

ALASKA LEGISLATURE COMMITTEES 1901-1902 0072

1887 SRES NATURAL GAS TRANS. 3/31/82 (KIDDER PEABODY) 1887

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

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15-FEB-62

GASLINE DEC 1986-LOU 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 END OF YEAR	REVENUE RLO FOR GF BAL 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	287.2	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	1061.8	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 % TO PF	ROYALTIES 50% TO PF
1983	91.2	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.E. CASH BAL	=	0.200
% OF ROYALTIES TO PERMANENT FUND	=	0.250
% OF PERMANENT FUND EARNINGS PAID AS DIVIDENDS	=	0.500
% OF GE 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	=	0.020

STATE OF ALASKA  
LEGISLATIVE FINANCE WORKING DOCUMENT  
BUDGET FORECASTING MODEL

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15-FEB-82

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	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	8160.0	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	17601.5	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	5515.8	0.0
1997	8279.3	10371.5	18650.8	9740.4	4869.9	16.7	1113.6	15740.6	2910.2	22326.0	6115.1	0.0
1998	8463.5	10941.2	19404.7	10919.0	5459.2	14.4	1204.2	17596.8	1807.9	23993.5	6115.8	0.0

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 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	3390.5	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	1619.5	7125.4	2296.6	1148.3	111.8	260.7	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	13825.2	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	17241.5	0.0
1992	3771.9	2937.6	6709.5	2533.4	1266.6	52.5	320.7	4173.4	2536.1	6851.0	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	3847.4	3127.3	6974.7	2755.8	1377.8	8.2	334.1	4475.9	1568.7	6856.7	17683.6	0.0
1996	2548.4	3170.4	5718.8	2834.2	1417.0	7.7	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	455.3	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	1,757.0	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	=	0.10%
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

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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	3184.4	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

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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	TOTAL	SURPLUS	PERM-	GENERAL	REVENUE REQ		
END	REVENUE	INTEREST	REVENUE	BUDGET	DUBGET	SERVICE	DIVIDENDS	BUDGET	OR	FUND	END OF YEAR	FOR GF BAL
									DEFICIT	FUND		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	145.9	4919.0	0.0	5143.3	0.0	0.0
1985	4707.9	823.0	5530.9	2209.0	2988.9	137.9	175.1	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	2133.4	1881.9	52.5	320.7	4788.7	-0.0	6051.0	0.0	0.0
1993	3570.0	979.0	4549.1	2505.5	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	932.3	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	3,074.6	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 O.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	=	0.070
'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	=	0.020

STATE OF ALASKA  
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BUDGET FORECASTING MODEL

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GASLINE DEC 1986-HIGH 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	446.0	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	9513.6	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

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 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	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	326.4	3337.6	4149.0	6852.8	28586.1	0.0
1994	3317.2	4178.4	7495.7	2731.9	328.9	10.6	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	6644.8	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
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	85.0	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	3,429.1	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	25.0	0.0	3,357.0	862.0	708.7	600.5	3,733.4	443.2
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  
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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 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	3037.2	436.2	4273.3	1877.9	1436.3	113.2	152.5	3579.9	693.4	4771.9	0.0	0.0
1984	4680.1	684.9	5365.0	2224.0	2839.9	138.8	162.3	5365.0	-0.0	5606.2	0.0	0.0
1985	5604.9	977.6	6582.4	2694.8	3492.1	163.8	231.8	6582.4	-0.0	6505.0	0.0	0.0
1986	6455.3	1233.0	7688.3	3127.3	4098.5	161.9	300.6	7688.3	0.0	7459.1	0.0	0.0
1987	7834.1	1496.6	9330.6	3417.5	5388.1	157.8	367.2	9330.6	0.0	8513.6	0.0	0.0
1988	7826.8	1710.0	9536.8	3700.5	5257.9	154.8	423.6	9536.8	-0.0	9664.3	0.0	0.0
1989	8474.9	1881.3	10356.2	4120.8	5603.8	146.5	485.0	10356.2	-0.0	10944.2	0.0	0.0
1990	8245.7	2013.0	10258.6	4588.9	4982.9	135.4	551.3	10258.6	0.0	2221.1	0.0	0.0
1991	7976.9	2092.2	10069.1	5110.3	4222.1	14.8	621.7	10069.1	0.0	13474.8	0.0	0.0
1992	8051.9	2161.8	10213.7	5690.8	3713.2	14.1	695.6	10213.7	0.0	14804.0	0.0	0.0
1993	8353.1	2267.7	10620.8	6337.3	3479.2	31.7	772.7	10620.8	0.0	16223.2	0.0	0.0
1994	8559.9	2393.5	10953.4	7057.2	3017.7	25.8	852.7	10953.4	-0.0	17719.4	0.0	0.0
1995	8048.4	2422.0	10520.4	7858.9	1703.6	23.0	935.0	10520.4	0.0	19168.4	0.0	0.0
1996	7850.7	2529.7	10380.3	8751.6	1058.9	21.3	1019.6	10851.6	-471.3	20626.0	0.0	471.3
1997	8315.0	2661.6	10976.6	9745.8	1182.8	16.7	1106.9	12052.2	-1075.6	22205.2	0.0	1075.6
1998	8497.4	2869.9	11367.3	10852.9	1321.1	14.4	1197.2	13385.6	-2018.3	23872.2	0.0	2018.3

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

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GASLINE DEC 1985-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 END OF YEAR	REVENUE REQ FOR GF BAL 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	2939.1	137.9	195.1	5540.3	-0.0	5475.1	0.0	0.0
1986	4981.7	952.1	5933.8	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	67.4	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	378.9	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	2332.0	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 % 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	673.2	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  
 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 OF BAL OF \$0 MIL
1982										4005.3	-693.4	
1983	3837.2	432.2	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	3052.5	6031.2	7863.6	0.0
1988	5086.9	1839.8	6926.7	2440.7	1220.3	100.4	275.3	4036.9	2689.3	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	4460.3	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	1615.1	4.0	328.7	5178.6	-424.1	6553.8	11989.5	0.0

ASSUMPTIONS

	EXISTING DEBT SERVICE	NET 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	84.5	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	3,186.7	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

12

15-FEB-82

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										705.3	-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	7771.1	0.0	0.0
1987	7034.1	1483.2	9317.3	3493.9	5298.3	157.8	367.2	9317.3	0.0	8333.6	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	5803.5	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 \$

12

15-FER-82

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

YEAR	TOTAL		OPERATING	CAPITAL	DEBT	PERMANENT	TOTAL	SURPLUS	PERM-	GENERAL	REVENUE REQ
END	REVENUE	INTEREST	REVENUE	BUDGET	BUDGET	SERVICE	DIVIDENDS	OR	ANENT	FUND	FOR GF BAL
								DEFICIT	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
1984	4293.7	622.8	4916.5	2124.5	2515.8	127.3	148.9	4916.5	0.0	5143.3	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
1986	4984.7	938.7	5923.4	2475.2	3091.1	125.0	232.1	5923.4	-0.0	5759.8	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
1988	5085.9	1104.7	6191.6	2440.7	3375.0	100.6	275.3	6191.6	0.0	6281.1	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
1990	4510.7	1094.3	5605.0	2581.5	2647.9	74.1	301.6	5605.0	-0.0	685.3	0.0
1991	4003.3	1041.0	5044.3	2454.9	2019.8	57.6	312.0	5044.3	0.0	6762.5	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
1993	3528.5	948.2	4476.6	2808.0	1403.9	13.4	326.4	4551.7	-75.1	6852.8	0.0
1994	3317.2	932.3	4256.5	2887.9	1443.9	10.0	330.4	4672.2	-415.7	6866.8	0.0
1995	2861.5	945.0	3806.5	2970.0	1484.9	8.2	332.4	4795.5	-989.0	6815.0	0.0
1996	2560.7	951.6	3512.3	3054.5	1527.2	7.0	332.6	4921.2	-1408.9	6727.8	0.0
1997	2488.2	955.6	3443.8	3141.4	1570.5	5.0	331.2	5048.2	-1604.4	6644.8	0.0
1998	2332.9	957.4	3290.3	3230.7	1615.3	4.0	328.7	5178.6	-1888.3	6553.8	0.0

ASSUMPTIONS

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

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 on 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>\$303,422,000</u>

APPENDIX C

# STATE OF ALASKA

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

JAY S. HAMMOND, GOVERNOR

POUCH Z  
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

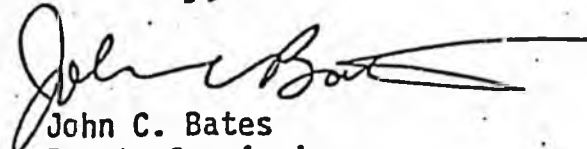
Mr. Bob Williams of your staff contacted my office on January 18, 1982, requesting a brief explanation of the reasons behind the great increases in construction costs as compared to the consumer price index.

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:i1

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 *Choplin*  
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.

Column

4. Severance tax is at 10% \* ELF \* non-royalty production \* price
5. Royalties are equal to production \* (price - field cost) \* .125.  
Field cost assumed to be \$.20/Mcf times 7% annual inflation.
6. Two Ways     A. Property Taxes (2%) calculated on inflated undepreciated base assuming an initial cost of \$27 B. Inflation is assumed to be 7%.  
  
