PRELIMINARY REPORT ON FISCAL DESIGNS FOR THE DEVELOPMENT OF ALASKA NATURAL GAS

BY
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For

State of Alaska
Legislative Budget & Audit Committee

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Appendix 7

Sensitivity Analysis: Alaska Gas Progressivity Tax (GPT) - Alternative Mechanisms Evaluated with Ten Hypothetical Fields

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Sensitivity Analysis: Alaska Gas Progressivity Tax (GPT) - Alternative Mechanisms Evaluated with Ten Hypothetical Fields

The sensitivity of the economic performance and fiscal contributions of each of the ten hypothetical gas fields to ten alternative gas progressivity tax (GPT) mechanisms modelled in this studied is illustrated in this appendix as a series of graphs and tables applying a wide range of gas price, capital cost and operating cost assumptions modifying the base case values presented in other sections of the report.

See discussion in **section 4.6** of this report for a more detailed interpretation of the performance sensitivity analysis focused on the large gas field #4.

The ten alternative mechanisms for GPT are driven by:

- Mechanism No. 1 Status quo CPT rules (CPT 2008 Rules).
- Mechanism No. 2 Separate CPT streams for oil and gas (Gas CPT Rules).
- Mechanism No. 3 Separate CPT streams for oil and gas, with 33% gas stream subject to GPT (33% Gas Rules).
- Mechanism No. 4 Separate CPT streams for oil and gas, with gas valued on its own and not boe equivalent (Gas PTV).
- Mechanism No. 5 GPT calculated on return-factor (R-Factor).
- Mechanism No. 6 GPT calculated on internal rate of return (IRR).
- Mechanism No. 7 GPT calculated on cumulative gas reserves production volume (Cum Res).
- Mechanism No. 8 GPT calculated on annual gas production volume (Gas Prod).
- Mechanism No. 9 GPT calculated on cumulative gas PTV (Cum Gas PTV).
- Mechanism No. 10 Cumulative gas PTV plus fiscal allowances (Cum Gas PTV + Allowances).

Note: Mechanism No.1 represents the status quo progressivity tax mechanism in the Alaska fiscal design.

The consequences of the different factors driving the alternative GPT mechanisms, in terms of fiscal revenues for Alaska, are evaluated here by a series of sensitivity cases. In the figures presented in this appendix the identification abbreviations used for the ten alternative GPT mechanisms are:

- Mechanism No. 1 CPT: 2008 Rules
- Mechanism No. 2 GPT: Gas CPT Rules
- Mechanism No. 3 GPT: 33% Gas - CPT Rules
- Mechanism No. 4 GPT: Gas PTV
- Mechanism No. 5 GPT: R-FACTOR
- Mechanism No. 6 GPT: IRR
- Mechanism No. 7 GPT: Cum Res
- Mechanism No. 8 GPT: Gas Prod
- Mechanism No. 9 GPT: Cum Gas PTV
- Mechanism No. 10 GPT: Cum Gas PTV + Allowance

Gas Field #1 (92 million boe produced)

Model Field Number:	1	Base Case Gas Reserves Produced:	490.2 bcf	Cpy Disc Rate Applied:	10.0%	State Disc Rate Applied	5.0%

Sensitivity Analysis - changing selected input metrics by a factor to analyse field profitability

Input Variables	Base Case =1.00	1.00	0.40	0.50	0.60	0.70	0.80	0.90	1.20	1.40	1.50	2.00	2.50	3.00
Year 1 Gas Price ($/mmbtu)		8	3.0	3.8	4.5	5.3	6.0	6.8	9.0	10.5	11.3	15.0	18.8	22.5
Year 1 Oil Price ($ / Barrel)	Field # 1	80	32.0	40.0	48.0	56.0	64.0	72.0	96.0	112.0	120.0	160.0	200.0	240.0
Condensate Yield (barrels/mmcf)		20.0	8.0	10.0	12.0	14.0	16.0	18.0	24.0	28.0	30.0	40.0	50.0	60.0
Gas TT&T ($/ mcf)		4.5	1.8	2.3	2.7	3.2	3.6	4.1	5.4	6.3	6.8	9.0	11.3	13.5
Total Capex ($/boe)		9.05	3.62	4.53	5.43	6.34	7.24	8.15	10.86	12.67	13.58	18.10	22.63	27.16
Total Opex ($/boe)		5.97	2.39	2.99	3.58	4.18	4.78	5.38	7.17	8.36	8.96	11.95	14.94	17.92
Production Startup Accelerated (-) or Delayed (+) by Years		4					-2.0	-1.0	1.0	2.0	3.0			
Producer Base Case NPV Real $ millions:		-45												
		-45												

Gas Price ($/mmbtu) →

Total Government Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	72.9%	100.0%	100.0%	100.0%	99.3%	83.2%	76.5%	69.6%	68.5%	68.3%	68.5%	68.4%	68.5%
GPT: Gas PTV	Field # 1 %	73.6%	100.0%	100.0%	100.0%	99.3%	83.2%	76.5%	71.2%	70.7%	70.8%	72.6%	75.2%	76.8%
GPT: R-FACTOR	%	74.0%	100.0%	100.0%	100.0%	99.5%	83.7%	77.3%	70.6%	69.0%	68.5%	67.4%	67.1%	67.3%
GPT: IRR	%	72.9%	100.0%	100.0%	100.0%	99.3%	83.2%	76.5%	70.0%	70.0%	70.5%	72.0%	73.6%	75.2%
GPT: Cum Res	%	73.6%	100.0%	100.0%	100.0%	99.6%	83.7%	77.1%	70.0%	68.1%	67.5%	65.6%	64.8%	64.2%
GPT Gas Prod	%	72.9%	100.0%	100.0%	100.0%	99.3%	83.2%	76.5%	69.3%	67.4%	66.7%	64.8%	63.9%	63.4%
GPT: Cum Gas PTV	%	73.0%	100.0%	100.0%	100.0%	99.3%	83.2%	76.5%	69.4%	67.6%	67.0%	65.4%	64.7%	64.5%
GPT: Cum Gas PTV + Allowance	%	71.0%	100.0%	100.0%	100.0%	92.9%	78.4%	73.7%	68.4%	67.1%	66.6%	65.7%	65.6%	65.6%
GPT: Gas CPT Rules	%	72.9%	100.0%	100.0%	100.0%	99.3%	83.2%	76.5%	70.4%	71.0%	71.6%	75.9%	77.5%	78.7%
CPT: 2008 Rules	%	68.4%	100.0%	100.0%	100.0%	92.7%	74.8%	70.1%	68.9%	70.3%	71.2%	75.9%	77.5%	78.6%
[Take of mod Cash flow on Undiscounted basis]		68.4%												

Gas Price ($/mmbtu) →

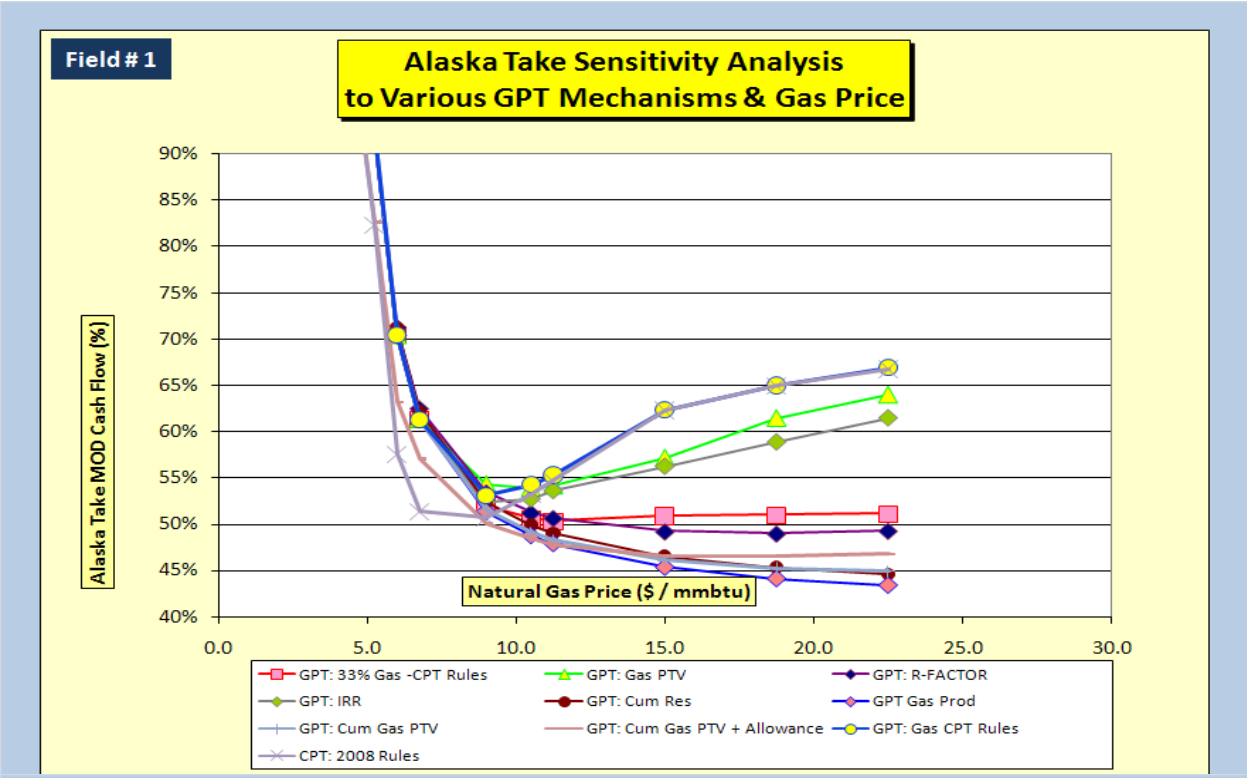
Total Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	56.4%	100.0%	100.0%	100.0%	92.3%	70.4%	61.3%	51.9%	50.6%	50.3%	50.9%	51.0%	51.1%
GPT: Gas PTV	%	57.4%	100.0%	100.0%	100.0%	92.3%	70.4%	61.4%	54.4%	53.9%	54.2%	57.2%	61.5%	64.0%
GPT: R-FACTOR	Field # 1 %	58.0%	100.0%	100.0%	100.0%	92.7%	71.3%	62.5%	53.4%	51.2%	50.7%	49.2%	49.0%	49.3%
GPT: IRR	%	56.4%	100.0%	100.0%	100.0%	92.3%	70.4%	61.3%	52.5%	52.8%	53.7%	56.3%	58.9%	61.5%
GPT: Cum Res	%	57.4%	100.0%	100.0%	100.0%	92.8%	71.2%	62.2%	52.5%	49.9%	49.0%	46.5%	45.3%	44.6%
GPT Gas Prod	%	56.4%	100.0%	100.0%	100.0%	92.3%	70.4%	61.3%	51.3%	48.7%	47.9%	45.3%	44.1%	43.4%
GPT: Cum Gas PTV	%	56.4%	100.0%	100.0%	100.0%	92.3%	70.4%	61.3%	51.5%	49.1%	48.3%	46.1%	45.3%	45.0%
GPT: Cum Gas PTV + Allowance	%	53.4%	100.0%	100.0%	100.0%	82.7%	63.2%	57.0%	50.0%	48.4%	47.7%	46.6%	46.6%	46.8%
GPT: Gas CPT Rules	%	56.4%	100.0%	100.0%	100.0%	92.3%	70.4%	61.3%	53.1%	54.3%	55.3%	62.3%	65.0%	66.9%
CPT: 2008 Rules	%	49.4%	100.0%	100.0%	100.0%	82.3%	57.6%	51.4%	50.7%	53.3%	54.7%	62.4%	65.0%	66.8%
[Take of mod Cash flow on Undiscounted basis]		49.4%												

