & SALE THROUGH ANGTS

FISCAL YEAR	SEV. TAX	ROYALTY	AD VALOREM	PRODUCTION INCOME TAX	PIPELINE INCOME TAX	TOTAL GAS REVENUE	DISCOUNTED CASHFLOW
1987	0.000	0.000	594.000	0.000	212.709	806.709	413.969
1988	0.000	0.000	570.240	0.000	204.200	774.440	775.251
1989	0.000	0.000	546.480	0.000	195.692	742.172	1090.004
1990	0.000	0.000	522.720	0.000	187.184	709.904	1363.703
1991	54.361	69.159	498.960	1.260	178.675	802.415	1644.944
1992	124.921	194.922	475.200	22.154	170.167	987.364	1959.549
1993	200.347	341.515	451.440	46.711	161.659	1201.671	2307.630
1994	264.243	473.335	427.680	68.914	153.150	1387.322	2672.956
1995	274.264	510.983	403.920	75.494	144.642	1409.302	3010.331
1996	272.257	552.993	380.160	83.201	136.133	1424.744	3320.397
1997	261.695	595.700	356.400	91.284	127.625	1432.704	3603.850
1998	276.739	643.648	332.640	99.686	119.117	1471.830	3868.572
1999	275.035	688.606	308.880	108.017	110.608	1491.146	4112.386
2000	280.801	736.029	285.120	116.640	102.100	1520.690	4338.427
2001	271.015	786.809	261.360	126.316	93.592	1539.091	4546.405
2002	255.735	841.833	237.600	136.950	85.083	1557.201	4737.701
2003	241.795	900.164	213.840	148.201	76.575	1580.575	4914.217
2004	226.419	962.687	190.080	160.306	68.067	1607.558	5077.425
2005	160.729	823.498	166.320	134.950	59.558	1345.055	5201.568
2006	121.180	704.121	142.560	112.730	51.050	1131.640	5296.519
2007	95.517	600.232	118.800	93.142	42.542	950.232	5369.000
2008	74.725	515.665	95.040	77.195	34.033	796.658	5424.243
2009	57.384	443.939	71.280	63.646	25.525	661.774	5465.961
2010	41.912	374.041	47.520	50.388	17.017	530.878	5496.385
2011	40.568	322.922	23.760	40.437	8.508	436.195	5519.110
2012	39.064	279.540	0.000	31.994	0.000	350.598	5535.716
2013	33.197	237.391	0.000	23.894	0.000	294.482	5548.395
2014	27.624	197.397	0.000	16.198	0.000	241.219	5557.837
2015	29.553	211.023	0.000	18.867	0.000	259.443	5567.069
2016	31.631	225.701	0.000	21.743	0.000	279.075	5576.097

APPENDIX E

STATE OF ALASKA

THE LEGISLATURE

1981

Source

FSS-FCCSSJR 4

Legislative
Resolve No.

1



Proposing amendments to the Constitution of the State of Alaska relating to limiting increases in appropriations.

BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. Article IX, Constitution of the State of Alaska, is amended by adding a new section to read:

SECTION 16. APPROPRIATION LIMIT. Except for appropriations for Alaska permanent fund dividends, appropriations of revenue bond proceeds, appropriations required to pay the principal and interest on general obligation bonds, and appropriations of money received from a non-State source in trust for a specific purpose, including revenues of a public enterprise or public corporation of the State that issues revenue bonds, appropriations from the treasury made for a fiscal year shall not exceed \$2,500,000,000 by more than the cumulative change, derived from federal indices as prescribed by law, in population and inflation since July 1, 1981. Within this limit, at least one-third shall be reserved for capital projects and loan appropriations. The legislature may exceed this limit in bills for appropriations to the Alaska permanent fund and in bills for appropriations for capital projects, whether of bond proceeds or otherwise, if each bill is approved by the governor, or passed by affirmative vote of three-fourths of the membership of the legislature over a veto or item veto, or becomes law without signature, and is also approved by the voters as prescribed by law. Each bill for appropriations for capital projects in excess of the limit shall be confined to capital projects of the same type, and the voters shall, as provided by law, be informed of the cost of operations and maintenance of the capital projects. No other appropriation in excess of this limit may be made

except to meet a state of disaster declared by the governor as prescribed by law. The governor shall cause any unexpended and unappropriated balance to be invested so as to yield competitive market rates to the treasury.