                  B. Property taxes (2%) are calculated on a straight line depreciation remaining life basis.
7. Production expenses are assumed to be \$500 million and inflated by 3% until 2005 when they are assumed level at \$850 million.
8. The production income tax is calculated as .275 \* .094 \* (Gross production value less royalties less severance tax less production expenses) .275 is a factor used to scale production income tax estimates in line with the current corporate income tax law.
9. ANGST-Northwest income tax is calculated on straight line depreciated equity of 25% of the estimated \$27.0 billion construction cost with a rate of return after tax equal to 17.5%. A federal tax rate of 42% and a state tax rate of 9.4% are assumed.
10. \$27.0 billion is assumed to be the center point cost of construction; hence, if the NW ANGTS portion of the gas line costs \$24 B to build the rate of return would be:

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

CLL:il

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%  
 CRTR FT RATE OF RETURN: 17.5%  
 AD VALDREM: ORIGINAL COST

*Price Base = Cost of Construction = 2 points  
 Estimate for Generalport: Rate of Return,  
 Wellhead Price @ FEIC 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	164.162	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	1180.957
1989	190.859	304.401	496.800	40.426	194.580	1227.066	1709.353
1990	207.516	328.753	475.200	44.339	186.120	1241.920	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	5519.886
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	112.696	834.289	151.200	136.852	59.220	1344.256	6165.193
2006	123.863	720.826	129.600	115.683	50.760	1140.732	6260.906
2007	98.504	620.361	108.000	96.707	42.300	965.871	6334.501
2008	77.824	538.619	86.400	81.268	33.840	817.952	6391.309
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	324.808	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%  
 CNTR 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 ANGT'S

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	385.630
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	2304.526
1994	264.243	473.335	308.800	68.914	152.280	1347.572	2739.303
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	5572.052
2015	29.553	211.023	0.000	18.867	0.000	259.443	5581.285
2016	31.631	225.701	0.000	21.742	0.000	279.075	5590.312

INPUT ASSUMPTIONS FOR THE NORTHWEST ALASKA SEGMENT OF ANGT'S

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	413.967
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	167.184	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	1307.322	2672.956
1995	274.264	510.983	403.920	75.474	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	962.607	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

Legislative  
Resolve No.

Source

FSS-FCCSSJR 4

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 \$7,500,000,000 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.

TO: John Katz, Commissioner  
Department of Natural Resources

DATE: February 25, 1981

THRU: Ronald D. Lehr, Director  
Division of Budget & Management  
Office of the Governor

FILE NO:

TELEPHONE NO:

FROM:

RDR  
Ronald D. Ripple, Economist  
Division of Budget & Management  
Office of the Governor

SUBJECT:

Report to Task Force on  
Financial Participation of  
the State in ANGTS

Marketability of Alaska Natural Gas

Purpose and Conclusion

The purpose of this report is to provide input into the interim report of the Governor's Task Force on Alaska Financial Participation in the Alaska Natural Gas Transportation System (ANGTS). In meeting that purpose this report encompasses two related issues. First, it provides a review of the Alaska natural gas marketability study prepared by the Jensen Associates, Inc. of Boston, Massachusetts. And second, using the Jensen study as a base, it lays the groundwork for further study of Alaska natural gas marketability including the effects of natural gas decontrol on marketability and on the wellhead value of Alaska natural gas.

The Jensen report, "The Demand for Alaska Natural Gas," was prepared for the Northwest Alaskan Pipeline Company and is the only study presently available on the subject of Alaska natural gas marketability. The Jensen report concludes that there will be a market for Alaska natural gas throughout the 25-plus year expected life of the project.

The conclusion of this interim report is that the marketability of Alaska natural gas is anything but certain, and likely to be much less certain than suggested by the Jensen report.

Jensen's assumptions

The primary assumptions upon which Jensen bases its conclusions are as follow:

1. The real price of crude oil will increase prior to 1985 natural gas decontrol under the Natural Gas Policy Act of 1978 (NGPA) and throughout the 1980's.
2. The prices of imported natural gas are tied to the price of crude oil while Alaska natural gas prices are not.
3. There will be an increase in natural gas demand which will be greater than the increase natural gas supply.

The one major obstruction to marketing Alaska natural gas in the lower-48 is the cost of transporting it from Prudhoe Bay. Individually, each of the above assumptions could be expected to lead to the conclusion that Alaska natural gas would be marketable. With the real price of crude oil increasing while natural gas wellhead prices are controlled, one would expect substitution of the relatively less expensive natural gas for oil. Furthermore, with the price of imported natural gas tied to crude oil -- the real price of which is assumed to be increasing -- while Alaska natural gas prices are not so tied, it would be expected that Alaska natural gas would become competitive relative to imported natural gas and back the imports out of the market. The assumed additions to natural gas demand which exceed the additions to natural gas supply lead to the result that the market-clearing price will increase sufficiently to allow Alaska natural gas, with its roll-in pricing provision, to be competitive and hence marketable. Taken together, these assumptions appear to provide a very strong case for the marketability of Alaska natural gas. However, the solution to the marketability question is not quite that clear and/or easy.

To begin with, it is not clear that the real price of crude will increase between now and January 1, 1985. Even Jensen, in their summary for the Congressional hearings on the waiver package, adjusted their time frame for constant or declining real prices of crude. In the July 1981 study Jensen assumed that real prices would remain constant or decline through the end of 1982 and thereafter return to an increasing path. For the October 1981 Congressional hearings they conceded that it was more likely that "For the next year or so prices, indeed, are more likely to fall than to rise." Some observers suggest that the real price of crude will decline or remain constant throughout 1982 and 1983 with only modest increases through 1984. Moreover, the relevance of crude oil price changes between now and 1985 is questionable. Jensen notes that "...the markets which concern us are not those of October 1981, but those of 1987 and the years following." This, of course, assumes completion of the ANGTS to begin delivery during the winter of 1986-87. (Even Northwest is "seriously re-evaluating" this completion date.) It is, in fact, the markets of post-1987 that are of importance and the lack of relevance of October 1981 can be equally applied to the markets between now and 1985.

The implied relevance of the increasing real prices of crude oil is that natural gas, which is controlled during this time, will become relatively less costly and will be substituted for oil on the margin. This being the case, the market for natural gas expands prior to January 1, 1985. However, after January 1, 1985 -- assuming decontrol proceeds pursuant to NGPA -- over half of the natural gas will be decontrolled and allowed to attain its market-clearing level. Because a significant portion of the natural gas will still be controlled -- and therefore be priced at less than its market value -- the price of decontrolled gas will rise above its market value such that the average price of delivered gas (both controlled and decontrolled) will approach the free market market-clearing price. Hence, post-January 1, 1985 the market for natural gas will clear. Moreover, the natural gas markets will have been clearing for at least two or three years prior to the first delivery of Alaska natural gas, thus the relevance of the pre-1985 natural gas markets pales significantly.

The question of the ability of Alaska natural gas to back out the imports has both political and market answers. Politically, if the United States Government decided that it was in the nation's best interest to use domestic

energy sources rather than imports, it could restrict imports thus favoring Alaska natural gas regardless of relative prices. However, if left to the market, the ability of Alaska natural gas to back out import natural gas is not as straight forward as the Jensen report implies. The Jensen report provides an example of import natural gas prices being tied to crude oil price. They state, "Canada has announced a gas export pricing policy based on 'value substitution' or price linkage with imported Canadian crude oil." Although this statement gives credence to their argument, the very next sentences reduces the significance of the position. It states, "However, the decline in Canadian gas export demand has ameliorated the implementation of this policy (i.e., a planned October 1980 export gas price increase was delayed until April 1, 1981, and was then posted at \$4.94/mcf -- below the possible crude oil-linked formula price)." Hence, politics aside, import gas pricing is sensitive to market share and the linkage is likely to be disengaged to preserve that share.

The extent of any increase in natural gas supply is quite difficult to estimate. Jensen provides various statistics which indicate that commercial gas finds are falling relative to drilling activity, and they conclude that supply will decline in the long run. Because an increase in drilling activity cannot guarantee an increase in deliverable gas, the fact that decontrolled wellhead prices will stimulate drilling activity does not insure increased gas supply. The major difficulty in determining the supply response to decontrol is the asymmetric treatment of wellhead price escalation under NGPA. It would appear that the NGPA would skew drilling activity toward the "high cost" gas which would likely lead to reductions in the rate-of-find ratios cited. Hence, movement toward a deregulated market may well provide drilling stimulus in areas which have been avoided since 1978 (due to lack of price incentives) thereby providing supplies of gas which seem out of character with recent experience. Thus, it appears that the supply estimates provided by Jensen are conservative -- and perhaps overly so.

Jensen's degree of conservatism in projecting natural gas supply disappears when estimating future natural gas demand. Jensen states that the demand by the residential and commercial sectors will remain relatively constant throughout the period of analysis, and that the driving force to the increased demand for natural gas will come from the industrial and electric utility sectors. The industrial sector consumed 40 percent of the natural gas used during 1980 and therefore is indeed important to the marketability of natural gas. However, the location of that sector is also important. Fifty percent of the gas consuming industrial sector is located in the West South Central (WSC) census region - Texas, Oklahoma, Louisiana, and Arkansas. Alaska natural gas will provide only 1.1 percent of the industrial gas usage of the WSC region. According to the schedule provided to the Congressional hearings on the natural gas waiver package by Northwest Energy, Inc. (dated 10/20/81), only 6.35 percent of Alaska natural gas will be effectively delivered to the WSC region. This implies that only 46.4 billion cubic feet (Bcf) per year of Alaska natural gas would "supplement" the supplies of the WSC region. During 1980, the industrial sector located in WSC consumed approximately 4,000 Bcf.

Furthermore, 62 percent of the natural gas consumed by all electric utilities was consumed by utilities located in the WSC region of the lower-48. These WSC utilities consumed over 2,000 Bcf during 1980, so the quantity of Alaska natural gas going to WSC amounts to only 2 percent of this region's electric utility natural gas consumption.

To summarize, Jensen explicitly states that the increased demand from the industrial sector and the electric utility sector will be the driving force in natural gas demand expansion which will enhance the marketability of Alaska natural gas. Fifty percent of the industrial gas users and 62 percent of the electric utility gas users are located in the WSC region of the U.S. where only 6.35 percent of the Alaskan natural gas will be shipped. The industrial and utility users of the WSC combine to consume over 30 percent of all lower-48 gas consumption (as of 1980) and Alaska will provide only three-fourths of one percent of that consumption. Hence, the significance of marginal adjustments in these two consuming sectors is limited as to the impact on the marketability of Alaska natural gas.

Moreover, this increasing demand scenario for the industrial and utilities sectors requires the existence and maintenance of an excessive differential between the price of natural gas and the price of residual fuel oil. The lack of likelihood and significance of such a pricing scenario were discussed above.

### Conclusion

Therefore, while the Jensen report provides a basic framework for continued study, significant issues need to be addressed more fully before the marketability of Alaska natural gas can be assured with the conviction found in the Jensen report.

### Issues for continued study

One issue of considerable significance is the structure of prices to be decontrolled relative to those which continue to be regulated in the markets which Alaska natural gas will be marketed. This is of importance when evaluating the effectiveness of the roll-in provision for Alaska natural gas pricing.