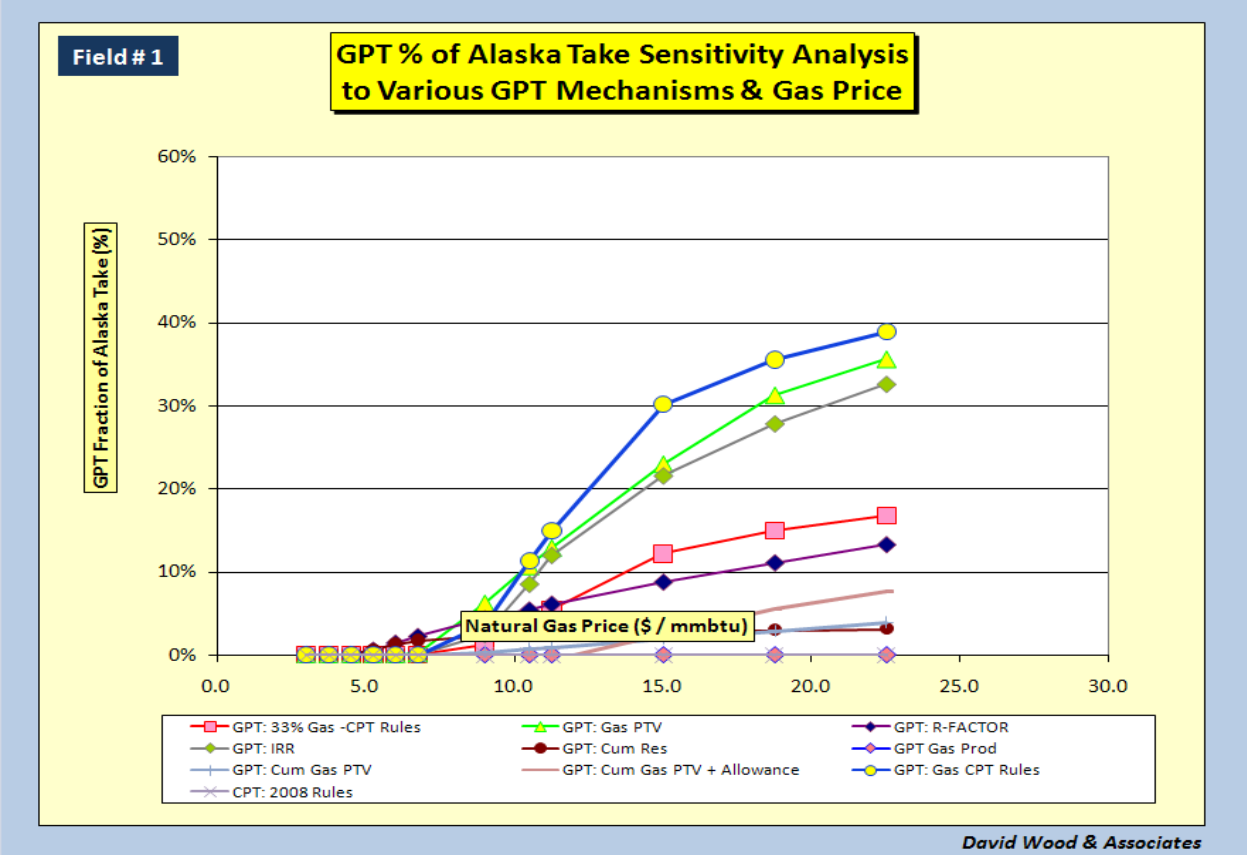
Gas Price ($/mmbtu) →

Alaska NPV Real ($/boe) to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	$/boe	13.3	0.0	0.0	0.0	6.1	8.4	10.8	18.6	24.2	27.0	42.1	57.1	72.2
GPT: Gas PTV	$/boe	13.4	0.0	0.0	0.0	6.1	8.4	10.8	19.0	24.9	28.0	44.5	62.7	81.0
GPT: R-FACTOR	Field # 1 $/boe	13.4	0.0	0.0	0.0	6.1	8.4	10.9	18.8	24.3	27.1	41.2	55.7	70.5
GPT: IRR	$/boe	13.3	0.0	0.0	0.0	6.1	8.4	10.8	18.6	24.5	27.7	43.9	61.0	78.8
GPT: Cum Res	$/boe	13.4	0.0	0.0	0.0	6.1	8.4	10.9	18.6	24.0	26.7	40.2	53.9	67.6
GPT Gas Prod	$/boe	13.3	0.0	0.0	0.0	6.1	8.4	10.8	18.5	23.8	26.4	39.9	53.4	66.9
GPT: Cum Gas PTV	$/boe	13.3	0.0	0.0	0.0	6.1	8.4	10.8	18.5	23.8	26.5	40.1	53.9	67.8
GPT: Cum Gas PTV + Allowance	$/boe	12.9	0.0	0.0	0.0	5.9	8.0	10.4	18.2	23.6	26.3	40.2	54.5	68.8
GPT: Gas CPT Rules	$/boe	13.3	0.0	0.0	0.0	6.1	8.4	10.8	18.8	25.0	28.3	46.6	64.7	83.0
CPT: 2008 Rules	$/boe	12.5	0.0	0.0	0.0	5.9	7.8	10.0	18.4	24.7	28.1	46.6	64.7	83.0
		12.5												

Gas Price ($/mmbtu) →

GPT % Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	4.0%	5.4%	12.2%	14.9%	16.8%
GPT: Gas PTV	%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.1%	10.6%	12.8%	22.9%	31.2%	35.6%
GPT: R-FACTOR	Field # 1 %	3.0%	0.0%	0.0%	0.0%	0.5%	1.4%	2.2%	4.3%	5.4%	6.1%	8.7%	11.1%	13.2%
GPT: IRR	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	8.5%	11.9%	21.5%	27.8%	32.5%
GPT: Cum Res	%	2.0%	0.0%	0.0%	0.0%	0.6%	1.3%	1.7%	2.4%	2.6%	2.7%	2.9%	3.0%	3.1%
GPT Gas Prod	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GPT: Cum Gas PTV	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.8%	1.0%	1.9%	2.9%	3.9%
GPT: Cum Gas PTV + Allowance	%	-6.5%	0.0%	0.0%	0.0%	-13.1%	-12.5%	-8.6%	-3.3%	-1.1%	-0.7%	2.6%	5.6%	7.7%
GPT: Gas CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	11.3%	14.9%	30.1%	35.5%	38.8%
CPT: 2008 Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		0.0%												


Field # 1
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
Alaska Take MOD Cash Flow (%)
90%
85%
80%
75%
70%
65%
60%
55%
50%
45%
40%
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Natural Gas Price ($ / mmbtu)
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 1
GPT % of Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
GPT Fraction of Alaska Take (%)
60%
50%
40%
30%
20%
10%
0%
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Natural Gas Price ($ / mmbtu)
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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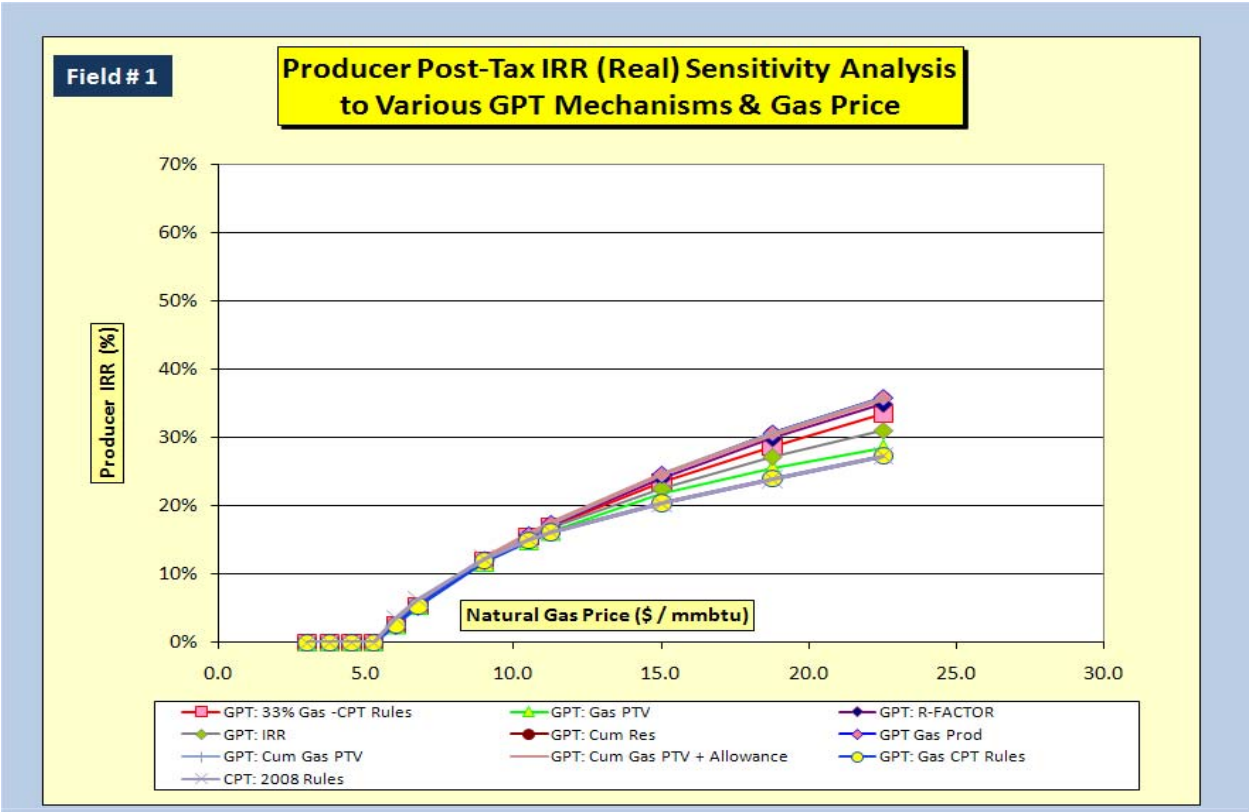
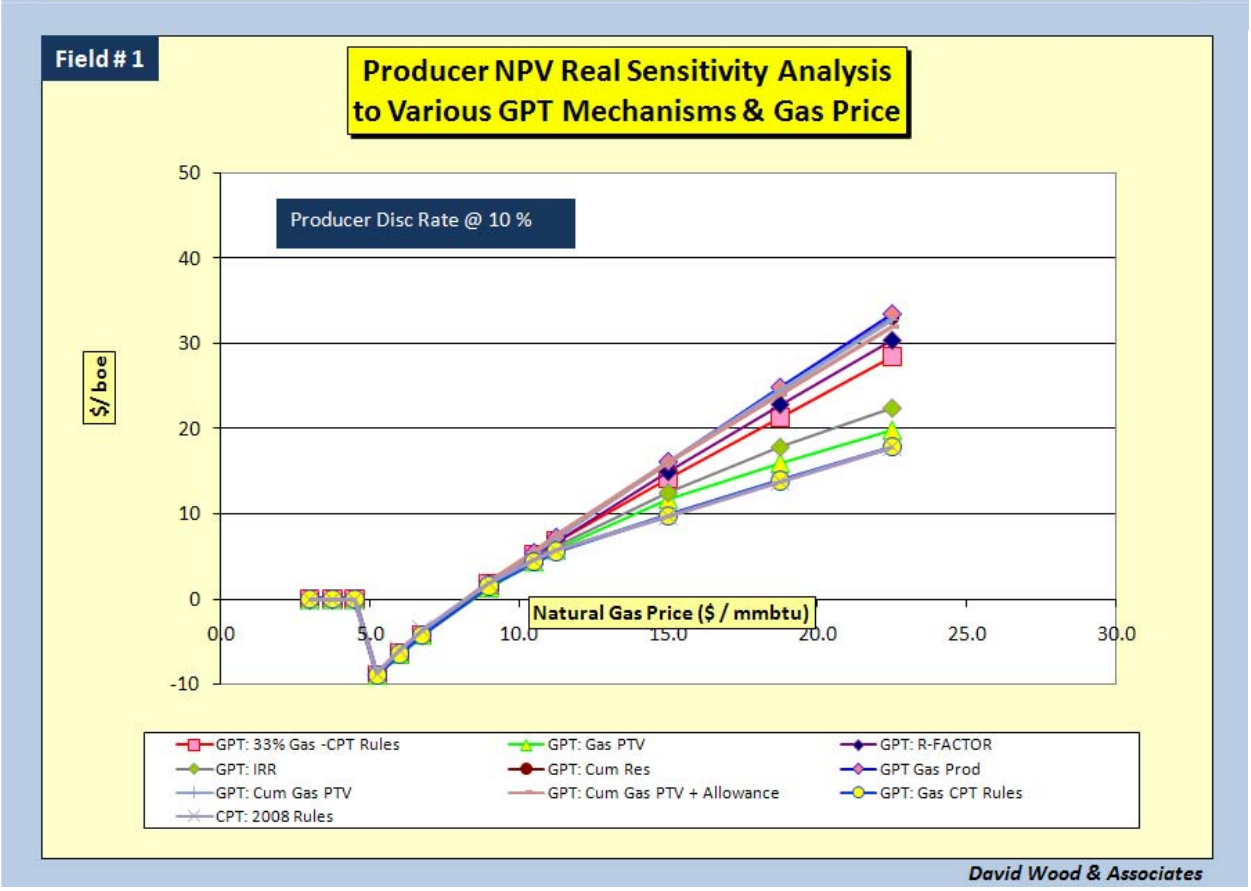

Field # 1
Producer Post-Tax IRR (Real) Sensitivity Analysis to Various GPT Mechanisms & Gas Price
Producer IRR (%)
70%
60%
50%
40%
30%
20%
10%
0%
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 1
Producer NPV Real Sensitivity Analysis to Various GPT Mechanisms & Gas Price
Producer Disc Rate @ 10 %
$/boe
50
40
30
20
10
0
-10
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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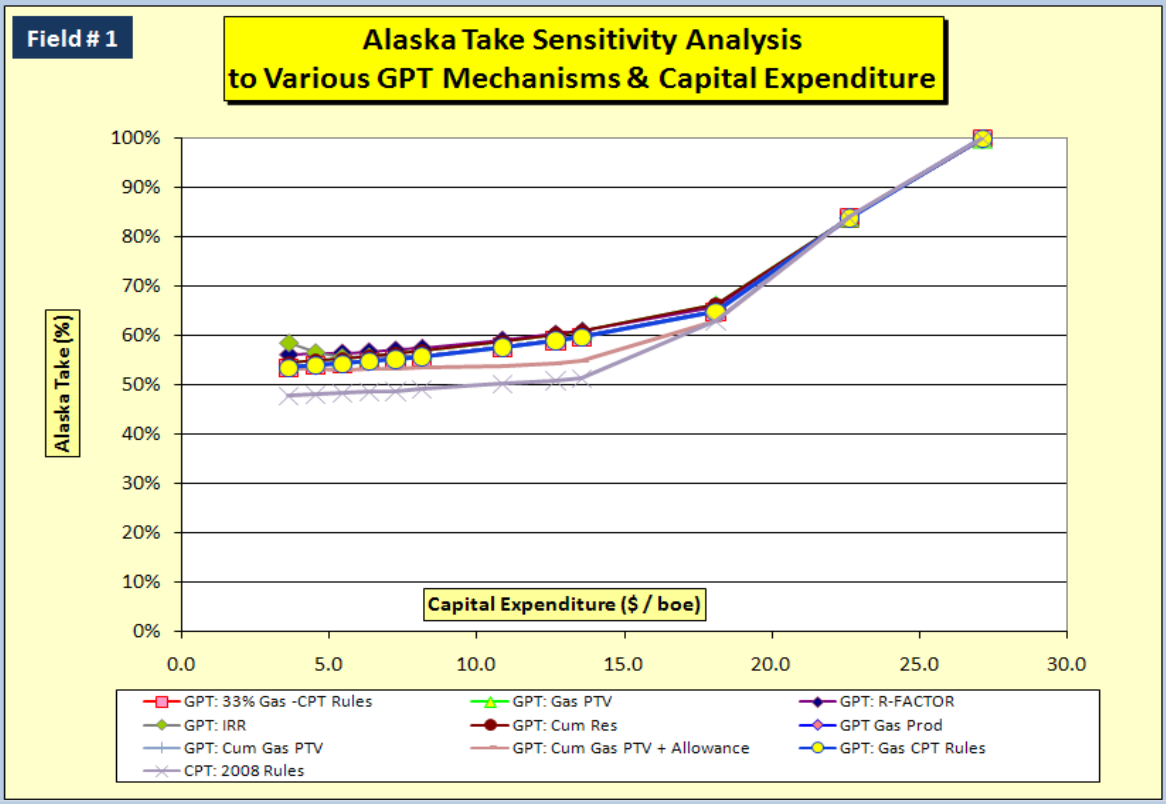