* Sec. 2. Article XV, Constitution of the State of Alaska, is amended by adding new sections to read:

SECTION 26. APPROPRIATIONS FOR RELOCATION OF THE CAPITAL. If a majority of those voting on the question at the general election in 1982 approve the ballot proposition for the total cost to the State of providing for relocation of the capital, no additional voter approval of appropriations for that purpose within the cost approved by the voters is required under the 1982 amendment limiting increases in appropriations (art. IX, sec. 16).

SECTION 27. RECONSIDERATION OF AMENDMENT LIMITING INCREASES IN APPROPRIATIONS. If the 1982 amendment limiting appropriation increases (art. IX, sec. 16) is adopted, the lieutenant governor shall cause the ballot title and proposition for the amendment to be placed on the ballot again at the general election in 1986. If the majority of those voting on the proposition in 1986 rejects the amendment, it shall be repealed.

SECTION 28. APPLICATION OF AMENDMENT. The 1982 amendment limiting appropriation increases (art. IX, sec. 16) applies to appropriations made for fiscal year 1984 and thereafter.

* Sec. 3. The amendments proposed by this resolution shall be placed before the voters of the state at the next general election in conformity with art. XIII, sec. 1, Constitution of the State of Alaska, and the election laws of the state.

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MAJOR ISSUES ASSOCIATED WITH THE ALASKA NATURAL GAS TRANSPORTATION WAIVERS

Prepared at the request of the
House Energy and Commerce Subcommittee on Fossil and Synthetic Fuels

Prepared by

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December 18, 1981

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I. FOREWORD

When oil and gas were first located in 1969 at Prudhoe Bay on the North Slope of Alaska, the euphoria of discovery soon gave way to the sobering reality of the transportation problem that this presented. The first priority was to provide a system for moving the oil to market; this was accomplished through the completion of the Trans Alaska Pipeline System (TAPS) in 1977. The delivery of North Slope gas, yet to be realized, will be even more difficult and considerably more costly.

Several gas delivery systems (Arctic Gas, El Paso, Alcan) were proposed and later rejected, providing an opportunity for the Alaska Natural Gas Transportation System (ANGTS) to become the pipeline proposal selected. Its construction has been uncertain because of its high cost, which is already estimated to be five times that of the TAPS (the current record holder for the most expensive privately financed project in history). The costs for the ANGTS are higher for a variety of reasons including the length of the line, the large number of pump stations, the need for a gas conditioning plant, inflation, the extremely harsh climate, and the difficulty in supplying material and labor for construction. These costs have led the sponsors to request Congressional approval of waivers which would permit the North Slope gas producers to own equity in the pipeline and to finance a proportionate amount of its construction cost, to include in the rate base the cost of building a gas conditioning plant, and to permit pre-billing to consumers for segments that are completed before a certain date if the rest of the ANGTS is not finished by that time. It is generally conceded that financing would not be possible without the waivers, and it is far from certain that it will be forthcoming even with them.

The Congressional Research Service, at the request of the House Energy and Commerce Subcommittee on Fossil and Synthetic Fuels has examined various aspects of the ANGTS proposal and the alternatives to it. The report, originally written as a series of "white papers" and provided to the Subcommittee for use during its hearings on ANGTS, analyzes the pre-billing commencement waiver, the regulatory economics of the ANGTS, the potential consequences of not having a pipeline, the methanol alternative to the ANGTS, and the natural gas resources of Alaska.

This report is prepared for use by the Congress in its consideration of this complex and highly controversial issue. The decisions made by Congress on this matter could well have a major impact on U.S. energy policy for decades. The purpose of this report is to provide information on which those decisions can be based.

David Lindahl, Gary J. Pagliano, and Larry Kumins
Analysts in Energy Policy
Environment and Natural Resources Policy Division
and
Joseph P. Riva
Specialist in Earth Sciences
Science Policy Research Division
Congressional Research Service

II. Executive Summary

THE CONTROVERSIAL PROVISION OF THE WAIVERS PACKAGE: PRE-BILLING COMMENCEMENT

The pre-billing commencement provision of the President's waiver package potentially imposes direct liability on 38 million residential, commercial, and industrial gas consumers, and indirect liability on many more if industrial consumers buying high-priced Alaskan gas pass the extra cost on to customers buying their products. The potential consumer liability of the project depends on four factors: (1) the cost of building the project, (2) the order in which the project segments are completed, (3) the length of time the project remains inoperative, and (4) whether or not the Federal Energy Regulatory Commission (FERC) approves pre-billing commencement.