Another issue of importance is that of the method of natural gas price decontrol that will, in fact, exist. The Jensen study assumed the existing NGPA would run its course and decontrol (with some continued regulation) in 1985 would dictate the market structure to be faced. There are alternative decontrol schemes afoot and the probability of the implementation of any one of these is uncertain. These range from immediate, complete decontrol to extended NGPA-type controls into the mid-1990's. The markets for natural gas will likely differ considerably under each scheme. Hence, attention must be paid to the changes in the regulatory mood of the U.S. Congress.

# MEMORANDUM

# State of Alaska

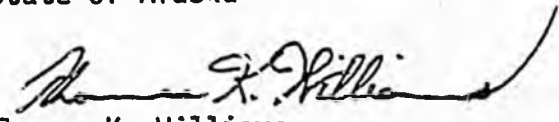
Department of Revenue

TO: The Honorable Jay S. Hammond  
Governor  
State of Alaska

DATE: March 26, 1982

FILE NO:

TELEPHONE NO:

FROM:   
Thomas K. Williams  
Commissioner  
Department of Revenue

SUBJECT: March Revenue  
Forecasts

The March 1982 revenue forecast is now complete after an exhaustive study as has been possible of the fast moving events recently occurring in the arena of oil.

The drop in FY 1982 total unrestricted revenues net of permanent fund from our January forecast of \$4.3358 billion to our March forecast of \$4.0444 billion amounts to \$291.4 million.

The drop in FY 1983 total unrestricted revenues net of permanent fund from our January forecast of \$4.1337 billion to \$2.7477 billion amounts to \$1.3860 billion. The drop for FY 82 and FY 83 combined amounts to \$1.6774 billion. I should note at this juncture that the mean petroleum revenue projections were used for these two years, which is consistent with past forecasts.

The drop in FY 1984 total unrestricted revenues net of permanent fund from our January forecast of \$5.0053 billion to \$2.9906 billion amounts to \$2.0147 billion. The latter represents the 30% cumulative frequency distribution case for FY 1984; that is, of the 500 computer-generated forecasts for FY 1984, only 30% were at or below this level. Seven times out of 10 the outcome was the same or greater. This is more consistent with the budgetary expectation that the predicted revenues will in fact be realized.

I have attached a detailed break down of all revenues which will appear in the soon-to-be-released March 1982 Revenue Source Book. The primary reasons for the precipitous drop in revenues center on events forcing oil prices downward.

The reasons are several-fold, including a continuing severe recession (not just in the United States, but worldwide as well), a current over-supply in world markets, and a continued effort on the part of the populace to practice conservation measures.

I anticipate the current lower prices to prevail for the intermediate term with gradual price increases thereafter -- barring, of course, any major disruptions in the world supply of oil due to natural or contrived conditions. The high prices of the past have spurred, however, substitution processes in many forms including the development of new energy sources, the retooling of industry to develop relatively energy efficient products, and the utilization of fuels other than oil. Hence, any future price increases will be dampened accordingly.

The Honorable Jay S. Hammond

March 26, 1982

Page 2

The changes in the non-petroleum picture have resulted in downward revisions as well. The investment earnings forecast for FY 83 has dropped from \$315 to \$200 million (see attached) due to the fact that the general fund balance will be less than previously calculated.

The non-petroleum corporate taxes in FY 83 have been revised downward slightly from \$35 million to \$32 million due to adoption of the more liberal provisions provided for in the Federal Economic Recovery Tax Act of 1981. The canned salmon tax has also been revised downward due to the current problems associated with that industry.

The forecast is indeed startling and reveals the unfortunate vulnerability of our State which is so dependent on a volatile source of income.

## GENERAL FUND UNRESTRICTED REVENUES

(IN MILLIONS OF CURRENT DOLLARS)

	1981 ACTUAL	1982 ESTIMATE	1983 ESTIMATE	1984 ESTIMATE
<b>TAXES</b>				
<b>INCOME</b>				
CORPORATE-GENERAL	34.8	29.0	32.0	37.0
CORPORATE-PETROLEUM	860.1	684.0	258.0	307.0
FIDUCIARY	0.0	0.0	0.0	0.0
INDIVIDUAL	0.0	0.0	0.0	0.0
<b>GROSS RECEIPTS</b>				
ALASKA BUSINESS LICENSE	5.4	5.5	5.5	5.5
FISH-CANNED	5.9	5.0	5.0	5.0
FISH-SHOREBASED	11.0	11.2	11.0	11.0
FISH-FLOATING	3.8	4.0	4.0	4.0
SALMON ENHANCEMENT	0.0	2.4	2.4	2.4
INSURANCE COMPANIES	10.6	11.3	11.5	11.5
OTHER	1.2	1.3	1.4	1.4
<b>SEVERANCE</b>				
GRAVEL, TIMBER, ETC.	2.7	2.5	2.5	2.5
OIL AND GAS PRODUCTION PROPERTY	1170.2	1579.3	1120.8	1200.0
OIL AND GAS	143.0	143.7	148.6	153.2
VEHICLE REGISTRATION	0.2	0.0	0.0	0.0
SALE/USE				
ALCOHOLIC BEVERAGES	8.3	8.5	9.0	9.0
FUEL TAXES-AVIATION	4.1	4.3	4.5	4.7
FUEL TAXES-HIGHWAY	15.6	19.0	19.5	20.0
FUEL TAXES-MARINE	3.5	3.6	3.8	4.0
TOBACCO PRODUCTS	1.7	1.8	1.9	1.9
<b>STATE</b>				
SCHOOL	0.5	0.5	0.5	0.5
	6.0	0.0	0.0	0.0
<b>TOTAL TAXES</b>	<b>2282.6</b>	<b>2516.9</b>	<b>1641.9</b>	<b>1780.6</b>
<b>LICENSES &amp; PERMITS</b>				
<b>BUSINESS</b>	<b>9.1</b>	<b>9.9</b>	<b>11.0</b>	<b>12.1</b>
NON-BUSINESS				
MOTOR VEHICLE TITLES/REGISTRATIONS	11.6	12.0	12.5	13.0
OTHER NON-BUSINESS	0.6	0.5	0.5	0.5
<b>TOTAL LICENSES &amp; PERMITS</b>	<b>21.3</b>	<b>22.4</b>	<b>24.0</b>	<b>25.6</b>
<b>INTERGOVERNMENTAL RECEIPTS</b>				
FEDERAL SHARED REVENUES				
MINERAL RENTS & ROYALTIES	1.2	13.2	4.0	4.0
OTHER FEDERAL SHARED REVENUES	7.2	5.8	5.9	6.0
<b>TOTAL INTERGOVERNMENTAL RECEIPTS</b>	<b>8.4</b>	<b>19.0</b>	<b>9.9</b>	<b>10.0</b>
<b>STATE RESOURCE REVENUE</b>				
<b>SALE/USE</b>				
BONUS SALES	7.6	1.5	0.0	0.0
INVESTMENT EARNINGS	227.8	290.0	200.0	225.0
RENTS	5.4	5.5	5.5	5.5
ROYALTIES	1118.5	1137.7	811.2	885.0

SALE OF STATE PROPERTY	4.8	5.5	5.5	5.5
FACILITIES RELATED CHARGES				
AIRPORTS	1.1	1.2	1.2	1.2
FERRY SYSTEM-SOUTHEAST	21.0	23.9	26.3	28.9
FERRY SYSTEM-SOUTHWEST	3.4	3.5	3.8	4.1
OTHER FACILITIES RELATED CHARGES	3.7	4.0	4.5	4.7
SERVICE RELATED CHARGES				
COURT SYSTEM	2.9	3.1	3.3	3.5
OTHER SERVICE RELATED CHARGES	4.1	4.5	4.7	5.0
TOTAL STATE RESOURCES REVENUES	<u>1400.2</u>	<u>1480.4</u>	<u>1066.0</u>	<u>1168.4</u>
MISCELLANEOUS REVENUE				
TOTAL MISCELLANEOUS REVENUE	5.5	5.7	5.9	6.0
TOTAL UNRESTRICTED REVENUES	<u>3718.0</u>	<u>4044.4</u>	<u>2747.7</u>	<u>2990.6</u>

# STATE OF ALASKA

## DEPARTMENT OF REVENUE

OFFICE OF THE COMMISSIONER

JAY S. HAMMOND, GOVERNOR

POUCH 5  
JUNEAU, ALASKA 99811  
PHONE: (907) 465-2300

CHANGE IN PROJECTED GENERAL FUND REVENUES  
BETWEEN THE JANUARY 1982 FORECAST  
AND THE MARCH 1982 FORECAST  
(\$ millions)

	<u>FY 82</u>	<u>FY 83</u>	<u>TOTAL</u>
January 1982 Forecast	4335.8	4133.7	8469.5
March 1982 Revised Forecast	<u>4044.4</u>	<u>2747.7</u>	<u>6792.1</u>
CHANGE IN FORECAST	-291.4	-1386.0	-1677.4

The Department of Revenue's newest forecast of unrestricted General Fund revenues for Fiscal Years 1982 and 1983 is sharply lower from the last forecast, which was made in December 1981 and issued early this past January. As the accompanying table shows, these revenues are now projected to be down by \$291,400,000 in FY 82 and \$1,386,000,000 in FY 83 -- a total reduction in expected income for this fiscal biennium of \$1,677,400,000.

The reasons for this dramatic downward shift in revenue expectations are the State's inordinate dependence on petroleum revenues, the surprising slide in world oil prices occurring over the last two and a half months, and the present expectation that oil prices are likely to remain at or below their current depressed levels for some time before they could reverse direction and start moving back toward official OPEC price levels. The recent decision by OPEC to curtail its collective oil production was an unprecedented attempt by those nations to restore supply and demand -- a move which surprised a number of informed observers of the oil scene who were skeptical that the cartel could reach agreement on the subject, given the widely differing economic circumstances of the various OPEC members. The Department's earlier projections included the possibility of OPEC's taking this or similar action to counteract any market pressure to lower oil prices. After all, the whole purpose of forming a cartel is to overcome the normal economic forces that bring supply and demand into balance at the market price; cartels seek to impose a higher price and make it stick.