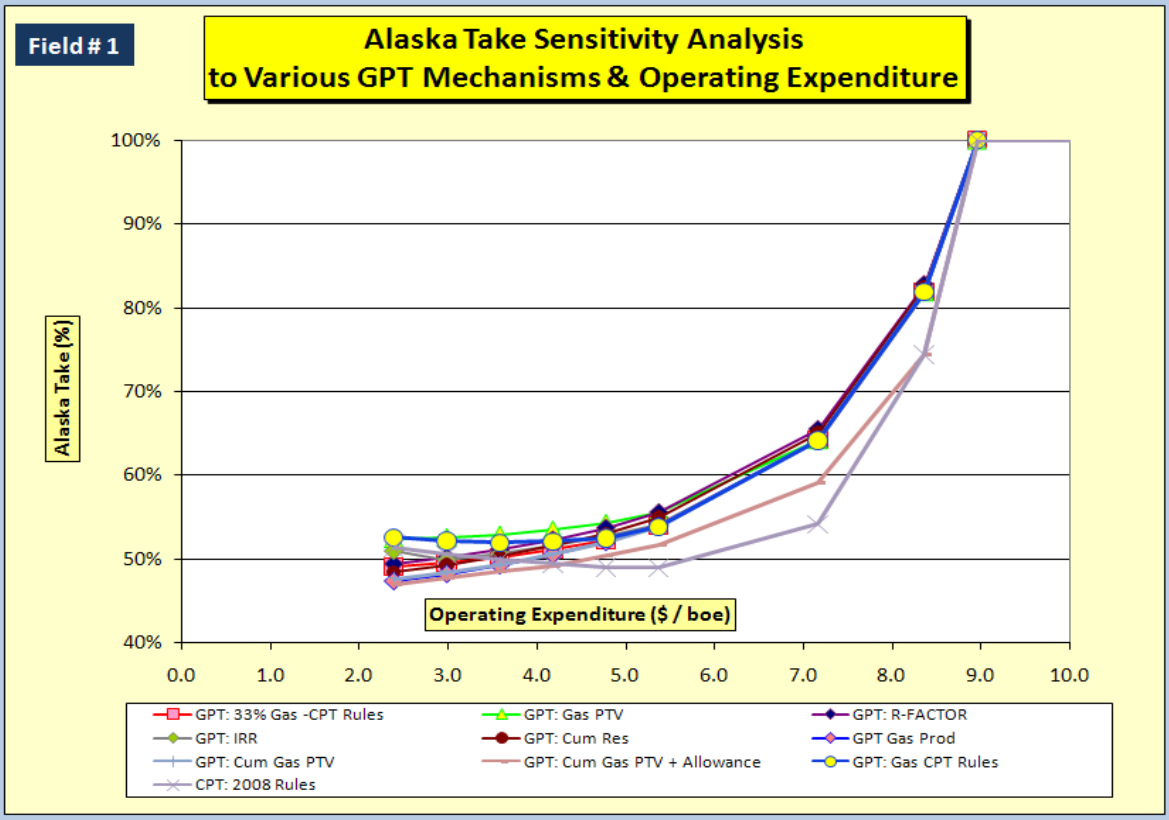

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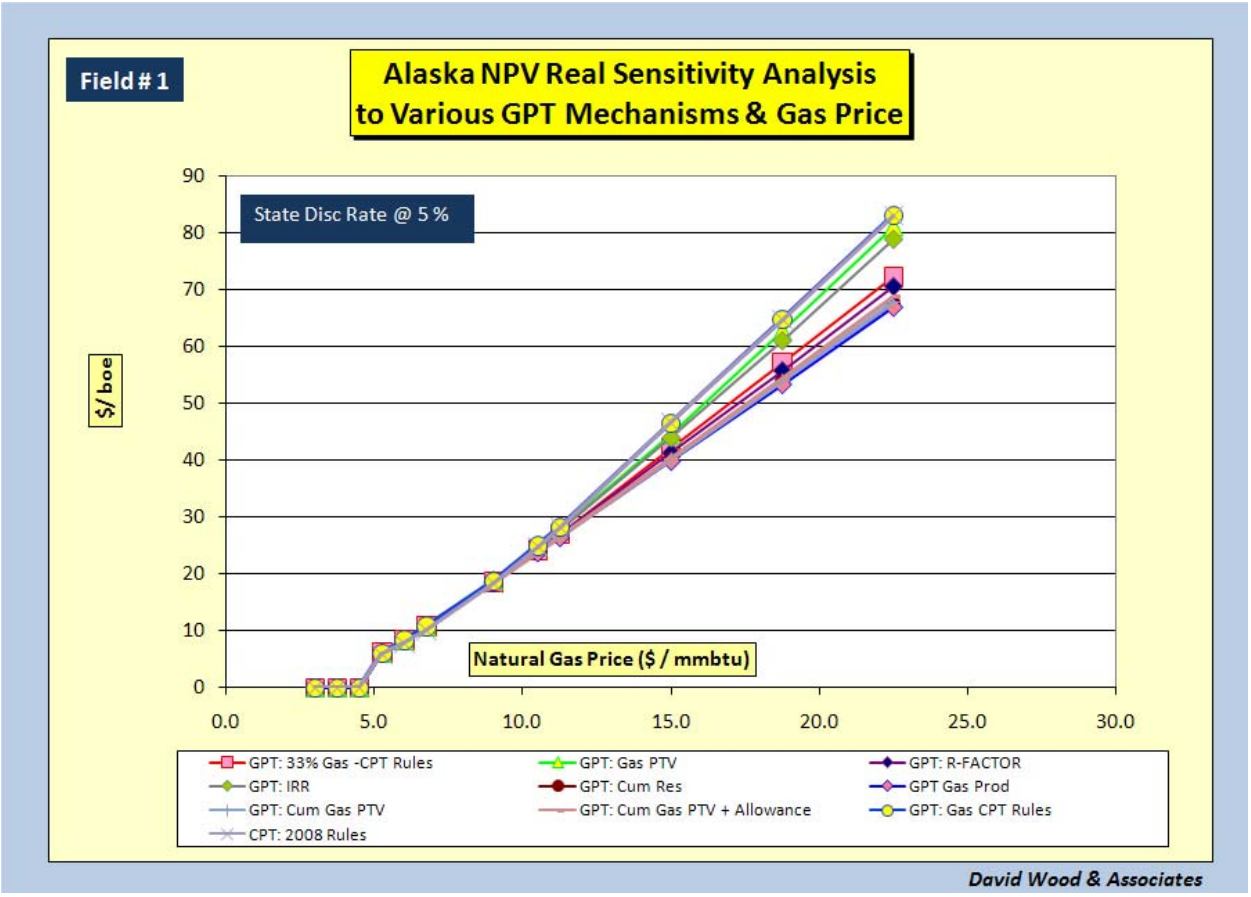
Field # 1
Alaska NPV Real Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
State Disc Rate @ 5 %
$/ boe
Natural Gas Price ($ / mmbtu)
0
10
20
30
40
50
60
70
80
90
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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Gas Field #2 (135 million boe produced)

Model Field Number:	2	Base Case Gas Reserves Produced:	715.4 bcf	Cpy Disc Rate Applied:	10.0%	State Disc Rate Applied	5.0%

Sensitivity Analysis - changing selected input metrics by a factor to analyse field profitability

Input Variables	Base Case =1.00	1.00	0.40	0.50	0.60	0.70	0.80	0.90	1.20	1.40	1.50	2.00	2.50	3.00
Year 1 Gas Price ($/mmbtu)		8	3.0	3.8	4.5	5.3	6.0	6.8	9.0	10.5	11.3	15.0	18.8	22.5
Year 1 Oil Price ($ / Barrel)	Field # 2	80	32.0	40.0	48.0	56.0	64.0	72.0	96.0	112.0	120.0	160.0	200.0	240.0
Condensate Yield (barrels/mmcf)		20.0	8.0	10.0	12.0	14.0	16.0	18.0	24.0	28.0	30.0	40.0	50.0	60.0
Gas TT&T ($/ mcf)		4.5	1.8	2.3	2.7	3.2	3.6	4.1	5.4	6.3	6.8	9.0	11.3	13.5
Total Capex ($/boe)		8.72	3.49	4.36	5.23	6.11	6.98	7.85	10.47	12.21	13.08	17.44	21.81	26.17
Total Opex ($/boe)		5.16	2.07	2.58	3.10	3.62	4.13	4.65	6.20	7.23	7.75	10.33	12.91	15.49
Production Startup Accelerated (-) or Delayed (+) by Years		5					-2.0	-1.0	1.0	2.0	3.0			
Producer Base Case NPV Real $ millions:		-51												
		-51												

Gas Price ($/mmbtu) →

Total Government Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	71.5%	100.0%	100.0%	100.0%	90.8%	79.6%	74.5%	68.9%	68.0%	67.9%	68.3%	68.2%	68.3%
GPT: Gas PTV	Field # 2 %	72.2%	100.0%	100.0%	100.0%	90.8%	79.6%	74.6%	70.5%	70.3%	70.4%	72.4%	75.2%	76.8%
GPT: R-FACTOR	%	72.5%	100.0%	100.0%	100.0%	91.2%	80.3%	75.4%	69.8%	68.5%	68.1%	67.2%	67.1%	67.3%
GPT: IRR	%	71.5%	100.0%	100.0%	100.0%	90.8%	79.6%	74.5%	69.2%	68.9%	69.4%	70.8%	72.2%	73.4%
GPT: Cum Res	%	72.7%	100.0%	100.0%	100.0%	91.5%	80.6%	75.6%	69.7%	68.1%	67.5%	65.9%	65.1%	64.7%
GPT Gas Prod	%	71.5%	100.0%	100.0%	100.0%	90.8%	79.6%	74.5%	68.4%	66.8%	66.2%	64.5%	63.7%	63.2%
GPT: Cum Gas PTV	%	71.6%	100.0%	100.0%	100.0%	90.8%	79.6%	74.5%	68.6%	67.1%	66.6%	65.3%	64.9%	64.8%
GPT: Cum Gas PTV + Allowance	%	70.1%	100.0%	100.0%	100.0%	85.4%	75.9%	72.0%	68.1%	66.8%	66.8%	66.0%	66.3%	66.6%
GPT: Gas CPT Rules	%	71.5%	100.0%	100.0%	100.0%	90.8%	79.6%	74.5%	69.8%	70.6%	71.3%	75.8%	77.4%	78.7%
CPT: 2008 Rules	%	67.2%	100.0%	100.0%	100.0%	83.1%	71.0%	68.1%	68.3%	70.0%	70.9%	75.9%	77.4%	78.6%
[Take of mod Cash flow on Undiscounted basis]		67.2%												