The final tariff plan of FERC will set a specific date as reasonable time for completing the entire project. If the Canadian segment of the pipeline is finished by that time, the Canadians could be permitted to begin charging U.S. consumers a rate covering their debt, equity and operating costs. The U.S. part of the project will be divided into two segments, the conditioning plant and the pipeline. The rate set by the FERC may allow each of the segments, if completed, to recover debts and operating expenses starting on the fixed date. When the entire system is completed and gas is flowing, the U.S. pipeline consortium will also be allowed to recover equity costs.

The intent is to give the U.S. sponsors an incentive to finish on time while giving their lenders some assurance of payment. The Canadians would be discouraged from moving too rapidly to complete their portion before the fixed date. The FERC could adjust the fixed date for completion if necessary.

The consumer may be called upon to assume financial risk which could run into the billions of dollars if the project is abandoned; but, re-receives little immediate compensation in return. An added consideration might be to either reduce the consumer's risk or increase the consumer's compensation for assuming a greater risk. Reducing consumer risk might include: (1) the gas producers risking more equity than the approximate \$3 billion each has pledged; or (2) the State of Alaska, which could realize \$10.7 billion (1980 dollars) from natural gas sales through royalties and severance taxes, assuming part of the risk. On the other hand, if consumers do take on the burden of increased liability, then their tariff could be reduced (by reducing rate of return on equity) proportionately to compensate them for their increased risk.

THE REGULATORY ECONOMICS OF THE ANGTS

A number of proposals have recently been made regarding the decontrol of gas prices. Even though the Natural Gas Policy Act (NGPA) provides for phased deregulation by 1985, many categories of gas still remain under price controls for the duration of their well's production life. Additionally, some gas is sold under contractual bases which prohibit price escalation, although many gas supply contracts have deregulation clauses in them which would allow the prices of older, flowing gas to rise to market levels if price controls were lifted. This deregulation could remove some of the inherent protection for Alaskan gas and its expensive transport system provided by the NGPA and by the supply of old gas under contracts which could ensure that its price remains well below market clearing levels which would prevail under deregulation.

There is a likelihood that the economic viability of the ANGTS project hinges upon the wellhead pricing issue to a large extent. The capital

cost of the pipeline, including interest accrued during the construction period and amortized like a mortgage, results in an estimated fixed transport cost of \$13.00 per mcf. The wellhead price actually paid for the gas itself, presently controlled under the NGPA, plus operating costs, would be additional. Whether or not the waiver package is passed, however, the project partners will be able to charge ANGTS fixed costs to all of their ratepayers equally. This means that the Alaskan gas can be "rolled in" (averaged) with the lower cost "Lower-48" gas for delivery and pricing; thus, spreading the pipeline costs to all of the partners' gas customers. These consumers would see the price of all purchased gas (whether Alaskan gas or not) rise by about \$1.10 per mcf, assuming the ANGTS costs were allocated equally both among the partners' customers. Those customers who are the direct beneficiaries of the extra gas supply will not pay its real transportation cost. They will pay only a fraction of the costs involved. The rest of the partners' customers will pay a higher price for the bulk of their gas because of the higher ANGTS costs.

Also effecting ANGTS is what might happen to the NGPA in the near future. Not only does the 1978 law control Prudhoe Bay gas at a relatively low wellhead price, but it also controls a great deal of Lower-48 gas which will be flowing into the 1990s. The controlled Lower-48 gas provides a cushion of the ANGTS partners, giving them substantial quantities of low-priced gas with which to blend their higher-cost Alaskan supplies in order to make their product more competitive. A change in the law could cause

this gas to be decontrolled, and its price determined in a way which does not appear to be well understood or much discussed.

One possible outcome of decontrol is that with transport costs already being paid by customers of the several ANGTS partners, and the partners' need to bid for other gas supplies in competition with pipeline companies not burdened with ANGTS project amortization, even the price of Prudhoe Bay gas will be determined in the Lower-48 market place, where most of the bidding for supplies occurs. If this were the case, the ANGTS partners could end up paying the Lower-48 market clearing price (indeed, most of their supplies will still be purchased there) for Alaskan gas as well, in spite of its vastly higher, but disguised, transport cost.