However, despite the fact that the OPEC action went in the only direction offering any real promise of returning prices to higher levels,

the extent of the overall production cutback seems to be too small to achieve that result. Further production cutbacks will probably have to be agreed upon by OPEC in order to accelerate a return to higher oil prices, or else it is likely that those OPEC members most strapped for revenue will start to break ranks from the cartel's official policy and start selling their oil production at discounted prices again in order to elevate their revenues through the sale of more oil. Although there was some brave talk by a few of the OPEC ministers at Vienna about their willingness to endure even further production cutbacks in order to restore a supply/demand balance artificially, it does not appear likely that the cartel has the collective ability to do so to any significant degree except for very short periods of time. In addition, it appears possible that additional production from non-OPEC sources might also become available, which would offset the OPEC cutback and thereby delay or prevent worldwide supply from balancing with the present level of worldwide demand.

Besides these gloomier considerations on the supply side of the world oil market, prospects for any significant increases in demand have become less likely since we prepared the last forecast in December. The recession in the United States is deeper and appears to be longer lasting than many had then expected. The prospects of recovery seem at this time to depend considerably on the ability of the federal government to reduce the enormous budget deficits that are projected. The sharp decline in world oil prices has depressed domestic oil prices, not only for production in Alaska but elsewhere in the nation as well. One consequence of this is a steep reduction in the amount of windfall profit tax that will

be collected. This makes it even more difficult to straighten out the federal budget problem and makes it more likely that the U.S. Treasury will be obliged to continue its extremely heavy schedule of borrowing from the money market, thereby keeping interest rates at their extraordinarily high levels. High interest rates, of course, weaken the ability of the U.S. economy to begin the economic upsurge which the Reagan Administration's fiscal and monetary policies are intended to stimulate. Thus, economic recovery will be slow at best for at least a number of months, and this implies that U.S. oil consumption will continue to be relatively low. With the largest single market for crude oil continuing in the doldrums this way, there seems little likelihood that demand elsewhere will pick up to the point so that the present worldwide crude oil surplus will evaporate any time soon.

Thus, considerations on both the supply side and demand side of the economic equation for oil prices strongly suggest that the possibilities for upward oil price movement are very much less likely than they appeared in December. The reduction in the State's revenues reflects the elimination of these "upside" possibilities. In addition, we now foresee greater probabilities of the downward price cascade continuing or halting only temporarily, which means we have increased the likelihood assigned to the "downside" revenue possibilities.

Technical Note. The figures presented in the revised revenue forecast for Fiscal Years 1982 and 1983 represent the mean, or average, outcome of the 500 different forecasts generated by the computer model. This is consistent with the prior practice of the Department. However, beginning with this revenue forecast, the projections for FY 84 and be-

yond are based on the 30th percentile of outcomes; that is, of the 500 different computer-generated projections, only 30 percent of them were at or below the 30th percentile. Seven times out of ten the projection came out at or above this "30% figure." In taking this step the Department is recognizing the great reliance placed in the budgetary process on its revenue forecasts and the expectation that the predicted amount of revenues will in fact be realized.

As a matter of information, the "30% figures" for FY 82 and FY 83 are \$3,942,400,000 and \$2,515,700,000, respectively. If these were used for the forecast instead of the average outcomes, the combined revenue projection for both fiscal years would be down another \$334.0 million from the revenue forecast issued last January.

# STATE OF ALASKA

## DEPARTMENT OF REVENUE

OFFICE OF THE COMMISSIONER

JAY S. HAMMOND, GOVERNOR

POUCH 5  
JUNEAU, ALASKA 99811  
PHONE: (907) 465-2300

February 10, 1982

Mr. Kenneth F. Seplow  
Mr. Roger Pyle  
Mr. Joseph M. Schell  
Vice Presidents  
Kidder, Peabody & Co.  
10 Hanover Square  
New York, NY 10005

Re: Gasline Financing Options - Overview of Financing Mechanisms  
Available to the State of Alaska

Gentlemen:

You have requested an overview of the various financing mechanisms available to the State of Alaska which might be considered by yourselves in responding to the financial plan presented by Northwest Alaskan Pipeline Company or in developing a proposal for the State for an appropriate means of participating in the financing of the ANGTS, assuming it is determined that state investment is both prudent and necessary for the successful completion of the pipeline project. The mechanisms which I will discuss will be familiar to you I am sure and, therefore, I will not belabor the general concepts and I will only emphasize those constitutional and statutory considerations which might be peculiar to the Alaska context. I have also tried to compile the specific legal opinions and financial opinions of state counselors and advisors who have participated in various aspects of this general problem in the past. I will not attempt, at this time, to discuss the relative merits of the State's participation in the financing of the gas pipeline as an equity owner, as a lender, or as both, since it is my understanding that that review is initially part of your charge.

#### A. Issuance of General Obligation Bonds:

The first general limitation on the power to contract debt is contained in Art. IX, § 6 of the state constitution which prohibits the use of the "public credit . . . except for a public purpose." The Alaska Supreme Court has construed the public purpose requirement very broadly and stated that it would defer to legislative findings in this regard unless they are found to be clearly arbitrary. See DeArmond v. Alaska State Development Corp., 376 P.2d 717 (Alaska 1962). Thus, any project which generally advances the social and economic interests of the State will be found to satisfy this provision.

Article IX, § 8 of the Alaska Constitution sets out the exclusive method by which the full faith and credit of the State of Alaska may be pledged to guarantee obligations of the State. It provides in part:

No state debt shall be contracted unless authorized by law for capital improvements and ratified by a majority of the qualified voters of the State who vote on the question . . . . (Emphasis added.)

In 1979 Representatives Gardiner and Miles of the Alaska State Legislature requested an opinion from their legal services division concerning the constitutionality of issuing general obligation bonds for the purpose of purchasing a \$500 million equity interest in the Alaska gasline project. The response by Mr. Berrier dated March 1, 1979, concluded that, although the public purpose requirement of the Alaska Constitution would be satisfied, the purchase of an equity interest in a pipeline company would probably not qualify as a "capital improvement" on the basis of existing case law. (Attachment 1) He observed that the term "capital improvement" was no doubt intended to be given a liberal construction by the framers of the constitution and the leading cases he was relying on - City of Juneau v. Hixson, 373 P.2d 743 (Alaska 1962) and Wright v. City of Palmer, 462 P.2d. 326 (Alaska 1970) - in fact interpreted the parallel term for issuance of local debt in Art. IX, § 9 of the Alaska Constitution, not the language of § 8. Mr. Berrier, admitting that the question was by no means clear, stated that, in his opinion, purchase of equity related securities was not the type of asset the court meant by terms like "permanent asset in the form of real or personal property" and "tangible asset in proof of the indebtedness."

In order to finally resolve the question the Commissioner of Revenue requested an opinion of Wohlforth & Flint, bond counsel for the State Bond Committee, on the same subject. In an opinion dated July 9, 1979, Eric Wohlforth essentially confirmed the opinions of Mr. Berrier on both issues - the issuance of general obligation indebtedness for purchase of an equity interest in the gas pipeline would satisfy the public purpose test but that such an interest would not constitute a capital improvement required by Art. IX, § 8 of the Alaska Constitution. (Attachment 2) The opinion stated:

Only the retention by the issuer of some interest in the capital improvement, however, is required; full public ownership of the capital improvement with the right of conveyance is not . . . . [T]he court implicitly recognizes that as long as the disposition of "capital improvements" acquired through general obligation indebtedness accompanied by a security arrangement protective of the issuer's indebtedness, the constitutional restriction is satisfied . . . . [T]he court in Hixson may be said to have endorsed the view . . . that municipal acquisition of a capital improvement clearly comprehends that acquisition of

secured rights in a capital improvement without, necessarily, ownership and title.

. . . . .

The proposed investment of state general obligation bond proceeds in the pipeline easily meets the foregoing "physical" enumerated requisites of the "capital improvements" restriction. The incurring of such debt would be "for capital improvements" because the ultimate result would be the financing of a pipeline. Pipelines come within the constitutional definition of "capital improvements" because they constitute depreciable property of relatively permanent value. However, the state must acquire sufficient legal interest in the capital improvement to overcome the constitutional deficiencies set forth in Hixson. An investment by the state of bond proceeds in "equity related securities" does not meet this test. The financing must be accompanied by some form of interest in the pipeline. Clearly, the interest would have to be equivalent in value to the amount of bond proceeds devoted to its acquisition. (Bond Counsel Opinion, pages 11, 14-15).

A review of the relevant constitutional provisions and the above legal opinions relating to the referenced proposal for gasline financing then would suggest the following general conclusions:

First, the issuance of general obligation bonds to purchase equity related securities in a pipeline company is unconstitutional.

Second, the issuance of general obligation bonds to raise money to loan to the Project Sponsors, e.g. to purchase corporate bonds or to create a reserve fund to serve as a guarantee or to merely pledge the State's full faith and credit up to a stated amount for purposes of guaranteeing an agreed upon portion of the project financing would likewise violate Art. IX, § 8 of the Alaska Constitution since it would not be for a capital improvement. This is important given my perception of the rather casual references made by the representatives of the Northwest Alaska Pipeline Co. and by their financial advisors to the ability of the State to participate by providing several billion dollars of debt financing or guarantees. No such ready access to the State's credit exists. In addition, AS 37.10.085 specifically prohibits the State from lending its credit for the use of a corporation or from borrowing money for the use of a corporation.

Third, the issuance of general obligation bonds to acquire a direct interest in the pipeline or some related portion of the project, e.g. the conditioning plant, would be constitutional. Bond counsel has suggested that there may be forms of direct interest in the pipeline short of

ownership which may be constitutionally permissible "capital improvements." That interest would have to be specifically defined through negotiations with Northwest Alaska Pipeline Company, the producers, and other interested parties, incorporated into a firm financial plan and might possibly require approval from FERC before such a general obligation bond issue could be authorized by law. Mr. Wohlforth's opinion makes it clear that lack of a consummated transaction or a firm financial agreement in existence at the time of the voter approval would be another cause for constitutional concern. He stated:

This lack of commitment on the part of a second party to grant some type of interest in the property conveyed to it by the issuers and financed with general obligation bond proceeds further contributed to the constitutional defectiveness of the planned transaction in Hixson [i.e., to offer land to the state for capital site construction]. (Bond Counsel Opinion, page 10)

Assuming a viable plan for utilizing this power is proffered or developed, there are, of course, several other practical and political considerations which should be briefly mentioned in this context, in addition to these constitutional parameters on the state's bonding authority:

1. The general obligation bond approach would involve the following steps: (a) a bill authorizing the issuance of, for example, \$1 billion dollars in bonds would have to be enacted which, in turn, assumes the finalization of the financial plan of the Project Sponsors, definition of the interest to be acquired by the State, or decisions relating to the portions of the project to be owned by the State and to be constructed based on reasonable cost estimates; (b) it would have to be approved by the voters where it might find itself in competition with other priority proposals; (c) the proposal would have to be scrutinized by Bond Counsel and by the Financial Advisor to the State Bond Committee, presently John Nuveen & Co., prior to the actual issuance of the bonds. Recently, John Nuveen & Co. has advised the State Bond Committee that the maximum amount of bonds which could be sold annually over the next few years should not exceed \$400 million, \$200 million at a time, in order to safeguard the current credit ratings of the State (AA for Moodys and AA- for Standard and Poors). Thus, assuming this advice continues, raising the billion dollars for the project would take a minimum of two and a half years after the next general election and would absorb most of the total state access to the credit markets for a three-year period.