Gas Price ($/mmbtu) →

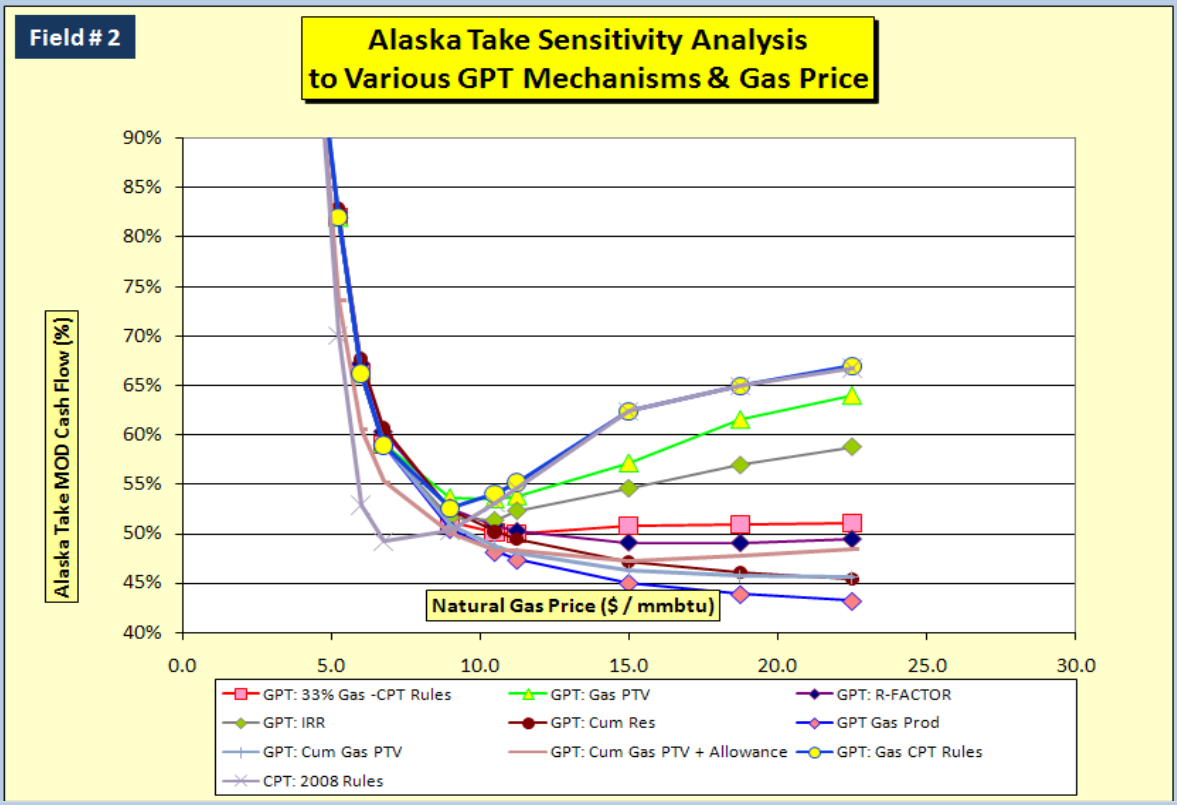
Total Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	54.8%	100.0%	100.0%	100.0%	82.0%	66.2%	59.0%	51.2%	50.1%	50.0%	50.8%	50.8%	51.0%
GPT: Gas PTV	%	55.9%	100.0%	100.0%	100.0%	82.0%	66.2%	59.2%	53.7%	53.5%	53.9%	57.2%	61.6%	64.0%
GPT: R-FACTOR	Field # 2 %	56.4%	100.0%	100.0%	100.0%	82.5%	67.2%	60.4%	52.7%	50.9%	50.3%	49.2%	49.1%	49.5%
GPT: IRR	%	54.8%	100.0%	100.0%	100.0%	82.0%	66.2%	59.0%	51.7%	51.4%	52.3%	54.6%	57.0%	58.8%
GPT: Cum Res	%	56.6%	100.0%	100.0%	100.0%	83.0%	67.7%	60.7%	52.4%	50.2%	49.4%	47.1%	46.1%	45.4%
GPT Gas Prod	%	54.8%	100.0%	100.0%	100.0%	82.0%	66.2%	59.0%	50.5%	48.1%	47.4%	45.0%	43.9%	43.2%
GPT: Cum Gas PTV	%	54.9%	100.0%	100.0%	100.0%	82.0%	66.2%	59.0%	50.8%	48.7%	48.0%	46.2%	45.7%	45.6%
GPT: Cum Gas PTV + Allowance	%	52.7%	100.0%	100.0%	100.0%	73.6%	60.5%	55.3%	50.1%	48.3%	48.3%	47.2%	47.8%	48.4%
GPT: Gas CPT Rules	%	54.8%	100.0%	100.0%	100.0%	82.0%	66.2%	59.0%	52.6%	54.1%	55.2%	62.4%	64.9%	67.0%
CPT: 2008 Rules	%	48.3%	100.0%	100.0%	100.0%	70.1%	52.9%	49.3%	50.3%	53.1%	54.7%	62.4%	64.9%	66.8%
[Take of mod Cash flow on Undiscounted basis]		48.3%												

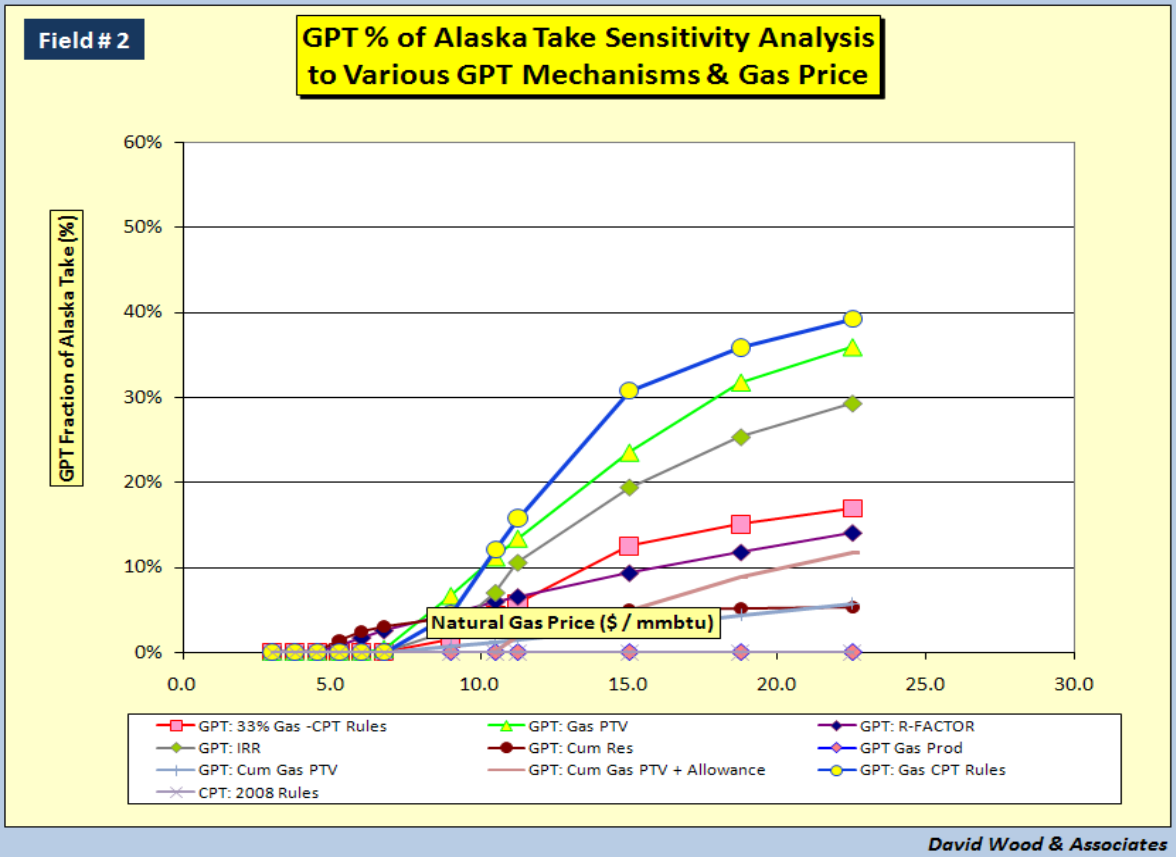
Gas Price ($/mmbtu) →

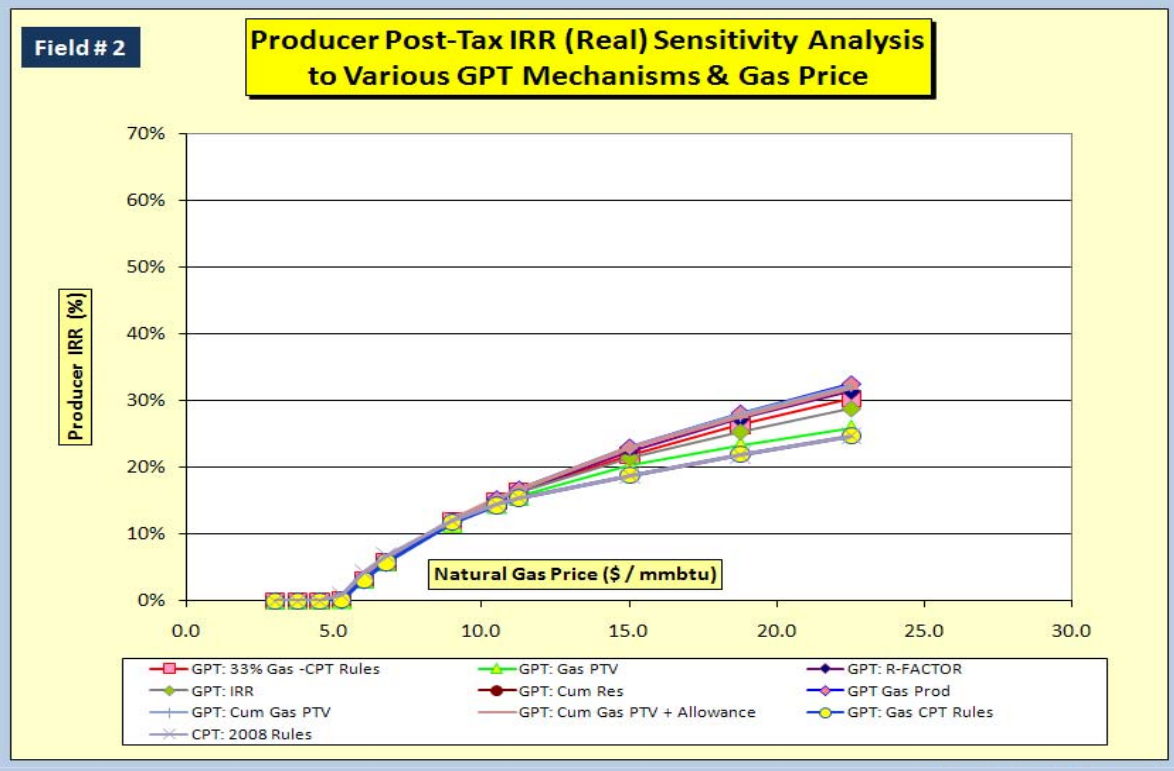
Alaska NPV Real ($/boe) to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	$/boe	13.8	0.0	0.0	0.0	6.4	8.7	11.2	19.1	24.8	27.7	42.8	57.8	72.9
GPT: Gas PTV	$/boe	13.9	0.0	0.0	0.0	6.4	8.7	11.2	19.6	25.6	28.7	45.4	63.6	82.0
GPT: R-FACTOR	Field # 2 $/boe	13.9	0.0	0.0	0.0	6.4	8.8	11.3	19.4	24.9	27.7	42.0	56.6	71.4
GPT: IRR	$/boe	13.8	0.0	0.0	0.0	6.4	8.7	11.2	19.2	25.0	28.1	44.1	60.8	77.9
GPT: Cum Res	$/boe	14.0	0.0	0.0	0.0	6.4	8.8	11.3	19.3	24.7	27.5	41.2	55.0	68.8
GPT Gas Prod	$/boe	13.8	0.0	0.0	0.0	6.4	8.7	11.2	19.0	24.3	27.0	40.5	54.0	67.5
GPT: Cum Gas PTV	$/boe	13.8	0.0	0.0	0.0	6.4	8.7	11.2	19.1	24.4	27.2	40.9	54.8	68.9
GPT: Cum Gas PTV + Allowance	$/boe	13.5	0.0	0.0	0.0	6.1	8.4	10.9	18.9	24.3	27.2	41.1	55.8	70.6
GPT: Gas CPT Rules	$/boe	13.8	0.0	0.0	0.0	6.4	8.7	11.2	19.4	25.7	29.0	47.5	65.6	84.0
CPT: 2008 Rules	$/boe	13.0	0.0	0.0	0.0	6.0	8.0	10.4	19.0	25.5	28.9	47.5	65.6	83.9
		13.0												

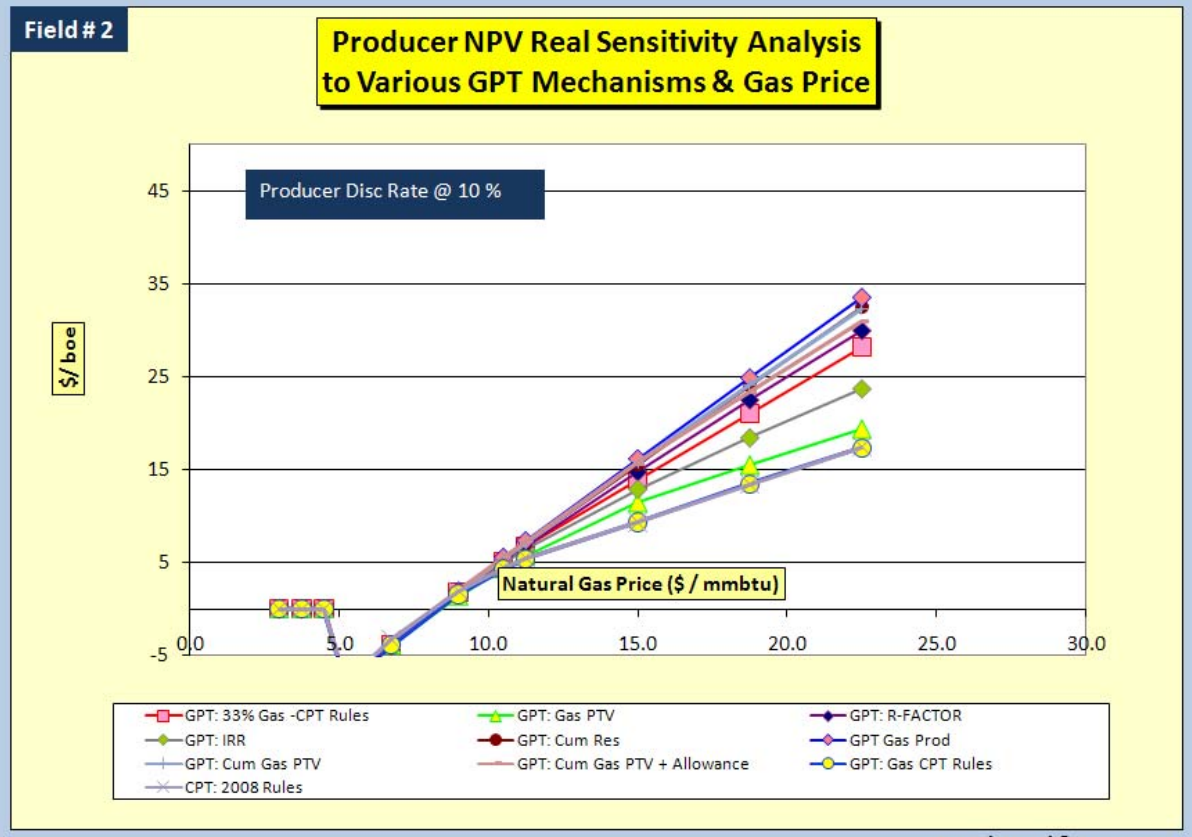
Gas Price ($/mmbtu) →

GPT % Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	4.3%	5.7%	12.5%	15.1%	16.9%
GPT: Gas PTV	%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	6.6%	11.1%	13.3%	23.5%	31.7%	35.9%
GPT: R-FACTOR	Field # 2 %	3.2%	0.0%	0.0%	0.0%	0.7%	1.7%	2.5%	4.6%	5.9%	6.5%	9.3%	11.7%	14.0%
GPT: IRR	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	7.0%	10.5%	19.4%	25.3%	29.3%
GPT: Cum Res	%	3.5%	0.0%	0.0%	0.0%	1.3%	2.4%	3.1%	4.1%	4.4%	4.6%	5.0%	5.2%	5.3%
GPT Gas Prod	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GPT: Cum Gas PTV	%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	1.2%	1.5%	2.9%	4.4%	5.7%
GPT: Cum Gas PTV + Allowance	%	-4.7%	0.0%	0.0%	0.0%	-12.8%	-10.6%	-7.6%	-1.1%	0.0%	1.8%	4.9%	8.8%	11.7%
GPT: Gas CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	12.1%	15.7%	30.8%	35.8%	39.1%
CPT: 2008 Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