THE POTENTIAL CONSEQUENCES OF NOT HAVING A PIPELINE

There are several facets of the decision on the ANGTS which are likely to affect U.S.-Canadian relations. First, there is the timeframe during which the decision is made. If the U.S. Congress does not approve the current waiver package, the project would probably be abandoned because of financial difficulties. A quick decision (even a positive one), however, could be just as damaging to U.S.-Canadian relations if financing cannot be arranged with the waivers. A longer timeframe could provide opportunities to improve country relations in general and to address the consequences of the ANGTS, whether it is completed or not.

Second, the U.S. Government handling of the ANGTS decision is very important. Even though the project has been touted a private sector project, the U.S. Government has provided official assurances to Canada that the ANGTS waivers would be sought. If the waiver package fails, the Canadian Government would surely question the level of U.S. Government support.

And third, some alternatives to the ANGTS could involve Canadian gas because of its proximity to Alaskan gas resources, and the potential economies of scale of joint transportation facilities. Frequent and explicit communication between the two countries is essential to any future joint venture. The Canadians should appreciate, however, that any action in the United States on the ANGTS has to be viewed with the same understanding that they are demanding of Americans concerning the Canadian National Energy Plan.

THE NET NATIONAL ECONOMIC BENEFIT(NNEB): IS THERE A LOSS?

Analysis of several major factors affecting the potential quantitative economic benefits of the ANGTS shows that most of the factors create large uncertainties concerning the project's economic viability. One of these uncertainties is the choice of an appropriate discount rate. If ten percent is used, the NNEB estimates in all three cited studies fall within the range of \$9-13 billion. A ten percent discount rate would be reasonable for a normal project during most historical capital market situations, but the ANGTS is not a normal project. If a higher discount rate is assumed, based on extremely high rates of return in light of the great risk involved, the NNEB would be lower and might disappear completely. If somewhat lower discount rates are assumed, the result would be more favorable to the ANGTS.

Stable (increasing at a low rate) world oil prices, while good for the United States in general, would be bad for the ANGTS because they would delay the time when the initially expensive Alaskan gas could be competitive with oil. The prospects for finding more gas in Alaska are good, but location and quantity are factors which would influence potential further

utilization of the ANGTS. There is still considerably uncertainty over whether or not those future gas supplies exist in quantities sufficient to warrant development. However, it should be pointed out that some benefits associated with ANGTS are difficult to quantify. The most important is the national security benefit to the United States.

THE METHANOL ALTERNATIVE TO THE ALASKA NATURAL GAS TRANSPORTATION SYSTEM

The prolonged difficulties associated with construction of the Alaska Natural Gas Transportation System (ANGTS), including the need for special legislative treatment by Congress, have prompted a review of alternative delivery systems. One of the potential alternatives is the conversion of the gas to methanol, which could be done incrementally, would have long-term flexibility, would be entirely on U.S. territory, and could cost less than the ANGTS. If the ANGTS line is not financed, methanol is considered by some to be the most practical alternative.

The methanol alternative consists of three major components, production, transportation, and market. The production of methanol on the North Slope would require the construction of approximately 17 barge-mounted methanol plants that would be towed to Prudhoe Bay. Each plant would produce about 3,000 metric tons/d (24,000 b/d) from 100 million cubic feet of gas. With all 17 plants operating, the total daily production would be about 51,000 tons (408,000 b/d). The conversion process would consume about 22 percent of the feedstock in processing, but it would convert to methanol all of the carbon dioxide and natural gas liquids in the gas stream in contrast to the ANGTS, which would remove these gases prior to transportation. The total

resource cost (the total raw material consumed or lost between the time of its production and its end use) for methanol, however, is less than half that of natural gas moved through the ANGTS (16 percent versus 40.4 percent).

The transportation of methanol from the North Slope can be accomplished several ways. The one most often mentioned is to batch the methanol through the Trans-Alaska Pipeline (TAPS). This would utilize spare capacity and, except for additional storage tanks, would require little additional capital outlay. If additional oil were discovered in large quantities, the North Slope producers would probably want to use that capacity for oil. The methanol could be commingled with the crude, but this would require a distillation step to separate the methanol from the crude after shipment. A line dedicated to methanol and sized to its production level could be built parallel to the TAPS line, although this would probably cost about \$5 billion. A fourth possibility is to use an all-marine route with ice-breakers escorting conventional tankers or icebreaking tankers by themselves to Prudhoe Bay. Submarine tankers might also be a possibility, although the costs and reliabilities are uncertain.