2. Governor Hammond in his Budget Address and several key legislators in both houses of the State Legislature have expressed serious reservations about the advisability of utilizing the turbulent national credit markets during periods of substantial state surpluses and instead they have indicated a preference for a pay-as-you-go approach. The Administration has decided not to propose any GO funded projects which

would otherwise have to be approved at the next general election this November.

3. Interest Rate Limits: AS 37.15.030 requires that each issue or series of bonds shall bear interest at an effective rate over the life of the bonds not to exceed 10 percent a year. Given the last two years' experience in the bond markets, the interest limitation remains a significant inhibitor on the ability of the State to go to market, no matter what the amount of the bonds actually authorized by law and by the voters. Thus, any serious effort to utilize the General Obligation bond approach would have to contemplate amendments to this provision which would guarantee the ability of the state to sell the bonds authorized for this project.

B. Exercise of the Appropriation Power:

For purposes of this discussion of potential methods of state involvement in pipeline financing, the appropriation power is perhaps the single most important because it is the most flexible. Art. IX, § 13, of the Alaska Constitution provides that all public monies must be spent in accordance with appropriation made by law. This legislative power is limited primarily by the "public purpose" requirement of Art. IX, § 6. As I mentioned previously in connection with general obligation bonds, this requirement has been liberally construed by the courts and great deference is given to legislative findings concerning what constitutes a public purpose. Although it is obviously dependent on the specific facts of the actual financial transaction involved, monies appropriated for purposes of facilitating the financing and construction of a pipeline and the marketing of a major state resource would in almost all cases satisfy this requirement. Monies properly appropriated could be used to loan to the Project Sponsors, to purchase an equity interest in the pipeline, or to build on behalf of the State any specific portion of the pipeline facility. These monies could also be set aside in a reserve fund to act as a guarantee mechanism should that option be found to be a desirable investment strategy for the state.

There are, however, other limitations on this appropriation power of which you should be aware in conducting your analysis and in preparing your recommendations.

1. Prohibition against Dedicated Funds: Art. IX, § 7 of the Alaska Constitution provides in pertinent part:

The proceeds of any state tax or license shall not be dedicated to any special purpose, except as provided in Section 15 of this article or when required by the federal government for state participation in federal programs.

The first question that arises upon reading this provision is whether royalty revenues can be dedicated. Although I am not aware of any Alaska Supreme Court decision on the subject, the Alaska Attorney General's Office did rule in an opinion dated May 2, 1975, that the prohibition on dedications could be given the effect intended by the framers of the constitution only if the words "proceeds of any tax or license" are interpreted to include the sources of any public revenues. The opinion concludes that the constitutional provision was concerned with problems relating to earmarking funds - not with the source of the funds. All monies from state royalties, lease bonuses, land rentals and sales and other resource related revenues are considered subject to this constitutional restriction.

Thus, future tax and royalty revenues cannot be appropriated, pledged or otherwise committed by this Legislature in order to assist in financing the gasline.

2. Exceptions to the Prohibition against the Dedication of Funds:

In 1977, the Alaska Permanent Fund was established by amendment to the State Constitution. Art. IX, § 15, provides:

Section 15. Alaska Permanent Fund. At least twenty-five per cent of all mineral lease rentals, royalties, royalty sale proceeds, federal mineral revenue sharing payments and bonuses received by the State shall be placed in a permanent fund, the principal of which shall be used only for those income-producing investments specifically designated by law as eligible for permanent fund investments. All income from the permanent fund shall be deposited in the general fund unless otherwise provided by law [Effective February 21, 1977].

Monies dedicated to the Permanent Fund are then beyond the appropriation power of the State Legislature. The contribution rate was increased to 50 percent in 1980 to apply to lease sales occurring after the Beaufort Sea sale and to production from future leases (including Beaufort Sea). Cook Inlet and Prudhoe Bay royalties remain subject to the 25 percent contribution rate. See AS 37.13.010(a). For instance, the current estimate of the royalty contribution to the Permanent Fund for FY 83 is \$441.7 million. The January 1982 issue of Revenue Sources: FY 81-84 includes only unrestricted royalties i.e., the net balance after permanent fund deductions or \$1,325.2 billion for FY 83. The Petroleum Production Revenue Forecast: December 1981 reports gross royalty revenues. Thus, you should be aware of this critical distinction which is made in those materials which I previously provided to you. In any event, it is clear that the dedication of substantial revenues to the Permanent Fund operates, as it was expressly intended to, to limit the monies available to any given legislature for expenditure.

The Permanent Fund provision, itself an exception to the dedication of revenues prohibition, also provides for an exception in the case of income generated by the fund. The total income of the fund available for disbursement, as defined by AS 37.13.140, is as follows:

FY 77	27,019
FY 78	900,434
FY 79	5,702,926
FY 80	23,675,560
FY 81	68,390,000
FY 82 Estimate	137,000,000
FY 83 Estimate	205,000,000
FY 84 Estimate	264,000,000

Presently 50 percent of the income from the permanent fund is dedicated to the dividend fund established by AS 43.23.050 to pay for the permanent fund dividend program.

Dedications of 50 percent of permanent fund earnings might be considered in your analysis although short term the funds available are de minimis in relation to the several billion dollar gap in the financial plan outlined by the Project Sponsors. In addition, suggested dedications would conflict with the policy recommendation of the Board of Trustees of the Permanent Fund Corporation which proposes that 50 percent of earnings be returned to the Permanent Fund to help protect the fund principal from erosion due to inflation.

3. Spending Limits: Last year the Alaska State Legislature was called into Special Session after it adjourned a general session without acting on the Governor's spending limit proposal. The outcome of the Special Session was a proposed amendment to the Constitution which would further limit the appropriation power of the Legislature. (Attachment 3 - Legislative Resolve No. 1, FSSLA 1981.) The proposed spending limit would take effect in FY 84 technically but the Governor has formulated his FY 83 budget in accordance with its provisions and he has vowed to enforce the principles of the limit with his veto power. The limit on general appropriations for operating and capital budgets was set at \$2.5 billion adjusted by inflation and population changes from a base year of July 1, 1981. One third of this amount must be reserved for capital projects and loans. Appropriations in excess of the limit must be approved by the voters on a project-by-project basis. Certain types of appropriations e.g. for debt service on general obligation bonds and for permanent fund dividends are expressly exempted from this limit. It should be added that concerns over government growth and spending limits are serious political issues this year and that the approval of this limit or a substantially similar one is very likely.

For the FY 82, FY 83 and FY 84 fiscal years, using the spending limit formula, the Governor's budget and the January 1982 Revenue Forecast the following figures apply:



excess of the limitation. For FY 84 that would mean an additional \$660 million would be unavailable for any appropriation. In addition, all projects which fail to obtain voter approval would automatically become contributions to the Permanent Fund.

Another constitutional amendment proposed by the Governor this year is an amendment to the Permanent Fund section, Art. IX, § 15, to include 25 percent of severance tax revenues as part of the mandatory contribution to the Permanent Fund. See SJR 58. This would severely impact revenues available for appropriations. For instance, in FY 84 the unrestricted revenue total of \$5,005.3 million would be reduced by \$553.4 as a result of such a measure. Whether or not these latter provisions are ultimately submitted to the people as proposed constitutional amendments, suffice it to say that Governor Hammond and this Legislature have other important priorities which while not in conflict with the idea of participating in pipeline financing compete directly with those monies immediately available for appropriation -- especially in the absence of the existence of a concrete and viable financing proposal from the Project Sponsors against which other projects and goals could be evaluated.

4. Multiple Year Appropriations: The appropriation of monies due to be received in years subsequent to the year for which the legislature is preparing a budget is apparently permissible under the state constitution. However, those appropriations are subject to repeal and revision by subsequent legislative enactments. Thus, an attempt to provide financing on the basis of, for instance, a bill appropriating several hundred million dollars for FY 83-84 revenues would be subject to repeal by the next legislature should it determine it did not wish to spend available revenues in that manner. If this were not the case, the dedication prohibition would be too easily circumvented.

AS 37.25.020 states that an appropriation for a capital project is valid for the life of the project and the unexpended balance may be carried forward to subsequent years. This provision is, of course, valid only in cases where the appropriation is of actual, current revenues which may be set aside for the project rather than future or speculative revenues subject to the appropriation powers of future legislatures.

One of the more creative efforts at encouraging subsequent year appropriations is contained in Ch. 118 SLA 1981 establishing the Power Project Development Fund, AS 44.83. AS 44.83.490(b)(2) provides that, if by July 1, 1986, the legislature has not appropriated at least \$5,000,000,000 to the fund, the statewide wholesale power rate applicable to all power projects that the State has acquired or constructed under the Energy Program for Alaska would be converted from state grants to a 10 percent equity return recoupable through an increased rate base calculation. The proponents of this bill were attempting to insure the successful funding of the Susitna Dam project presently estimated at

\$5.2 billion and designed to deliver cheap power to the railbelt. By providing grants for smaller power projects statewide benefitting several communities, the Act attempted to create a constituency to support the construction of the Susitna Dam project. Obviously, to the extent the provisions of Ch. 118, SLA 1981 represent a political compromise of various interests and the consensus political position, the demand on monies available for appropriation for the foreseeable future would foreclose any realistic possibility of significant sums being available for pipeline financing. However, future legislatures could reach different conclusions and decide to repeal the condition subsequent contained in AS 44.83.490(b)(2).