Field # 2
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
Alaska Take MOD Cash Flow (%)
90%
85%
80%
75%
70%
65%
60%
55%
50%
45%
40%
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Natural Gas Price ($ / mmbtu)
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 2
GPT % of Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
GPT Fraction of Alaska Take (%)
60%
50%
40%
30%
20%
10%
0%
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Natural Gas Price ($ / mmbtu)
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
David Wood & Associates


Field # 2
Producer Post-Tax IRR (Real) Sensitivity Analysis to Various GPT Mechanisms & Gas Price
Producer IRR (%)
70%
60%
50%
40%
30%
20%
10%
0%
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 2
Producer NPV Real Sensitivity Analysis to Various GPT Mechanisms & Gas Price
Producer Disc Rate @ 10 %
$/ boe
45
35
25
15
5
-5
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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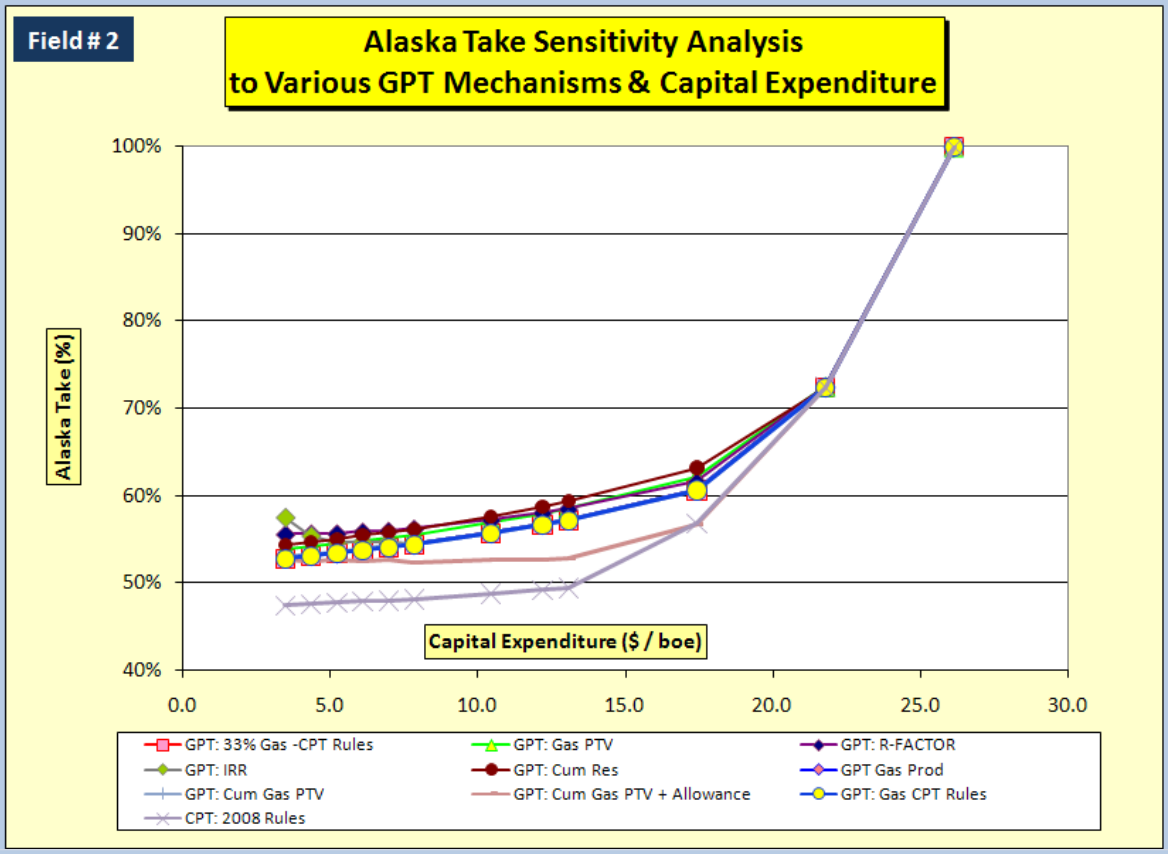
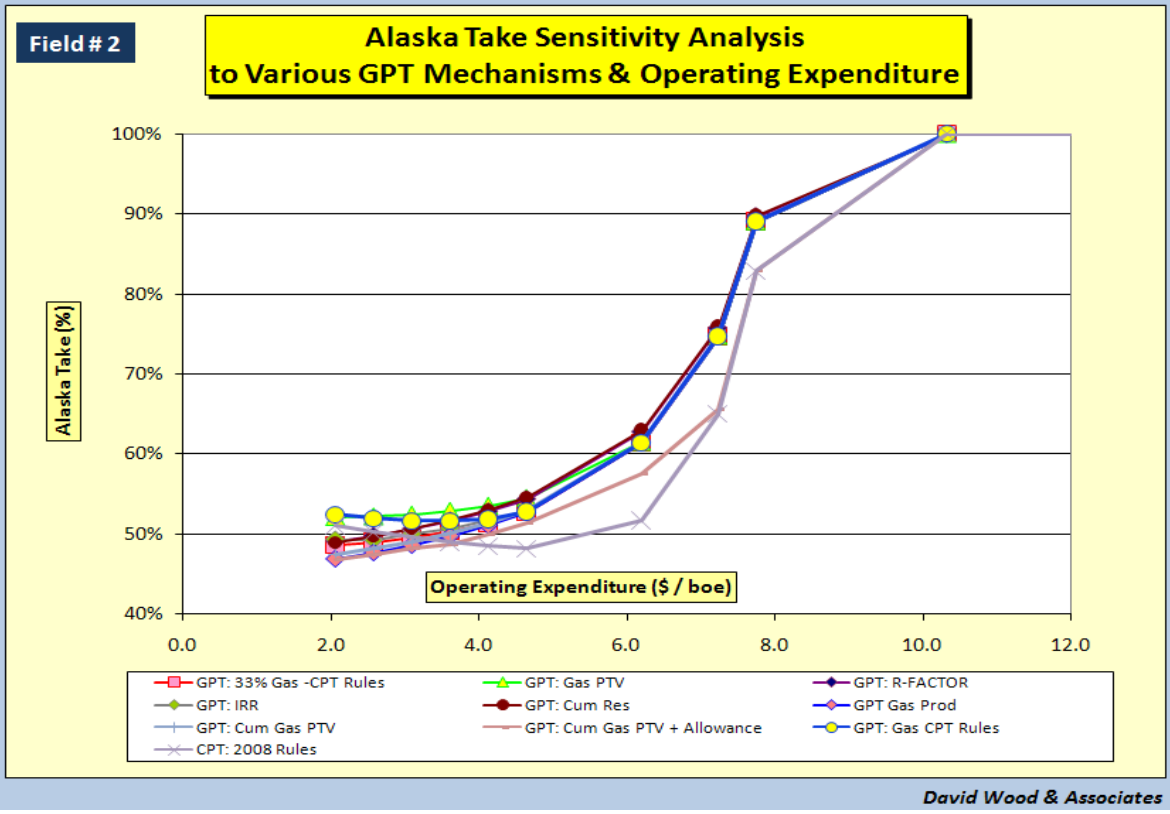

Field # 2
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Capital Expenditure
Alaska Take (%)
100%
90%
80%
70%
60%
50%
40%
Capital Expenditure ($ / boe)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 2
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Operating Expenditure
Alaska Take (%)
100%
90%
80%
70%
60%
50%
40%
Operating Expenditure ($ / boe)
0.0
2.0
4.0
6.0
8.0
10.0
12.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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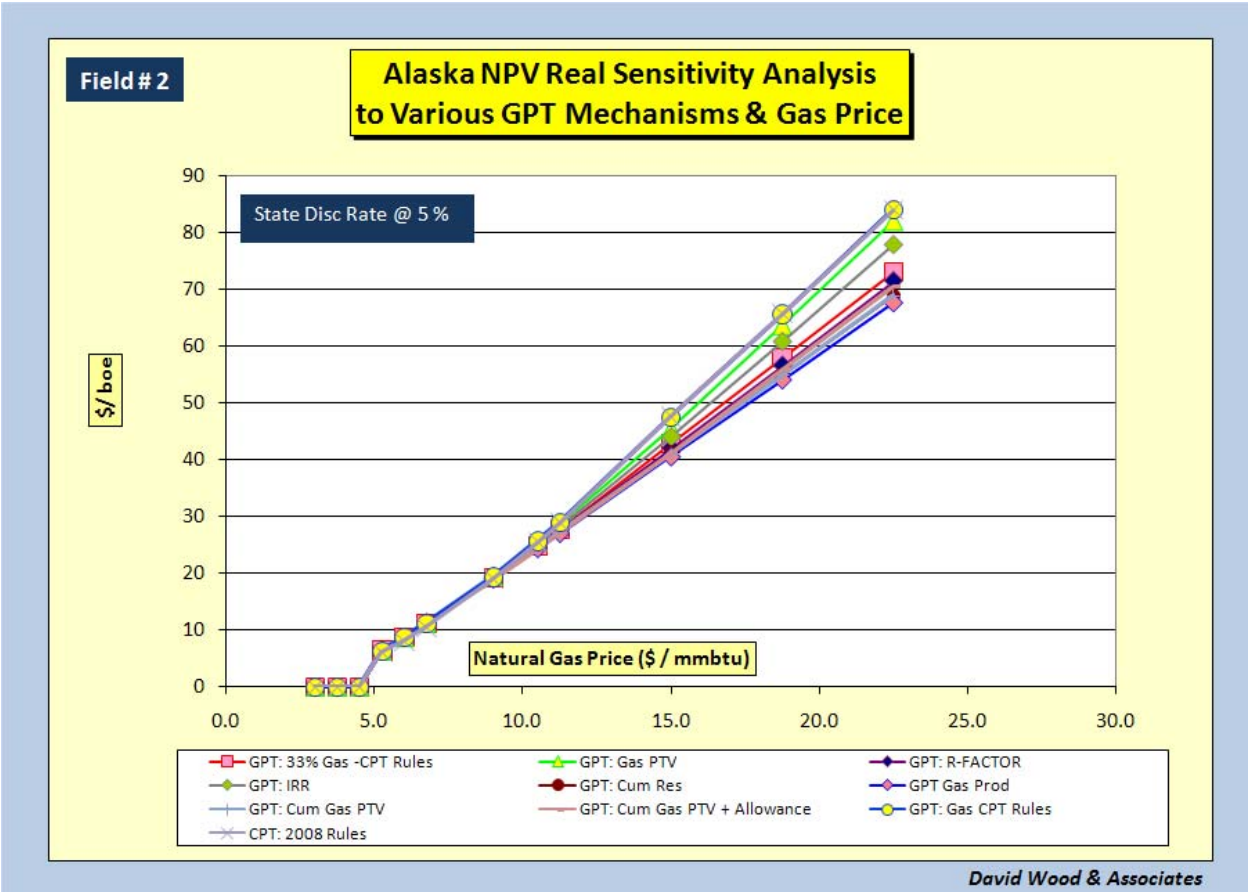
Field # 2
Alaska NPV Real Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
State Disc Rate @ 5 %
$/ boe
Natural Gas Price ($ / mmbtu)
0
10
20
30
40
50
60
70
80
90
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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Gas Field #3 (188 million boe produced)

Model Field Number:	3	Base Case Gas Reserves Produced:	995.3 bcf	Cpy Disc Rate Applied:	10.0%	State Disc Rate Applied	5.0%

Sensitivity Analysis - changing selected input metrics by a factor to analyse field profitability

Input Variables	Base Case =1.00	1.00	0.40	0.50	0.60	0.70	0.80	0.90	1.20	1.40	1.50	2.00	2.50	3.00
Year 1 Gas Price ($/mmbtu)		8	3.0	3.8	4.5	5.3	6.0	6.8	9.0	10.5	11.3	15.0	18.8	22.5
Year 1 Oil Price ($ / Barrel)	Field # 3	80	32.0	40.0	48.0	56.0	64.0	72.0	96.0	112.0	120.0	160.0	200.0	240.0
Condensate Yield (barrels/mmcf)		20.0	8.0	10.0	12.0	14.0	16.0	18.0	24.0	28.0	30.0	40.0	50.0	60.0
Gas TT&T ($/ mcf)		4.5	1.8	2.3	2.7	3.2	3.6	4.1	5.4	6.3	6.8	9.0	11.3	13.5
Total Capex ($/boe)		6.88	2.75	3.44	4.13	4.81	5.50	6.19	8.25	9.63	10.32	13.76	17.20	20.64
Total Opex ($/boe)		4.36	1.75	2.18	2.62	3.06	3.49	3.93	5.24	6.11	6.55	8.73	10.91	13.09
Production Startup Accelerated (-) or Delayed (+) by Years		5					-2.0	-1.0	1.0	2.0	3.0			
Producer Base Case NPV Real $ millions:		138												
		138												