The market for methanol has grown in recent years and is likely to increase at an even greater rate in the future. The largest market for fuel-grade methanol is octane boosting for gasoline. Methanol additives of up to 12.6 percent total fuel volume are currently being marketed, and wider use is expected. Methanol has a blending octane value of about 120, costs less than conventional octane boosters, and displaces a like amount of petroleum-based fuel. The major advantages of methanol as a fuel are that its combustion produces very little pollution, it is cost-competitive,

and it can be made from any hydrocarbon. Major disadvantages of North Slope methanol, however, include a limited market distribution system, required modifications in automobiles and power plants consuming methanol, and the prospects of strong competition from methanol using Southwestern coal as a feedstock.

The cost of methanol versus the cost of natural gas through the ANGTS is also an important consideration. After using the model of the Jet Propulsion Laboratory (of the California Institute of Technology) with CRS assumptions, estimates showed that first-year costs (1987 dollars) of converting Alaska gas to methanol and transporting it to Long Beach could be between \$14.24 and \$17.24 per million Btu's (mm/Btu's). The Office of the Federal Inspector has estimated that first-year costs (1987) for the ANGTS would be \$15.15 mm/Btu's.

III. INTRODUCTION *

Thirteen years ago, a huge natural gas deposit (26 trillion cubic feet) was discovered at Prudhoe Bay. Today, there is still doubt about when or if a transportation system will be built to bring the gas to the Lower 48 States. The Alaska Natural Gas Transportation System (ANGTS) project is currently two years behind schedule, and its costs have soared from \$10 billion to about \$44 billion. Even though preliminary construction has started, completion of the project remains uncertain because attempts at financing the project have so far been unsuccessful.

The Nation's need for development of new gas resources is readily apparent. Proven reserves of conventional gas in the Lower 48 States continue to decrease because the United States is consuming more gas than it is discovering. In 1973, the United States consumed 300 percent more gas than it found and in 1979, 40 percent. Consequently, U.S. proven gas reserves, which were 292 trillion cubic feet (tcf) 13 years ago, are today only 195 tcf of which 32 tcf is in Alaska.

There is little doubt, therefore, about the potential demand for Alaskan gas, providing the price is right. Some experts maintain, however, that Alaskan gas will be too expensive to compete with gas produced in the Lower 48, as well as most residual and distillate fuel oil. This will especially be true, they contend, because oil prices will moderate during the 1980s,

* Prepared by Gary Pagliano, Analyst in Energy Policy, Environment and Natural Resources Policy Division, Congressional Research Service.

mainly due to decreasing oil demand. Proponents of the ANGTS concede that Alaskan gas will be expensive in the first years of the project, but they claim that in the later years its price will be significantly lower than the alternatives. Moreover, ANGTS advocates claim that the average price of Alaskan gas during the life of the project would be less than the average price of its energy competitors over the same time period.

The risks associated with the ANGTS are substantial, but so are the potential benefits. Many of the potential benefits of the ANGTS depend on the project's final cost and the future behavior of the world gas and oil markets. Also such domestic factors as future gas deregulation, national security considerations, and any future discoveries of other Alaskan gas resources would influence the magnitude of benefits. Two Federal government-sponsored studies have already shown that the economic benefit to the nation could run into billions of dollars. 1/

The principal risk is in the decision to commit a great deal of money to a project which has a high probability of some cost overruns and some probability (its magnitude is controversial) of large cost-overruns. Specifically, investors may be unwilling to finance a project costing about \$45 billion because any construction delays or other problems associated with a project of this nature could cause project costs to rise by large increments. This could result in project abandonment or, more likely, in a project that could never pay for itself. To complicate matters, the current project sponsors apparently do not have sufficient borrowing capacity to rescue the project if the worst began to happen.

1/ Executive Office of the President. Decision and Report to Congress on the Alaska Natural Gas Transportation System. September 1977.

To strengthen the financial safety net for the project, the sponsors have urged the Alaskan gas producers (Exxon, ARCO, and Sohio) with their large financial assets to participate in the project. Recently, the gas producers and the sponsors agreed on producer participation and a financing plan for the project. The plan contained regulatory conditions which must be ratified by the Federal Government.