C. Investment Powers of the State:

1. State Funds: The Department of Revenue is currently responsible for managing three major funds: the General Fund, the Teacher's Retirement System and the Public Employee's Retirement System. The General Fund is the primary account for all surplus state funds where they are held to meet day to day operating expenses of state government and to pay out expenditures related to capital projects. The General Fund balance as of November 30, 1981, was \$1.8 billion. The list of permissible investments is set forth in AS 37.10.070. (Attachment 4.) Subsection (a)(4) permits investment in corporate debt securities with a minimum rating of "BAA" or the equivalent by a nationally recognized rating organization and the preferred and common stocks of companies which have paid dividends continuously for the last three years. Subsection (a)(5) allows investment in commercial paper bearing the highest rating of a nationally recognized rating organization. Even assuming the Project Sponsors were to obtain ratings which would qualify as debt securities or commercial paper for investment by the state, it is extremely doubtful that the General Fund would be in a position to contribute significantly to the gas pipeline financing effort. Given the general mandate to manage the fund in accordance with generally accepted standards of institutional investors (AS 37.10.070(b)), given the need to keep the general fund highly liquid to meet day-to-day costs of operating state government, and given the current mandate to deposit excess general fund revenues up to \$1.8 billion dollars into the permanent fund (with a minimum of \$1.4 billion having to be deposited by the end of this fiscal year), the current administration would not have any significant funds available for such investment in the near future. See Ch. 61 SLA 1981. In addition, neither this administration nor future ones would be likely to want to make any substantial long-term commitments of state funds involving a major state policy decision of this type solely through the exercise of the state investment power without review and approval by the legislature and without an express appropriation or authorization for that purpose.

The Public Employee's Retirement System (PERS) (net balance as of November 30, 1981 - \$567.6 million) and the Teachers Retirement System

(TRS) (net balance as of November 30, 1980 - \$415.7 million) are managed by the Department in a fiduciary capacity on behalf of employees and retired pensioners with vested interests in the respective pension funds. The list of permitted investments are set forth at AS 39.35.110 for PERS and at AS 14.25.180 for TRS and they both include corporate debt securities with a minimum rating of "A" and commercial paper bearing the highest interest rating of a nationally recognized rating firm. Both funds may not be invested more than 50 percent in corporate debt securities or corporate stocks at any given time. Even assuming Project Sponsors were able to issue debt with the requisite national ratings, prudent fund management practices and various express statutory provisions which dictate diversification when combined with the limited size of the funds themselves would not allow them to be invested significantly in a gas pipeline financing. Also, sound political practice would also dictate not utilizing the funds for such a purpose no matter how arguably attractive such an investment might be considered by fund managers since a state policy decision to invest in a gasline should be implemented directly with state funds not indirectly through trust fund holdings.

2. Permanent Fund: The Alaska Permanent Fund is managed by a six member Board of Trustees consisting of three commissioners and three public members all appointed by the Governor and confirmed by the Legislature. This Board provides general policy direction and has delegated day to day fund management activities to the Treasury Division of the Department of Revenue. The Board is requesting in the FY 83 budget funding for an Executive Director and a permanent staff to help it realize the goal of an independent Permanent Fund Corporation totally free of responsibility to a given Commissioner and a particular Administration and solely accountable to the Board. See AS 37.13.040 and .100 in Attachment 5. The Board is directed to be guided by the prudent man rule as it applies to institutional investors and to follow a policy of reasonable diversification. The approved investment list includes corporate debt securities which are rated AA or better by a nationally recognized rating service.

Currently, the balance of the permanent fund is approximately \$3 billion dollars and the estimated balance as of July 1, 1982, is \$3.75 billion. Obviously, it is a potential source of capital theoretically available for support of the gasline financing project. However, under current statutes and diversification policies, it is doubtful that the Board of Trustees could be expected to find a major contribution to the gasline debt financing to be prudent. Thus, although the Permanent Fund has been suggested by the Project Sponsors as a funding source, several practical and political problems have to be considered.

The investment philosophy presently reflected in AS 37.13 is the result of one of the most bitterly contested political issues resolved during the Hammond Administration. It reflects a conservative fiduciary

concept designed to promote conservation of the trust corpus by permitting the fund to be invested in high quality securities by an independent Board insulated in part from changing political philosophies evidenced by a new Administration and new Legislatures. The present charter reflects a deliberate rejection of arguments made to utilize these monies to fund state loan programs and vast capital projects, e.g. hydroelectric dams, and other major developmental projects. The request to utilize the Permanent Fund for gasline financing might be perceived by those many Legislators on both sides of the issue as an invitation to reopen the debate. Thus, any investment plan presented to the Board which would require legislative enactment would be looked upon with great concern by all interested in fund management issues. Indeed, even if a bill were passed specifically authorizing the investment, it is doubtful that the Governor or the Legislature would impose the decision on the Board. The three public members could block the investment should they consider it imprudent/or other investments more prudent.

Thus, on Permanent Fund issues the Project Sponsors are dealing with three entities - the Governor, the State Legislature and the Board of Trustees - managers of an independent fund. It should be noted that the Governor at the request of the Board has sponsored SB 684 which would make many technical changes to the Permanent Fund statutes. (Attachment 6) Therefore, should the decision be made to recommend changes in the statute for purposes of facilitating financing of the gas pipeline a legislative vehicle does exist. Furthermore, it is recommended that any change be as narrow as possible, i.e., specifically aimed at permitting participating at an expressly authorized level in a certain type of financing, e.g. \$500 million of corporate bonds. By stating an authorized level of participation, it would relieve Board members of concerns about liability for violating the prudent man rule and other statutory policies relating to diversification.

#### D. Revenue Bonds: Tax Exempt Financing

The use of industrial development bonds (IDB's) to provide financing for the pipeline or for portions thereof, or for related facilities, e.g., the conditioning plant, has been the subject of much discussion for several years. Section 103(b)(4) of the Internal Revenue Code provides a definition of certain "exempt activities" which can be financed through the issuance of revenue bonds in any amount. Those most likely to be relevant here are subsections E and F which read:

....

(E) Sewage or solid waste disposal facilities or facilities for the local furnishing of electric energy or gas,

(F) air or water pollution control facilities.

....

For purposes of subparagraph (E), the local furnishing of electric energy from a facility shall include furnishing solely within the area consisting of a city and one contiguous county.

The Internal Revenue Service has interpreted "local furnishing of gas" to involve the same basic restrictions. IRC Reg. § 1.103(f)(2).

Thus, this section prohibits financing multistate/multinational pipeline facilities by issuing IDB's. It does authorize the use of IDB's to fund air and water pollution control facilities. To my knowledge, the Project Sponsors have never approached the state with a proposal for financing specific pollution control facilities which might be required as part of the overall pipeline system. Certain other small issue exemptions exist under § 103(b) of the IRC (less than \$1,000,000 and other types less than \$10,000,000) but these are not relevant when one considers the massive amount of financing assistance the Project Sponsors require.

1. Alaska Gas Pipeline Financing Authority, AS 44.82.

It is my understanding that the representatives of the Project Sponsors approached Administration and Legislative leaders in 1978 and requested that the state create a financing authority in anticipation of an amendment to § 103(b) of the IRC which the Project Sponsors would seek in Congress. In response to that request and as a sign of good faith the Alaska State Legislature founded the Alaska Gas Pipeline Financing Authority, AS 44.82, which was a public corporation with a legal existence separate and apart from the State. (Attachment 7) The Commissioner of Revenue, who is the chairman, the Commissioner of Commerce and Economic Development and the Commissioner of Natural Resources constitute the authority. The Authority was authorized to issue up to \$1 billion of tax exempt revenue bonds. It was required to submit a detailed financial and Alaska impact plan during the Eleventh State Legislature (1979-1980) which had to be approved by concurrent resolution. The Authority ultimately introduced two Financial and Alaska Impact Plans for 1979 and for 1980. (Attachments 8 and 9) These submissions were more on the order of status reports which indicated why various delays in FERC proceedings and other uncertainties made it impossible to present a detailed plan. I am unaware of any evidence of a significant lobbying effort ever launched by the Project Sponsors to secure the necessary amendments to the IRC which would have rendered the Authority a viable entity.

In the meantime, the Administration continued work on issues relating to the existence and effectiveness of the Authority. Since some earlier commentary on the Authority suggested the existence of technical drafting problems, the firm of Preston, Thorgrimson, et al., was retained to review the Authority's legislation and to recommend appropriate statutory changes. See Legal Opinion of Preston, Thorgrimson, Ellis, Holman and

Fletcher to Commissioner Williams dated September 21, 1979 (Attachment 10). This advice was ultimately acted upon in 1981. At that time, HR 197 was introduced at the Governor's request in an attempt both to cure the defects and to revive the moribund authority whose existence had been tied to the Eleventh Legislature. (Attachment 11)

In addition to the substantial legal reviews of the Authority's charter, the Department of Revenue secured two financial opinions on the impact of \$1,000,000,000 revenue bond issue on the State's general credit rating - one from John Nuveen and Co. dated September 24, 1979, and one from Dillon, Read and Co., dated September 19, 1979. (Attachments 12 and 13) Both concluded generally that a pure revenue bond financing in that amount would not affect the State's general credit rating. Nuveen and Co. added that there would be no impact provided that the revenue bonds were adequately secured by a combination of pipeline revenues and the financial resources of the other participants. The State's credit rating would be involved if any of the following security features are employed: 1) full faith and credit guarantee; 2) guarantee by the Permanent Fund; 3) a make up provision to restore deficiencies in reserve accounting; or 4) an obligation to issue or purchase completion bonds.