Gas Price ($/mmbtu) →

Total Government Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	70.7%	100.0%	100.0%	100.0%	84.5%	76.9%	73.0%	68.5%	67.8%	67.7%	68.1%	68.1%	68.2%
GPT: Gas PTV	Field # 3 %	71.5%	100.0%	100.0%	100.0%	84.5%	76.9%	73.2%	70.1%	70.0%	70.1%	72.1%	74.9%	76.4%
GPT: R-FACTOR	%	72.1%	100.0%	100.0%	100.0%	85.0%	77.8%	74.1%	69.8%	68.7%	68.5%	67.8%	67.9%	68.4%
GPT: IRR	%	71.3%	100.0%	100.0%	100.0%	84.5%	76.9%	73.0%	70.7%	71.3%	71.5%	73.1%	74.6%	76.2%
GPT: Cum Res	%	72.3%	100.0%	100.0%	100.0%	85.3%	78.2%	74.5%	69.8%	68.4%	67.9%	66.4%	65.7%	65.3%
GPT Gas Prod	%	70.7%	100.0%	100.0%	100.0%	84.5%	76.9%	73.0%	68.0%	66.5%	66.0%	64.4%	63.7%	63.2%
GPT: Cum Gas PTV	%	70.9%	100.0%	100.0%	100.0%	84.5%	76.9%	73.1%	68.4%	67.1%	66.6%	65.6%	65.3%	65.4%
GPT: Cum Gas PTV + Allowance	%	70.2%	100.0%	100.0%	100.0%	80.3%	74.9%	71.9%	68.3%	67.6%	67.3%	67.1%	67.4%	68.1%
GPT: Gas CPT Rules	%	70.7%	100.0%	100.0%	100.0%	84.5%	76.9%	73.0%	69.5%	70.4%	71.0%	75.4%	77.0%	78.4%
CPT: 2008 Rules	%	67.0%	100.0%	100.0%	94.7%	73.5%	69.5%	67.4%	68.1%	69.8%	70.7%	75.4%	77.0%	78.2%
[Take of mod Cash flow on Undiscounted basis]		67.0%												

Gas Price ($/mmbtu) →

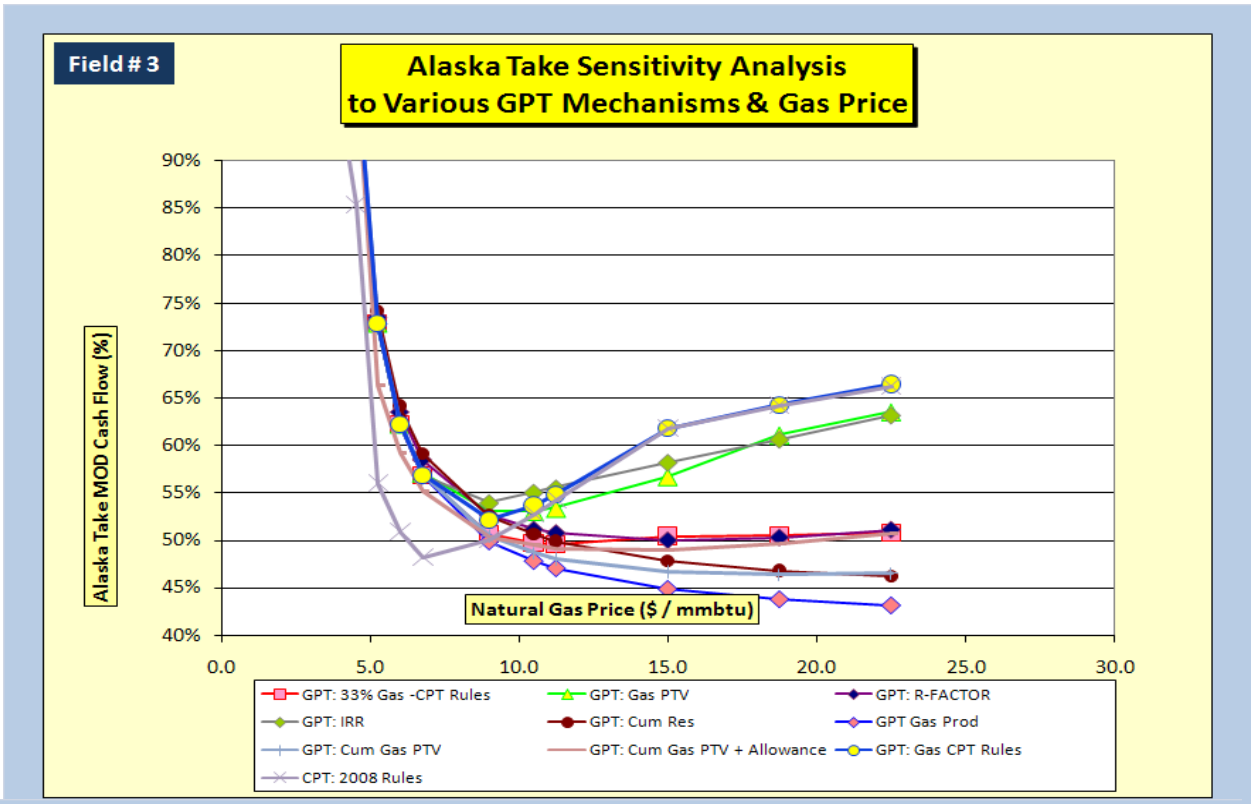
Total Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	53.6%	100.0%	100.0%	100.0%	72.8%	62.2%	56.8%	50.6%	49.8%	49.6%	50.5%	50.5%	50.8%
GPT: Gas PTV	%	54.8%	100.0%	100.0%	100.0%	72.8%	62.2%	57.1%	53.0%	53.1%	53.4%	56.7%	61.1%	63.5%
GPT: R-FACTOR	Field # 3 %	55.7%	100.0%	100.0%	100.0%	73.6%	63.6%	58.6%	52.7%	51.2%	50.8%	50.1%	50.4%	51.2%
GPT: IRR	%	54.5%	100.0%	100.0%	100.0%	72.8%	62.2%	56.8%	54.0%	55.1%	55.5%	58.2%	60.6%	63.2%
GPT: Cum Res	%	56.1%	100.0%	100.0%	100.0%	74.2%	64.2%	59.1%	52.6%	50.7%	50.0%	47.9%	46.9%	46.3%
GPT Gas Prod	%	53.6%	100.0%	100.0%	100.0%	72.8%	62.2%	56.8%	49.9%	47.8%	47.1%	44.9%	43.8%	43.1%
GPT: Cum Gas PTV	%	53.9%	100.0%	100.0%	100.0%	72.8%	62.2%	56.9%	50.4%	48.7%	48.0%	46.7%	46.4%	46.5%
GPT: Cum Gas PTV + Allowance	%	52.8%	100.0%	100.0%	100.0%	66.4%	59.2%	55.1%	50.3%	49.5%	49.0%	49.0%	49.6%	50.7%
GPT: Gas CPT Rules	%	53.6%	100.0%	100.0%	100.0%	72.8%	62.2%	56.8%	52.2%	53.7%	54.8%	61.8%	64.3%	66.5%
CPT: 2008 Rules	%	47.9%	100.0%	100.0%	85.4%	56.0%	50.9%	48.2%	50.1%	52.8%	54.3%	61.8%	64.2%	66.3%
[Take of mod Cash flow on Undiscounted basis]		47.9%												

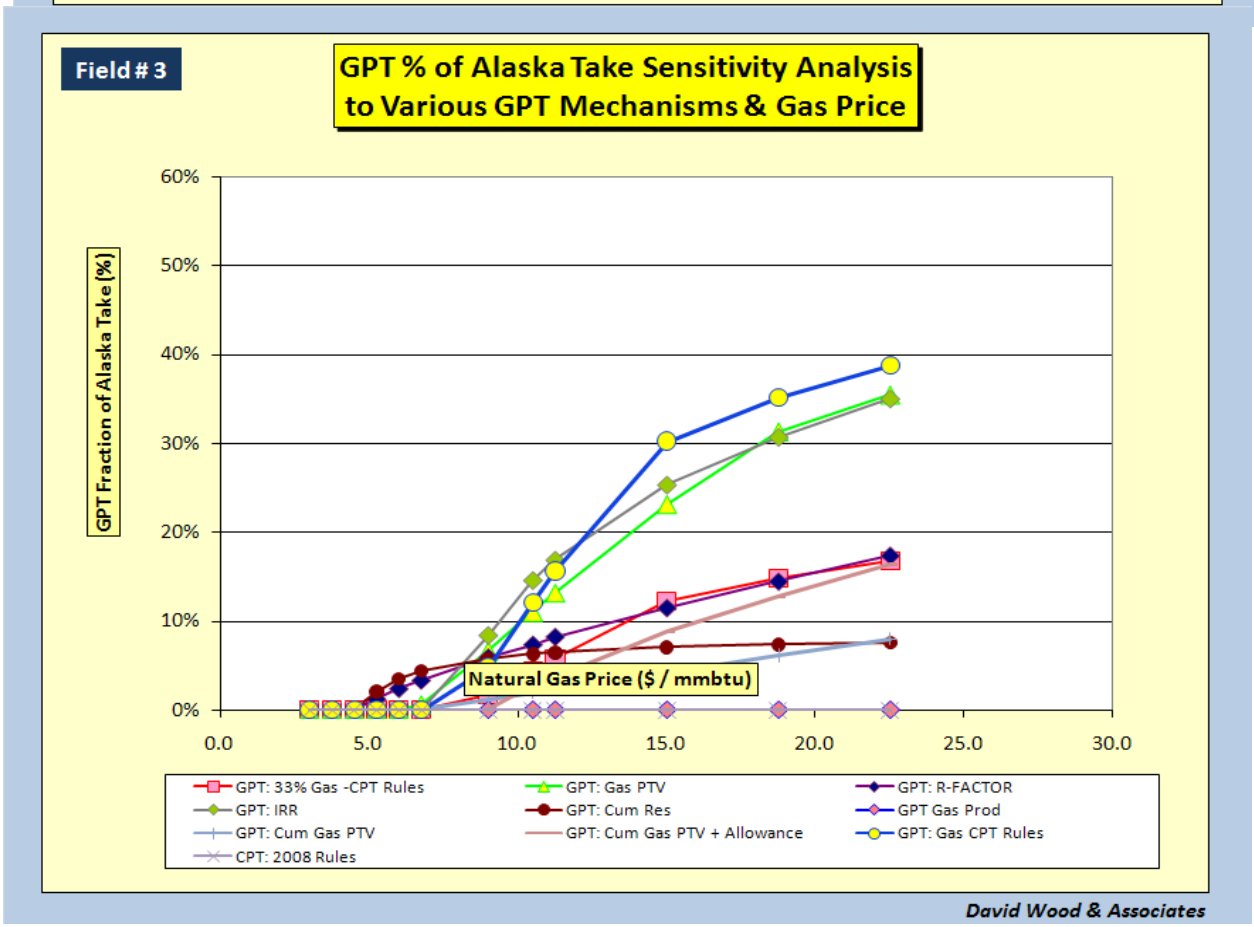
Gas Price ($/mmbtu) →

Alaska NPV Real ($/boe) to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	$/boe	15.1	0.0	0.0	4.9	7.3	9.8	12.4	20.5	26.2	29.1	44.3	59.3	74.5
GPT: Gas PTV	$/boe	15.2	0.0	0.0	4.9	7.3	9.8	12.4	21.0	27.1	30.2	46.9	65.1	83.4
GPT: R-FACTOR	Field # 3 $/boe	15.3	0.0	0.0	4.9	7.3	9.9	12.6	20.9	26.5	29.4	43.9	58.8	74.2
GPT: IRR	$/boe	15.2	0.0	0.0	4.9	7.3	9.8	12.4	21.1	27.4	30.6	47.3	64.6	82.8
GPT: Cum Res	$/boe	15.4	0.0	0.0	4.9	7.3	9.9	12.6	20.9	26.4	29.2	43.0	57.0	70.9
GPT Gas Prod	$/boe	15.1	0.0	0.0	4.9	7.3	9.8	12.4	20.4	25.8	28.5	42.0	55.5	69.1
GPT: Cum Gas PTV	$/boe	15.1	0.0	0.0	4.9	7.3	9.8	12.4	20.5	26.0	28.7	42.6	56.7	71.1
GPT: Cum Gas PTV + Allowance	$/boe	14.9	0.0	0.0	4.8	7.0	9.5	12.2	20.4	26.1	28.9	43.4	58.3	73.6
GPT: Gas CPT Rules	$/boe	15.1	0.0	0.0	4.9	7.3	9.8	12.4	20.8	27.2	30.6	49.0	67.0	85.5
CPT: 2008 Rules	$/boe	14.3	0.0	0.0	4.5	6.5	9.0	11.5	20.4	27.0	30.4	49.0	67.0	85.4
		14.3												

Gas Price ($/mmbtu) →

GPT % Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	4.3%	5.7%	12.2%	14.8%	16.7%
GPT: Gas PTV	%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	6.6%	10.9%	13.1%	23.0%	31.2%	35.4%
GPT: R-FACTOR	Field # 3 %	4.1%	0.0%	0.0%	0.0%	1.2%	2.3%	3.3%	5.9%	7.3%	8.2%	11.4%	14.4%	17.3%
GPT: IRR	%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.3%	14.5%	16.8%	25.3%	30.7%	35.0%
GPT: Cum Res	%	4.9%	0.0%	0.0%	0.0%	2.0%	3.4%	4.3%	5.7%	6.2%	6.4%	7.0%	7.3%	7.5%
GPT Gas Prod	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GPT: Cum Gas PTV	%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	1.2%	1.9%	2.3%	4.2%	6.1%	8.0%
GPT: Cum Gas PTV + Allowance	%	-2.4%	0.0%	0.0%	-7.1%	-11.3%	-6.3%	-4.1%	0.2%	2.9%	3.8%	8.8%	12.7%	16.3%
GPT: Gas CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.8%	12.1%	15.6%	30.2%	35.2%	38.7%
CPT: 2008 Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		0.0%												