These conditions, known as the "waiver package," involve overriding certain Federal regulations that would apply directly to this project. If the rate of return is high enough with the waivers, then financing probably could be obtained. Because the rate of return is generally accepted as adequate, especially when the investment tax credit is also considered, then risk reduction becomes the main problem facing the project. The "waiver package" reduces the project risk. The waiver package, as proposed, consists of the following elements:

- Producer ownership: The gas producers participate in ownership of the Alaska segment provided there is no inconsistency with antitrust laws and no restrictions on access to the pipeline or capacity expansion.

- Conditioning plant: The gas conditioning plant would be included as part of the pipeline for all legal purposes.

- Hearings: Requirements for formal FERC evidentiary hearings are eliminated unless FERC determines that such a hearing is necessary.

- Revisions: FERC would have no authority to change any final tariff rule or order in a way that would impair recovery of operating and debt costs. Nor could FERC change orders to allow purchasers of Alaska gas to recover all cost approved under the tariff.

- Shipper status: The U.S. pipeline consortium and any other shipper of gas to the Alaska segment would be considered a "natural gas company" for purposes of the Natural Gas Act.

-- Import, export: Gas transported to the Alaska segment would be free of export restrictions if delivered to Canada and replaced by Canadian downstream gas. Such Canadian gas would also be free of U.S. import rules.

-- Pre-Billing commencement: FERC's final tariff plan would set a specific date as reasonable time for completing the entire project. If the Canadian segment of the pipeline is finished, the Canadians on that date could start charging U.S. consumers a rate covering their debt, equity and operating costs.

The U.S. part of the project would be divided into the conditioning plant segment and the pipeline segment. The rate set by FERC would allow each segment, if complete, to recover debt and operating expenses starting on the fixed date. When the entire system is completed and gas is flowing, the U.S. pipeline consortium would be allowed to recover equity costs also.

IV. THE CONTROVERSIAL PROVISION OF THE WAIVER PACKAGE:
PRE-BILLING COMMENCEMENT *

A. Introduction

The pre-billing commencement provision of the President's waiver package potentially imposes direct liability on 38 million residential, commercial, and industrial gas consumers and indirect liability on many more if industrial consumers buying high-priced Alaskan gas pass the extra cost on to customers buying their products. How great is the potential consumer liability of the project? The answer depends on four factors: (1) the cost of building to project, (2) the order in which the project segments are completed, (3) the length of time the project remains inoperative, and (4) whether or not the Federal Energy Regulatory Commission (FERC) approves pre-billing commencement.

B. Pre-Billing Commencement

The provision would work in the following manner. The final tariff plan of FERC will set a specific date as reasonable time for completing the entire project. If the Canadian segment of the pipeline is finished by that time, the Canadians would be permitted to begin charging U.S. consumers a rate covering their debt, equity and operating costs. The U.S. part of the project will be divided into two segments, the conditioning plant and the pipeline. The rate set by the FERC may allow each of the segments, if completed, to recover debts and operating expenses starting on the fixed date. When the entire system

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is completed and gas is flowing, the U.S. pipeline consortium will also be allowed to recover equity costs.

The intent is to give the U.S. sponsors an incentive to finish on time while giving their lenders some assurance of payment. The Canadians would be discouraged from moving too rapidly to complete their portion before the fixed date. The FERC could adjust the fixed date for completion if necessary.

C. Impact of Pre-Billing

In order to estimate the potential consumer liability, CRS analyzed data contained in the Office of the Federal Inspector's (OFI), Cost of Service Model (see Table 1). Calculations were made by the OFI in Table 1 to determine the first-year cost-of-service charges for each major segment -- the Alaskan gas conditioning plant, the Alaskan pipeline segment and the Canadian pipeline segment. High and low assumption cases were examined -- Case I (the Alaska plant is completed last) and Case II (the Alaska pipeline is completed last -- it is commonly accepted the Canadian pipeline segment will be completed first).

Table 2. shows a wide range of potential consumer liability. Total annual liability ranges from \$1.7 billion (low assumptions -- Case II) to \$2.9 billion (high assumptions -- Case I). The average monthly charge per customer ranges from \$1.37-\$2.30 for residential, \$8.79-\$14.82 for commercial, and \$387.00-\$610.00 for industrial customers (1980 dollars). The estimates for 1987 would be double the 1980 estimates assuming a 10 percent inflation rate. For example, the average monthly charge to industrial customers would range from \$744-\$1220.