## 2. Alaska Industrial Development Authority (AIDA), AS 44.88

AIDA was created as a vehicle to facilitate the importation of capital for business loans by the issuance of industrial development bonds allowed under § 103 (b) of the Internal Revenue Code. Although its charter was substantially broadened in 1981 by Ch. 115, SLA 1981 that basic mission remains unchanged. (See Attachment 14) AIDA is authorized to issue tax exempt bonds concerning any of the exempt types of projects currently permitted by the Code, e.g., for air and water pollution control facilities. Assuming § 103 of the IRC was amended to allow financing of interstate pipelines, it is unclear whether AIDA's present definition of "project" is broad enough to encompass an interstate gas pipeline. AS 44.88.220(5)(a) uses the term of art "local furnishing of gas" from § 103(b). To the extent that the same term in the IRC is amended to expand its meaning, it might be construed to be incorporated by reference into AIDA's definition of "project". If AIDA were to be considered as the vehicle for issuance of revenue bonds for pipeline financing, bond counsel would probably recommend statutory amendments to expressly authorize the project and to expressly repeal the Alaska Gas Pipeline Financing Authority which, although technically defunct at this time, exists as evidence of a legislative intent to utilize a separate financing vehicle, not AIDA, for any participation in financing the gasline.

## E. General Stock Ownership Corporations (GSOC)

The Revenue Act of 1978 added Subchapter U to the Internal Revenue Code of 1954, 26 U.S.C. § 1391 through § 1397. This legislation provided

for the creation of a general stock ownership corporation (GSOC) and it authorizes special tax treatment for those corporations which qualify. The federal legislation requires that all GSOC's be chartered by an act of the state legislature or by a referendum and further requires that each state charter provide as follows:

1. That the charter provide for the issuance of only one class of stock;
2. That the charter provide for the issuance of shares only to eligible individuals; "eligible individuals" are further defined as those who are residents of the State as of the date specified in the State's enabling legislation and who continue to be residents of the State as of the date of the issuance of the shares;
3. That the charter provide for the issuance of at least one share of stock for each eligible individual;
4. That the charter provide that no share of stock shall be transferred by the shareholder other than by will or by intestate succession, until after five years from the date of issuance; that no share of stock be transferred to any individual other than a resident; and that no share of stock be transferred to any individual who would as a result of the transaction acquire more than ten shares of the GSOC.

In addition, the GSOC may not acquire more than 20 percent of the shares of any other existing corporation; the GSOC may not acquire property through the right of eminent domain; the GSOC's charter must mandate that it qualify as a GSOC under the Internal Revenue Code; and finally, the GSOC must be chartered and organized between December 31, 1978 and before January 1, 1984.

The GSOC is treated as a private corporation and not as a governmental unit for purposes of the Internal Revenue Code, except that a qualifying GSOC is not subject to federal corporate income taxes. Instead, GSOC's "taxable income" which is calculated in accordance with the Internal Revenue Code (with minor exceptions not relevant here) would be attributed directly to the shareholders in proportion to the number of shares held and would be taxed as individual income to those shareholders. This dividend income does not qualify for the exclusion from gross income associated with the first \$100.00 of dividend income. See 26 U.S.C. § 116.

The GSOC is required to distribute at least 90 percent of its "taxable income" for any tax year. 26 U.S.C. § 1396(a). The failure of an electing GSOC to make the required 90 percent distribution would

subject it to a penalty of twenty percent of the excess amount required to be distributed over that amount actually distributed.

The federal scheme is intended to give the GSOC a significant competitive advantage since the corporation can operate free of corporate income taxes at the federal level. This advantage is incorporated by reference into the State corporate income tax by AS 43.20.021. On the other hand, the ten percent maximum on retained earnings would inhibit a corporation's expansion into major new investment areas on the basis of these earnings alone.

The GSOC was the idea of Louis Kelso, originator of employee stock ownership plans (ESOP) and Senator Mike Gravel of Alaska, who was the primary sponsor of the Subchapter U amendments to the Code. Together, these two became proponents before the 1979 and 1980 Sessions of the Alaska State Legislature of an Alaska GSOC (or AGSOC) which they further proposed would be able to buy BP-Sohio's share of TAPS on a 100 percent debt financing basis. They admitted the possible need for access to state funds for start up financing, for guarantees, or for equity contributions. Although AGSOC certainly had significant supporters in the Alaska Legislature, problems relating to the internal organization of an AGSOC and the concept of an AGSOC significantly invested in the oil and gas industry and thus, in direct conflict with various state tax, resource development and environmental policies gave rise to serious reservations about the advisability of chartering such a corporation. See Attachment 15 for an overview of legal and constitutional problems.

Nonetheless, there was sufficient public support for the idea that Senator Gravel successfully got the issue on the November 1980 ballot by a successful initiative drive. See Attachment 16. The AGSOC, however, was rejected by Alaska voters that year.

On the financing issues related to AGSOC, one problem with the vigorous lobbying effort of Senator Gravel and Louis Kelso was that they failed to convince most observers that the State would not have to be a significant participant as lender or guarantor in the AGSOC's initial investment. Even for those who were willing to see the State play an affirmative role in financing a major project, e.g., a pipeline investment, Senator Gravel, other than allusions to seeking voter approval and pledging the state credit as a guarantee to allow debt financing, never developed a viable proposal for utilizing state credit other than by cash appropriations out of current revenues for loans or for reserve funds to guarantee private sector loans.

The impact of the establishment of a state funded loan guarantee fund on the State's credit rating was analyzed for the State Bond Committee by John Nuveen Co., Inc. in their letter of October 1, 1979. See Attachment 17.

F. Transfer or Encumbrance of Interest in North Slope Royalty Gas.

The State of Alaska presently has an uncommitted one-eighth royalty interest in an estimated 26 trillion cubic feet of North Slope gas which arises at the time the gas is produced. That future interest might be creatively incorporated into a state gasoline financing proposal. AS 38.05.183 authorizes "the sale, exchange or other disposal in whole or in part of a right to receive future mineral production under a state lease." Such a disposition must be by competitive bidding unless the Commissioner of Natural Resources makes a determination that bidding is not in the best interests of the State or that no effective competition exists. Subsection (e) outlines the factors which the Commissioner must consider in making an award other than by competitive bidding. These include the cash value offered, the projected effects of the disposal on the economy and the expected benefits of refining or processing the gas in state. Although this section clearly is oriented toward the outright sale of the interest as evidenced by the continued reference to the "prospective buyer," the term "sale, exchange or other disposal" would seem to be broad enough to encompass a pledge or encumbrance of that interest in future production. For instance, that interest in whole or in part could arguably be committed by contract to guarantee cost overruns or to serve as security for some other aspect of the financing. Obviously, the value of that security--dependent as it is upon completion of the project and upon marketability of the gas once the gasoline is completed--is a separate issue. AS 38.05 and AS 38.06 also provide authority for the State to waive rights to receive future production of royalty gas which would seem to include within it the right to defer payment of the royalty in value. An agreement providing for deferral of payments to the State would lower the front end costs of the gas and might help assure the marketability of the gas delivered to the Lower Forty Eight, since the declining tariff would over time lower the cost of the gas to all consumers. This deferral, assuming it was compensated by a reasonable interest rate, could arguably be consistent with the State's revenue needs since the revenues would be more critically needed in the 1990's than in the early years of proposed gas production.

Any proposed disposition would be subject to review by the Alaska Royalty Oil and Gas Development Advisory Board which is comprised of the Commissioner of Commerce and Economic Development, the Commissioner of Revenue, the Commissioner of Natural Resources (a nonvoting member) and three public members. The review procedures and the criteria which must be evaluated are outlined in AS 38.06 (Attachment 18) which ultimately result in a recommendation to the Legislature as to the advisability of the transaction. The Legislature must approve by enactment of a bill any sale, exchange or disposition of the rights (or waiver of the rights) to receive royalty oil or gas.

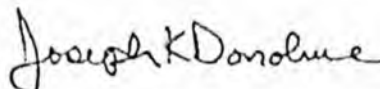
G. Moral Obligation

Given the magnitude of the financing assistance requested by the Project Sponsors, the complexity of the financial and policy issues involved, the fact that the Project Sponsors have not, as yet, finalized their financial plan documenting the commitment of their partners and the producers, and the fact that we are already in the middle of the second month of this session, it seems very unlikely that there is time to consider bold new legislative schemes requiring adoption this session. The Governor and Alaska State Legislature might, in establishing the capital project priorities, determine that the State commit some substantial investment to the gasoline project. However, there will simply not be enough available cash out of the FY 83 budget year for an investment the size contemplated and desired by the Project Sponsors. Assuming for instance, only one hundred million were found to be allocable to this project, one option might be the passage of a concurrent resolution. This would merely advise the next legislature that investment of, for example, one billion dollars should be considered a priority for the State and that, assuming an adequate financing plan is developed (meeting whatever conditions the legislature might wish to impose), those future legislatures should appropriate the balance out of current available surpluses, if any.

The concurrent resolution, while not binding on anyone, and therefore, not technically a financing device, might serve to define the existing political consensus of the type and extent of the investment commitment the State should seriously attempt to meet. This would, in turn, help meet the criticism of the Project Sponsors that the State has never clearly expressed to them the type and extent of the financial commitment it would consider fiscally prudent and desirable. It would help moot out the "chicken and egg" situation we find ourselves in where we demand that the Project Sponsors present us with a financial plan that we can respond to and they argue that they need to know what we would consider before they can develop a financial plan.

General Caveat: To the extent that some of the conclusions suggested in this overview constitute gratuitous legal opinions not supported by references to Bond Counsel opinions or Attorney General opinions, please feel free to challenge them. We can and should seek clarifying opinions on any questions pertaining to any of the alternatives discussed which you feel are worth pursuing in your study. Please do not hesitate to give me a call if you have any questions concerning these issues.