Field # 3
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
Alaska Take MOD Cash Flow (%)
90%
85%
80%
75%
70%
65%
60%
55%
50%
45%
40%
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Natural Gas Price ($ / mmbtu)
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 3
GPT % of Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
GPT Fraction of Alaska Take (%)
60%
50%
40%
30%
20%
10%
0%
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Natural Gas Price ($ / mmbtu)
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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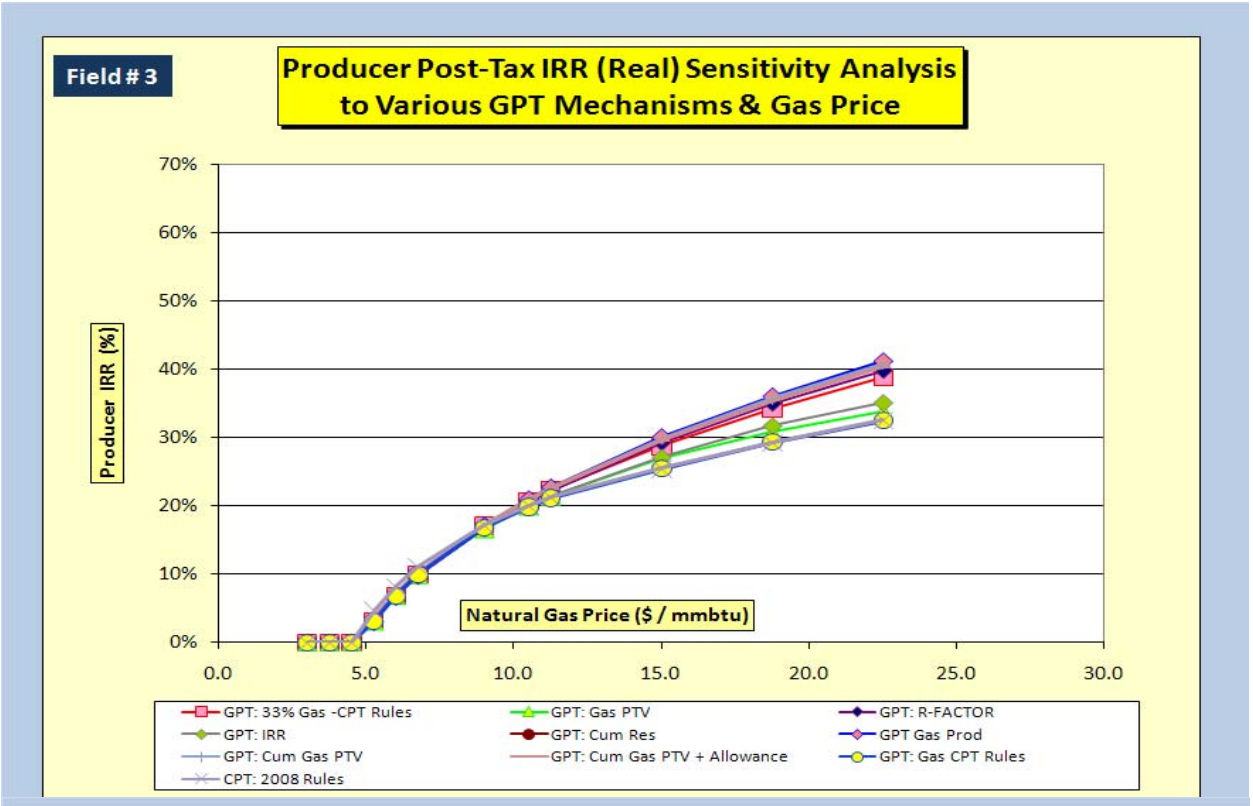
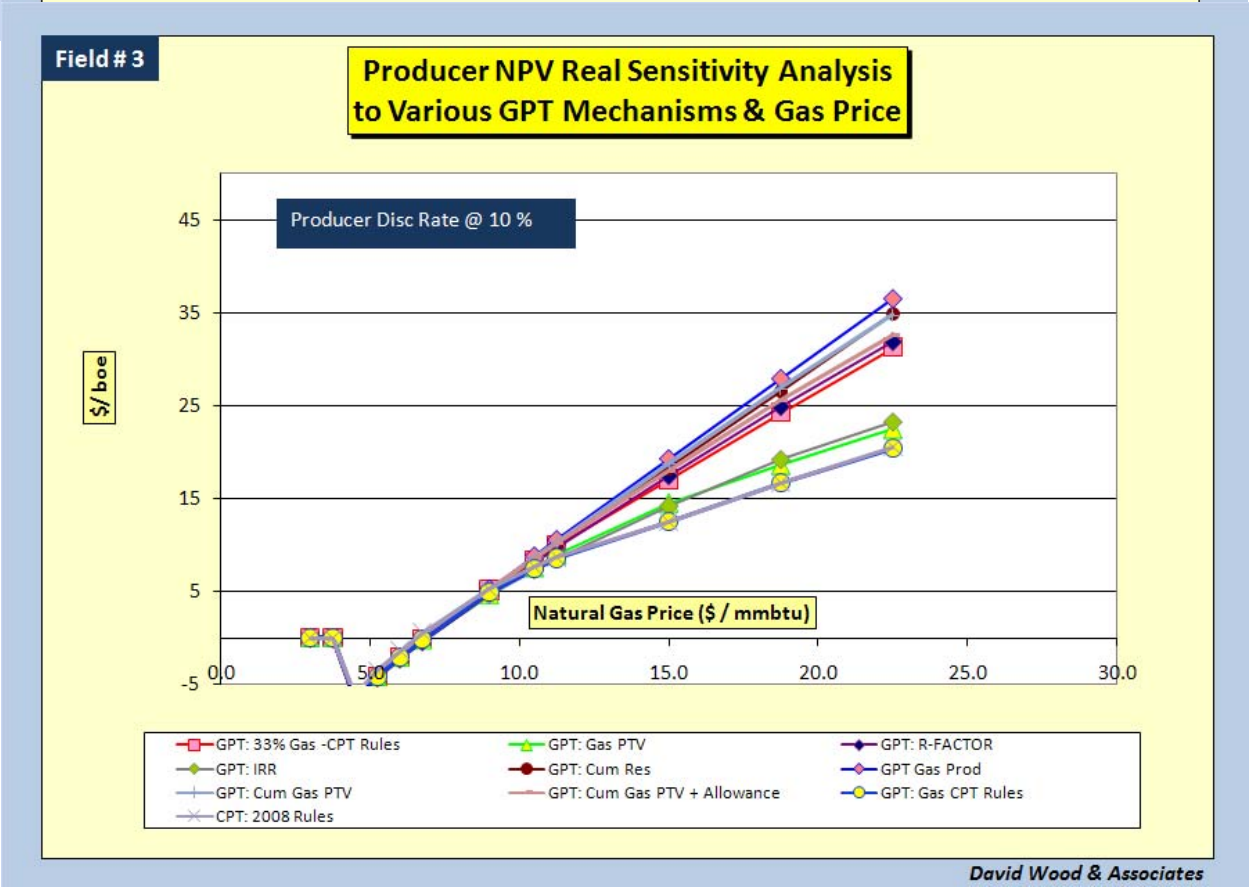

Field # 3
Producer Post-Tax IRR (Real) Sensitivity Analysis to Various GPT Mechanisms & Gas Price
Producer IRR (%)
70%
60%
50%
40%
30%
20%
10%
0%
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 3
Producer NPV Real Sensitivity Analysis to Various GPT Mechanisms & Gas Price
Producer Disc Rate @ 10 %
$/ boe
45
35
25
15
5
-5
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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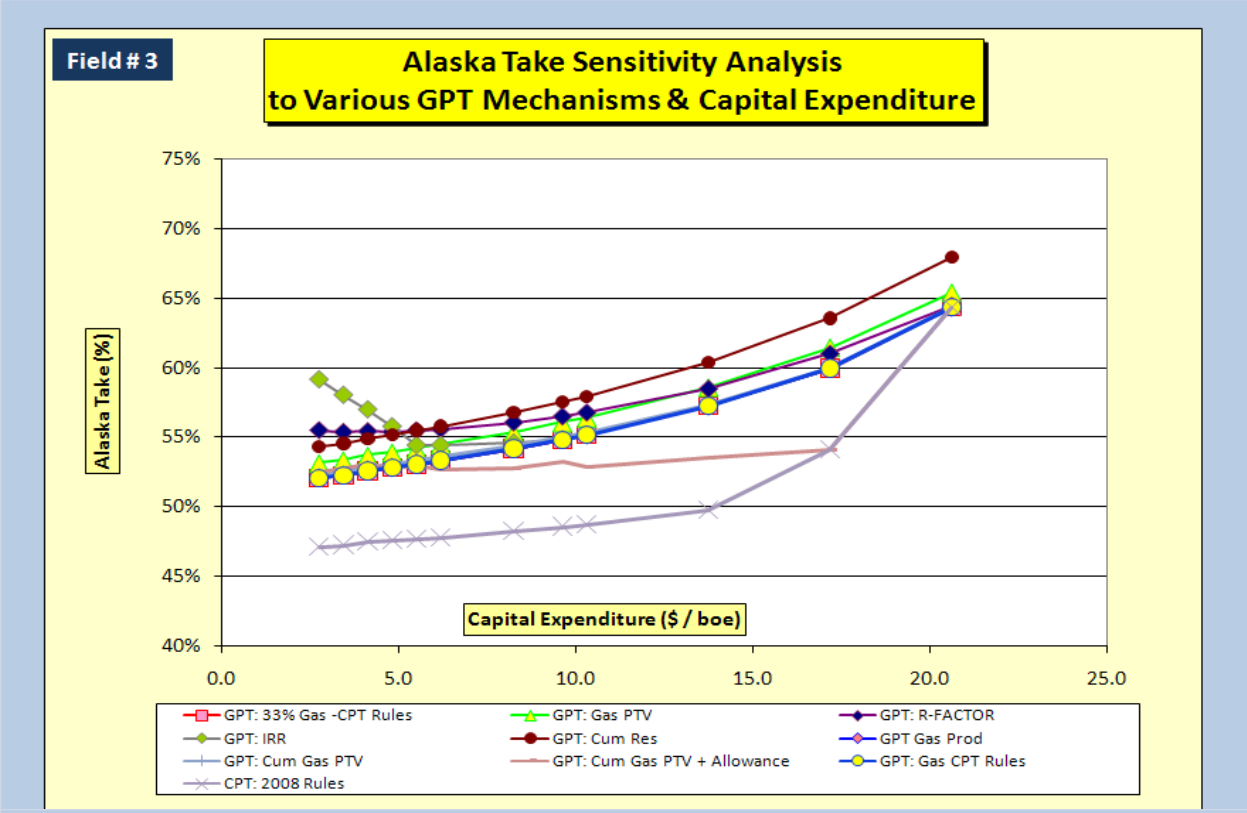
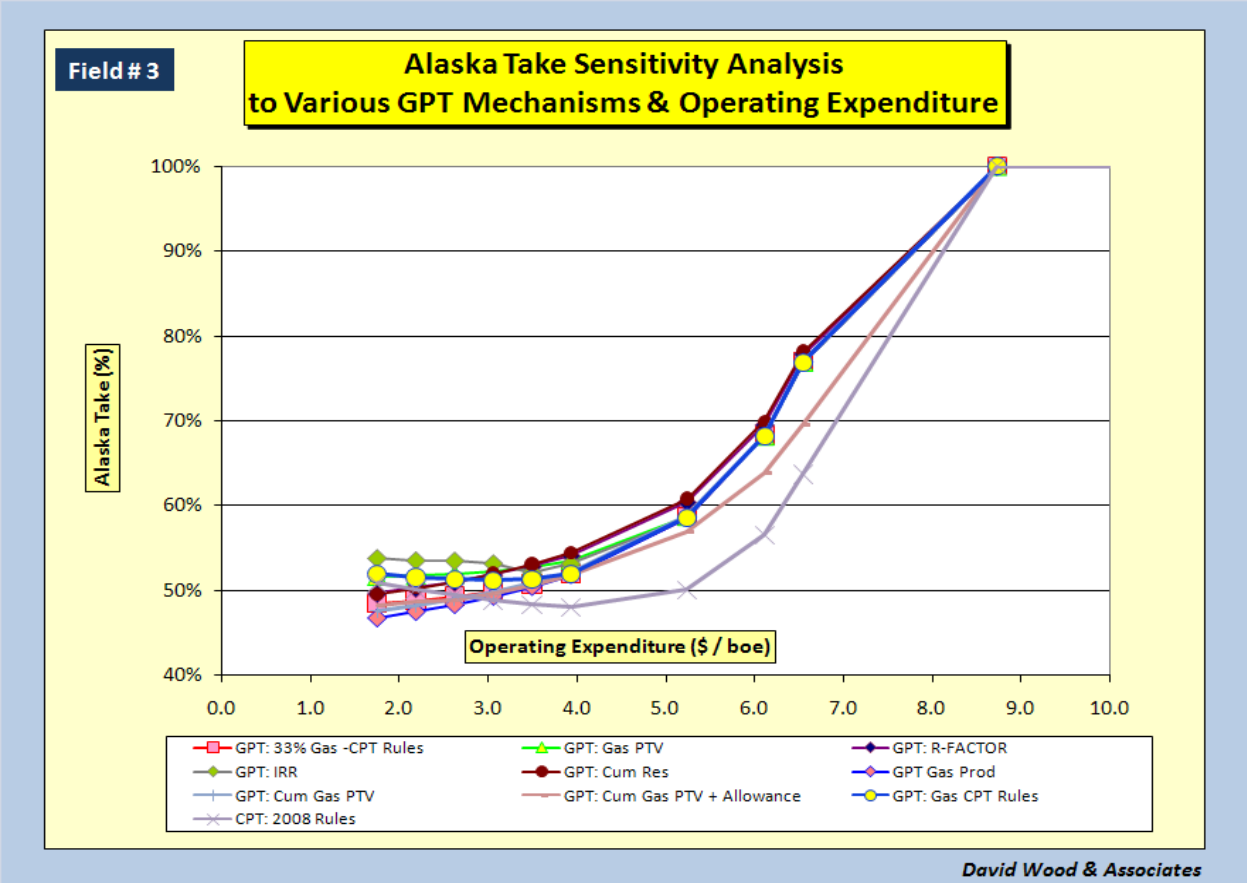