TABLE I

BILLING COMMENCEMENT

	<u>Low</u> <u>Assumptions</u>	<u>High</u> <u>Assumptions</u>
1980 Dollar Estimate	\$ 19.1 B	\$ 22.5 B
Interest Rate	8%	14%
Construction Escalation Rate	7%	11%
General Inflation Rate	5%	11%
ANGTS Costs in millions of 1987 dollars:		
Alaska Plant (min. bill)		
Operations & Maintenance	\$ 92.45	\$ 140.35
Ad Valorem Tax	107.12	148.97
Interest	257.91	652.02
Debt Repayment	165.33	238.84
Subtotal	622.81	1,180.18
1980 Dollars	432.0	539.5
Alaska Pipeline (min. bill)		
Operations & Maintenance	\$ 55.44	\$ 84.08
Ad Valorem Tax	330.91	500.48
Interest	659.67	2,036.41
Debt Repayment	422.86	745.94
Subtotal	1,468.88	3,366.91
1980 Dollars	1,018.7	1,539.5
Canada (Full Cost of Service)		
Canadian dollars	\$2,350.85	\$4,052.95
U.S. Dollars	1,880.2	3,249.7
1980 Dollars	1,304.0	1,389.0
23.5% Share of ANGTS costs (residential sales to total sales)		
Alaska Plant	\$ 101.5	\$ 126.8
Alaska Pipeline	239.4	361.7
Canada	306.4	326.4
80.5% U.S. customers affected by Alaskan gas (in millions)		
	34.9	34.9
Monthly average increase in customer's bill (1980 \$)		
Alaska Plant	\$ 0.24	\$ 0.30
Alaska Pipeline	0.57	0.86
Canada	0.73	0.78

Source: Office of the Federal Inspector.

The impact on the industrial sectors is especially noteworthy because most companies would either pass the increased cost to their customers through products price increases or, more likely in many cases, switch to a cheaper source of energy such as residual oil. If massive switching occurs in the industrial sector, then the average monthly cost to consumer in the residential and commercial sectors could skyrocket because the industrial sector is planned to bear 50 percent of the consumer liability. The length of time two of the three project segments could remain idle and still be paid for by the consumer is difficult to estimate. Much depends on the FERC's decisions setting completion dates for each of the three segments. A project delay of one year, however, is not unreasonable considering the Arctic weather factor, the technical complexities of the conditioning plant and Alaska's pipeline segment, and the past experience of some delays in the Trans Alaska Oil Pipeline System (TAPS).

Thus, the consumer may be called upon to take on a financial risk which could run into the billions of dollars if the project is abandoned and receives little immediate compensation in return. ^{1/} An added consideration might be to either reduce the consumer's risk or increase the consumer's compensation for assuming a greater risk. Reducing consumer risk might include: (1) the gas producers risking more equity than the approximate \$3 billion each has pledged; or (2) the State of Alaska, which could realize \$10.7 billion (1980 dollars) from natural gas sales through royalties and severance taxes,

^{1/} It is unclear when gas from ANGTS will become competitive with gas from the Lower 48 States or other energy competitors such as residual oil; 5-10 years is a reasonable estimate. After gas from ANGTS under prices its competitors, can consumers claim compensation for the extra risk.

TABLE III

POTENTIAL CONSUMER LIABILITY

	Low Assumptions (Million 1980 dollars)	High Assumptions (Million 1980 dollars)
<u>First Year Costs</u>		
Alaska Plant	\$ 432.0	\$ 539.5
Alaska Pipeline	1,018.7	1,539.3
Canada Pipeline	1,304.0	1,389.0
<u>Case I</u>		
	1,018.7	1,539.3
	1,304.0	1,389.0
Total Annual Cost	2,322.7	244.0
Total Monthly Cost	193.6	
<u>Market Distribution*</u>		
	Monthly Total	Monthly Average Per Consumer (1980 dollars)
Residential	63.9	\$ 1.83
Commercial	32.9	11.75
Industrial	96.8	484.00
<u>Case II</u>		
	432.0	539.5
	1,304.0	1,389.0
Total Annual Cost	1,736.0	1,928.5
Total Monthly Cost	144.7	160.7
<u>Market Distribution*</u>		
	Monthly Total	Monthly Average Per Consumer (1980 dollars)
Residential	47.8	1.37
Commercial	24.6	8.79
Industrial	77.4	387.00

*Based on 1979 interstate market distribution contained in AGA's Gas Facts.