Sincerely,



Joseph K. Donohue  
Deputy Commissioner, Taxation

JKD:jas

Enclosures

## List of Attachments

- Attachment 1 Berrier to Gardiner/Miles, dated March 1, 1979
- Attachment 2 Wohlforth & Flint to Williams, dated July 9, 1979
- Attachment 3 Proposed amendments to Alaska Constitution in re Appropriation Limit (on November 1982 Ballot)
- Attachment 4 General Fund Investment List
- Attachment 5 Permanent Fund statutes
- Attachment 6 Amendments Proposed by Governor and Board of Trustees to Permanent Fund Statutes
- Attachment 7 Alaska Gas Pipeline Financing Authority AS 44.82
- Attachment 8 1979 Financial Impact Plan
- Attachment 9 1980 Financial Impact Plan
- Attachment 10 Legal Opinion of Preston, Thorgrimson dated September 21, 1979
- Attachment 11 Governor's bill and transmittal letter: HB 197
- Attachment 12 Financial Opinion Letter from John Nuveen & Co., Inc., to Williams, dated September 24, 1979
- Attachment 13 Financial Opinion Letter of Dillon, Read & Co. to Williams, dated September 19, 1979
- Attachment 14 Alaska Industrial Development Authority AS 44.88
- Attachment 15 Legal Opinion Memorandum of Donohue to Ulmer, dated March 20, 1979
- Attachment 16 GSOC initiative and bill
- Attachment 17 Financial Opinion Letter of John Nuveen & Co., Inc. to State Bond Committee, dated October 1, 1979
- Attachment 18 Section 39.05.183 (Sale of Royalty) and Chapter 06 (Alaska Royalty Oil and Gas Development Advisory Board)

# MEMORANDUM

State of Alaska

TO: John W. Katz  
Commissioner  
Department of Natural Resources

DATE: March 26, 1982

FILE NO:

TELEPHONE NO:

FROM: Charles E. Behlke  
State Pipeline Coordinator  
Office of the Pipeline Coordinator

SUBJECT: Assessment of Potentials  
for Construction Cost  
Overruns for NWA Project

As you requested, the Office of the Pipeline Coordinator has assessed potential for construction cost overruns for the Northwest Alaska gas pipeline project. However, construction management is the key determinant of whether the project comes in under or over projected costs. A worst case estimate is that the project will suffer a 20% cost overrun if logistics and construction management were badly handled, a possibility we estimate at 33% probability. On the other hand, outstanding construction management could result in the project's costs being as much as 10% below the cost estimate. In addition, there is approximately a 23% probability of cost overruns due to project delay caused by the failure of a sea lift to make the sea ice "window" during at least one year of the construction period. Environmental and technical concerns present little reason for delay of completion and cost overruns for the project. The following presents a more detailed discussion of the potential construction cost overruns.

## Environmental

The environmental stipulations attached to the Federal Right-of-Way Grant, and which will be little different for the State Right-of-Way Lease, should prevent any major environmental disaster which could contribute to cost overruns. This is probably the area of least uncertainty with regard to costs because the Trans-Alaska Pipeline System (TAPS) project provided a significant background of field experience, both during and after construction, which State and federal officials utilized generously in developing the Right-of-Way Grant/Lease Environmental Stipulations. The environmental constraints have been properly allowed for in the Certification Cost Estimates (CCE) by Northwest Alaskan.

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### Geotechnical

A buried, chilled gas pipeline has not previously been constructed and operated under geotechnical conditions similar to those to be encountered by Northwest Alaska Pipeline Company's (NWA) proposed pipeline. NWA, principally through the vehicle of the Design and Engineering Board (contributing members consist of the pipeline partnership, Sohio, Exxon and ARCO), has designed and implemented at considerable expense, an extensive, continuing series of comprehensive field test programs, at several locations, in Alaska, in an attempt to better understand problems, principally frost heave, associated with the proposed buried, chilled pipeline. Because the oversight of pipeline integrity for this project is everywhere a federal responsibility, the State has not participated extensively in the government reviews, etc., of the design and implementation of these pipe related field programs. However, engineers from the State have participated in various other civil and environmental design reviews with NWA engineers and with associated Sohio, Exxon, and ARCO arctic engineering specialists. That experience leads us to be confident that the totality of engineering talents available and being utilized for the design of the pipeline is competent to address the problem, the probability is high that the engineering talents which are being brought to bear on this project will develop an acceptable design. It, presently, appears that the sponsors' engineering staff is progressing at a proper pace toward adequate, timely solutions to each of the technical problems associated with the long-term integrity of the proposed pipeline.

Long-term, technical solutions may require greater operations and maintenance costs than presently anticipated, but the initial construction costs should not be significantly higher than those presently anticipated.

### Construction Management

Construction management is the area which holds the most uncertainty. Construction management and logistics of the Trans-Alaska Pipeline System (TAPS) project were performed by the TAPS, so the company had the immediate ability to

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coordinate these aspects of the entire project. (Though there may be some disagreement regarding how well TAPS performed this coordination, it did take timely, effective action at critical times.) Gasline and conditioning plant construction will be performed by seven major, independent contractors. These contractors will be working under fixed unit cost contracts and each will be ordering equipment and supplies, shipping these items to the job sites, and constructing their respective segments of the pipeline independently of, but simultaneously with the other contractors. Consequently, the potential exists for major logistic problems which would create shortages of key manpower, equipment, materials, and supplies for the independent contractors, thus hindering their abilities to produce the end products on time and within budget.

Fortunately, in the preparation of its CCE, NWA utilized a panel of experienced contractors to advise it on costs associated with pipeline construction utilizing the proposed NWA independent contractor management plan. Presumably, the contractors and NWA made certain that the CCE was sufficient to make the plan work. Though we are not informed of contractor work plans, the logistic framework, or the oversight and coordinating activities of the project management contractor (FLUOR), our lack of knowledge of these certainly does not assure cost overruns. Indeed, outstanding construction management could bring the project in approximately perhaps 10% under the CCE. If overall construction management, on the other hand, is not well performed, the project may, as a worst case, go as much as 20% over the CCE. We estimate that the probability of such a cost overrun is approximately 35%.

#### Conditioning Plant

The timing of construction of the Prudhoe Bay gas conditioning plan very significantly influences the timely completion of the project. Fortunately, a single contractor will be responsible for construction of the plant, and that contractor's logistics will be largely separate from those of the other pipeline contractors, but it will not be separate from other, significant Prudhoe Bay development.

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The single, most apparent, uncertainty of timely completion of the gas conditioning plant is the uncertainty of the Arctic Ocean sea ice "window" which, when open, allows once-a-year sea transportation to Prudhoe Bay in late summer. The project sponsors do not appear to have built into their financial plans the possibility of the sea ice "window's" not opening for any one of the three annual sea lifts which are required for completion of the project. Since the first sea lift to Prudhoe Bay in 1969, the "window" has refused to open properly once. From the record of the past 13 summers, this office must conclude that there is a 1/13 possibility of having a sea ice "window" failure on any given year and approximately a 3/13 probability of sea ice problems in at least one year of a three consecutive year time span. (Not all observers would agree with this probability of non-cooperation by the sea ice. However, that is this office's best estimate). As a worst case, if any sea ice year of the three required for construction is missed, it would be impossible to make up for the loss without adding an additional construction year. Thus, as a result of possible sea ice problems, the completion of the project could be delayed during construction by one year. The probability of such an event, we feel, is 3/13, or about 23%.

#### Alyeska and Other Third Parties

Stipulations have been attached to the Federal Right-of-Way Grant and will be attached to the State Right-of-Way Lease which afford the Alyeska Pipeline Service Company crude oil pipeline a high degree of protection from damages due to NWA activities. The Yukon River Bridge would be the single most critical problem spot. This is recognized and the State, NWA, and Alyeska are working to minimize the risk to the bridge and pipeline on the bridge (the decision to construct the pipeline on the bridge is still to be made, but NWA wishes it to be located on the bridge).

The NWA pipeline will impact the State highways system, especially wherever the pipeline parallels highways. The State and NWA are negotiating on measures to minimize highway damage, but, certainly damages will occur. (Costs to repair damages are being sought by the State from NWA, but those negotiations are yet in the early stages).

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### Summary

Environmental and technical concerns present minimal expectations for delay of completion and cost overruns of the project.

The significant problems of managing seven independent major contractors to obtain cost effective, simultaneous completion of their respective segments of the project is cause for concern. The sponsors may not have the TAPS freedom to move resources into lagging segments of the project. Thus the slowest of the contractors will determine the completion data of the project.

Whatever additional costs could be expected to arise from efficient use of actual work resources has largely been factored into the certification cost estimates by the sponsors.

Because of the present uncertainties of how the logistics and construction will actually be carried out, a worst case cost overrun of 20% could occur if the logistics and construction management were to be badly handled (probability of 33%). Certainly, we do not have information which leads us to believe that such a cost overrun is inevitable, we only see it as a possibility because of present construction management uncertainties. On the other hand, outstanding management could result in the projects costs coming as much as 10% below the CCE. Certainly, the Incentive Rate of Return mechanism is strong incentive for an on time and within budget project.

The probability of cost overruns due to project delay as a result of a missing sea lift, we see as being 23%. Such a delay would result in the companies having to pay at least finance charges on the approximately \$20 billion of already constructed segments of the system for an additional year.



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## HIGHLIGHTS

WAIVER PACKAGE BECOMES LAW. . . FERC ORDERS GAS CONDITIONING PLANT AS PART OF ANGTS. . . EASTERN LEG CONTINUES ON SCHEDULE. . . ALASKA STUDIES GASLINE FINANCING. . . PROGRAM DEVELOPED FOR EMPLOYMENT, TRAINING AND COUNSELING OF ALASKAN NATIVES. . . COMPRESSOR BIDS REQUESTED FOR PLANT, PIPELINE. . . 1981 YEAR IN REVIEW.

WAIVER PACKAGE BECOMES LAW: On December 15 President Reagan signed into law a waiver package designed to remove government obstacles hindering development of a private sector financing plan for the Alaska Natural Gas Transportation System (ANGTS).

The action followed approval of the package by both the U.S. Senate and the House of Representatives. The Senate voted 75 to 19 on November 19 and the House 230 to 188 on December 10 in favor of the waivers. President Reagan originally submitted the waiver package, along with his endorsement of it, to Congress on October 15.

The ANGTS proposes to tap the vast reserves of natural gas beneath the Prudhoe Bay region on Alaska's North Slope. In excess of 26 trillion cubic feet, these reserves represent the largest accumulations of natural gas ever discovered in the United States. The ANGTS pipeline will bring the gas 4,800 miles across Alaska and Canada to the lower 48 states.

Approval of the waiver package strengthens the project's financial base by allowing the major North Slope producers--Exxon, ARCO and Sohio--to participate in equity financing with the project's gas industry sponsors. It also authorizes the Federal Energy Regulatory Commission (FERC) to approve at its discretion a tariff that will provide lenders with sufficient assurances of repayment of funds needed for private financing of the project.

In addition, the waiver package allows for expedited treatment of remaining federal regulatory approvals and permits the inclusion of a North Slope Alaska gas conditioning plant as an integral part of the ANGTS.

With this action gas transmission company partners, the North Slope gas producers and major banks can work together to forge a definitive financing plan. Development of such a plan will require a cooperative and concerted effort of

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