Field # 3
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Capital Expenditure
Alaska Take (%)
75%
70%
65%
60%
55%
50%
45%
40%
Capital Expenditure ($ / boe)
0.0
5.0
10.0
15.0
20.0
25.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 3
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Operating Expenditure
Alaska Take (%)
100%
90%
80%
70%
60%
50%
40%
Operating Expenditure ($ / boe)
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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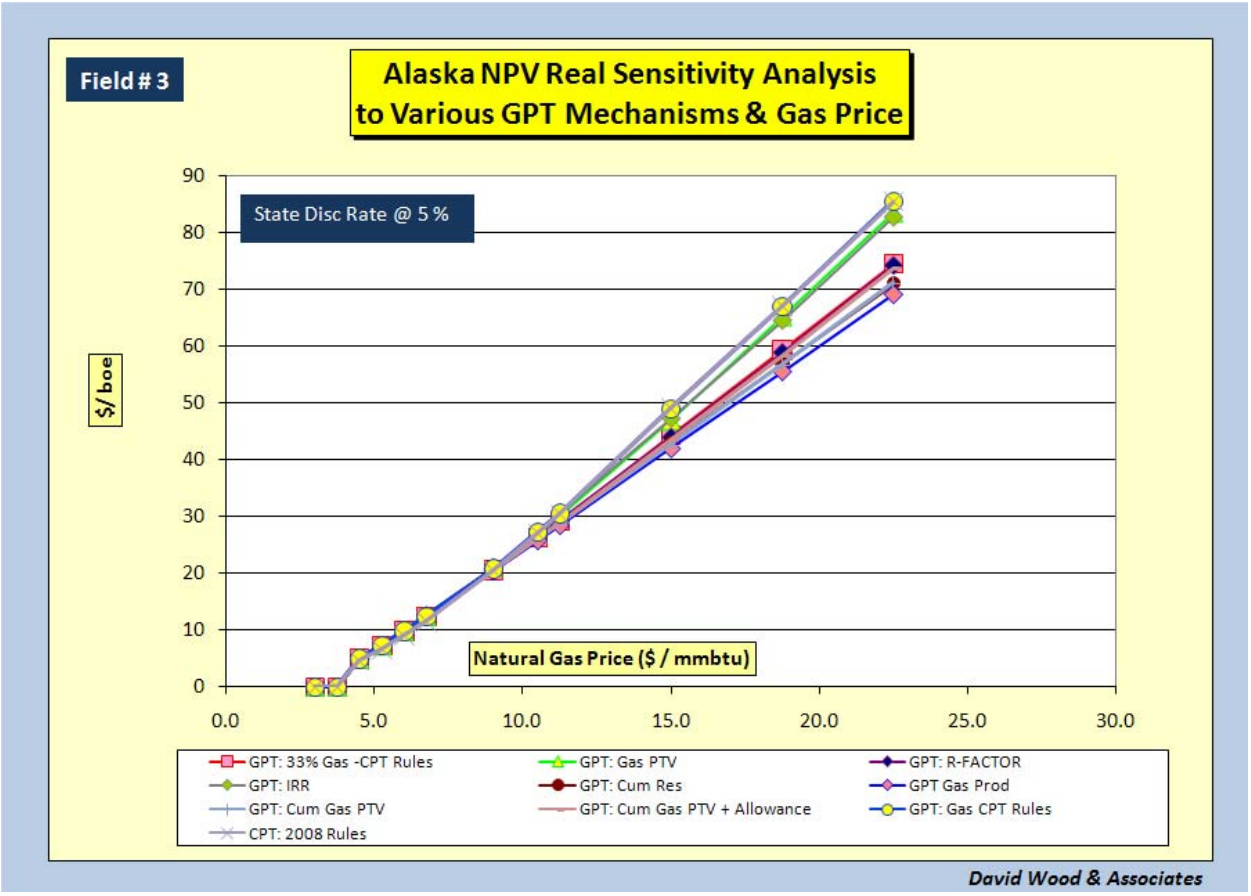
Field # 3
Alaska NPV Real Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
State Disc Rate @ 5 %
$/ boe
Natural Gas Price ($ / mmbtu)
0
10
20
30
40
50
60
70
80
90
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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Gas Field #4 (941 million boe produced)

Model Field Number:	4	Base Case Gas Reserves Produced:	4994.5 bcf	Cpy Disc Rate Applied:	10.0%	State Disc Rate Applied	5.0%

Sensitivity Analysis - changing selected input metrics by a factor to analyse field profitability

Input Variables	Base Case =1.00	1.00	0.40	0.50	0.60	0.70	0.80	0.90	1.20	1.40	1.50	2.00	2.50	3.00
Year 1 Gas Price ($/mmbtu)		8	3.0	3.8	4.5	5.3	6.0	6.8	9.0	10.5	11.3	15.0	18.8	22.5
Year 1 Oil Price ($ / Barrel)	Field # 4	80	32.0	40.0	48.0	56.0	64.0	72.0	96.0	112.0	120.0	160.0	200.0	240.0
Condensate Yield (barrels/mmcf)		20.0	8.0	10.0	12.0	14.0	16.0	18.0	24.0	28.0	30.0	40.0	50.0	60.0
Gas TT&T ($/ mcf)		4.5	1.8	2.3	2.7	3.2	3.6	4.1	5.4	6.3	6.8	9.0	11.3	13.5
Total Capex ($/boe)		4.37	1.75	2.18	2.62	3.06	3.49	3.93	5.24	6.12	6.55	8.74	10.92	13.11
Total Opex ($/boe)		3.05	1.22	1.52	1.83	2.13	2.44	2.74	3.66	4.27	4.57	6.10	7.62	9.14
Production Startup Accelerated (-) or Delayed (+) by Years		6					-2.0	-1.0	1.0	2.0	3.0			
Producer Base Case NPV Real $ millions:		1,508												
		1,508												

Gas Price ($/mmbtu) →

Total Government Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	68.5%	100.0%	100.0%	85.5%	76.5%	72.5%	70.1%	67.2%	66.9%	66.9%	67.6%	67.7%	68.0%
GPT: Gas PTV	Field # 4 %	69.4%	100.0%	100.0%	85.5%	76.5%	72.5%	70.4%	68.8%	69.0%	69.3%	71.8%	74.7%	76.2%
GPT: R-FACTOR	%	70.6%	100.0%	100.0%	85.6%	77.3%	73.7%	71.8%	69.3%	68.8%	68.7%	68.9%	69.7%	70.6%
GPT: IRR	%	71.2%	100.0%	100.0%	85.5%	76.5%	72.7%	70.8%	71.6%	72.2%	72.7%	74.4%	76.2%	77.6%
GPT: Cum Res	%	76.7%	100.0%	100.0%	86.1%	81.1%	78.9%	77.6%	75.7%	75.1%	74.9%	74.2%	73.9%	73.7%
GPT Gas Prod	%	75.3%	100.0%	100.0%	86.1%	80.4%	77.8%	76.3%	74.1%	73.4%	73.2%	72.4%	72.0%	71.8%
GPT: Cum Gas PTV	%	69.7%	100.0%	100.0%	85.5%	76.6%	72.8%	70.8%	68.8%	68.7%	68.8%	70.1%	72.1%	74.4%
GPT: Cum Gas PTV + Allowance	%	71.2%	100.0%	100.0%	83.5%	75.2%	72.6%	71.4%	71.5%	72.9%	73.7%	77.5%	79.5%	80.8%
GPT: Gas CPT Rules	%	68.5%	100.0%	100.0%	85.5%	76.5%	72.5%	70.1%	68.3%	69.6%	70.4%	75.0%	76.7%	78.1%
CPT: 2008 Rules	%	65.5%	100.0%	98.0%	71.6%	67.8%	66.1%	65.2%	67.1%	69.0%	70.1%	75.1%	76.6%	78.0%
[Take of mod Cash flow on Undiscounted basis]		65.5%												

Gas Price ($/mmbtu) →

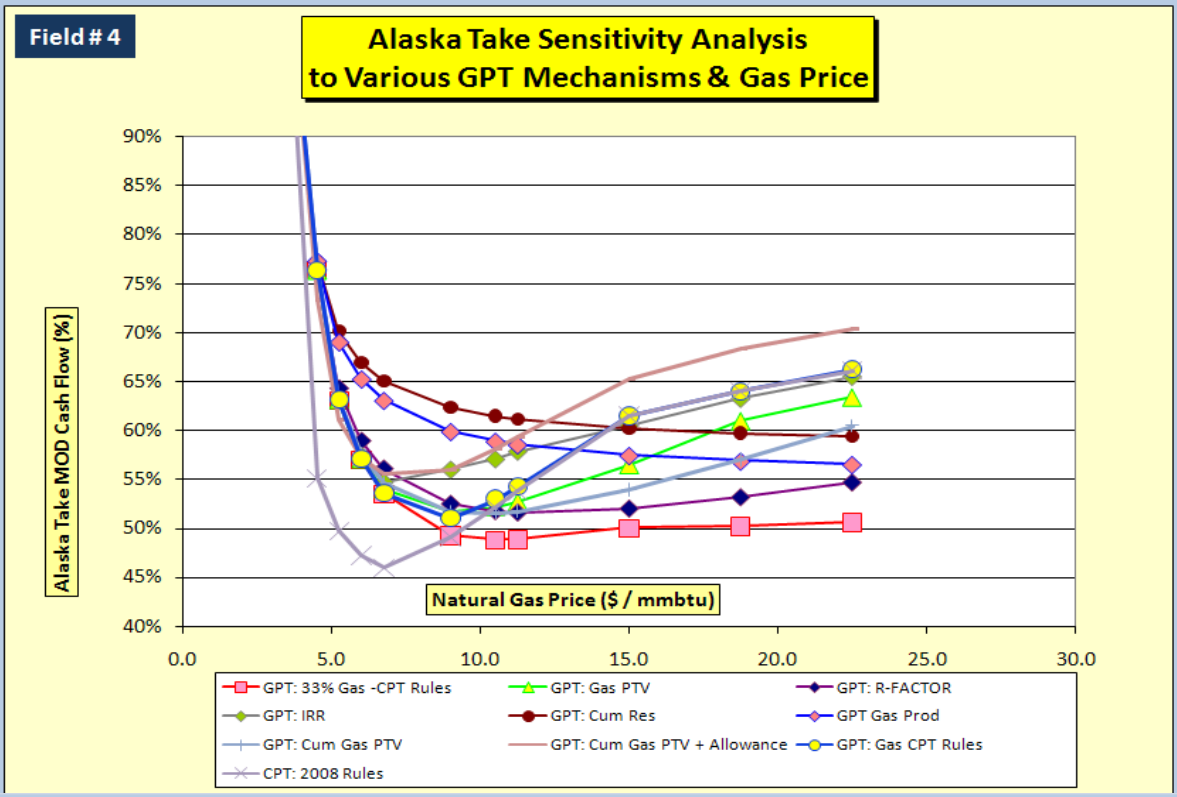
Total Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	51.3%	100.0%	100.0%	76.4%	63.1%	57.1%	53.6%	49.3%	48.9%	48.9%	50.1%	50.3%	50.6%
GPT: Gas PTV	%	52.6%	100.0%	100.0%	76.4%	63.1%	57.1%	54.0%	51.7%	52.2%	52.7%	56.5%	61.0%	63.4%
GPT: R-FACTOR	Field # 4 %	54.4%	100.0%	100.0%	76.5%	64.4%	59.0%	56.2%	52.6%	51.8%	51.7%	52.1%	53.2%	54.8%
GPT: IRR	%	55.4%	100.0%	100.0%	76.4%	63.1%	57.4%	54.7%	56.0%	57.1%	57.8%	60.5%	63.3%	65.5%
GPT: Cum Res	%	63.9%	100.0%	100.0%	77.3%	70.2%	67.0%	65.1%	62.4%	61.5%	61.2%	60.2%	59.7%	59.4%
GPT Gas Prod	%	61.6%	100.0%	100.0%	77.3%	69.0%	65.3%	63.1%	59.9%	58.9%	58.6%	57.4%	56.9%	56.5%
GPT: Cum Gas PTV	%	53.0%	100.0%	100.0%	76.4%	63.2%	57.6%	54.7%	51.7%	51.6%	51.8%	54.0%	57.0%	60.5%
GPT: Cum Gas PTV + Allowance	%	55.4%	100.0%	100.0%	73.4%	61.1%	57.2%	55.6%	56.0%	58.2%	59.4%	65.3%	68.4%	70.4%
GPT: Gas CPT Rules	%	51.3%	100.0%	100.0%	76.4%	63.1%	57.1%	53.6%	51.0%	53.0%	54.2%	61.5%	64.0%	66.3%
CPT: 2008 Rules	%	46.6%	100.0%	93.9%	55.1%	49.7%	47.3%	46.0%	49.1%	52.2%	53.8%	61.5%	64.0%	66.1%
[Take of mod Cash flow on Undiscounted basis]		46.6%												

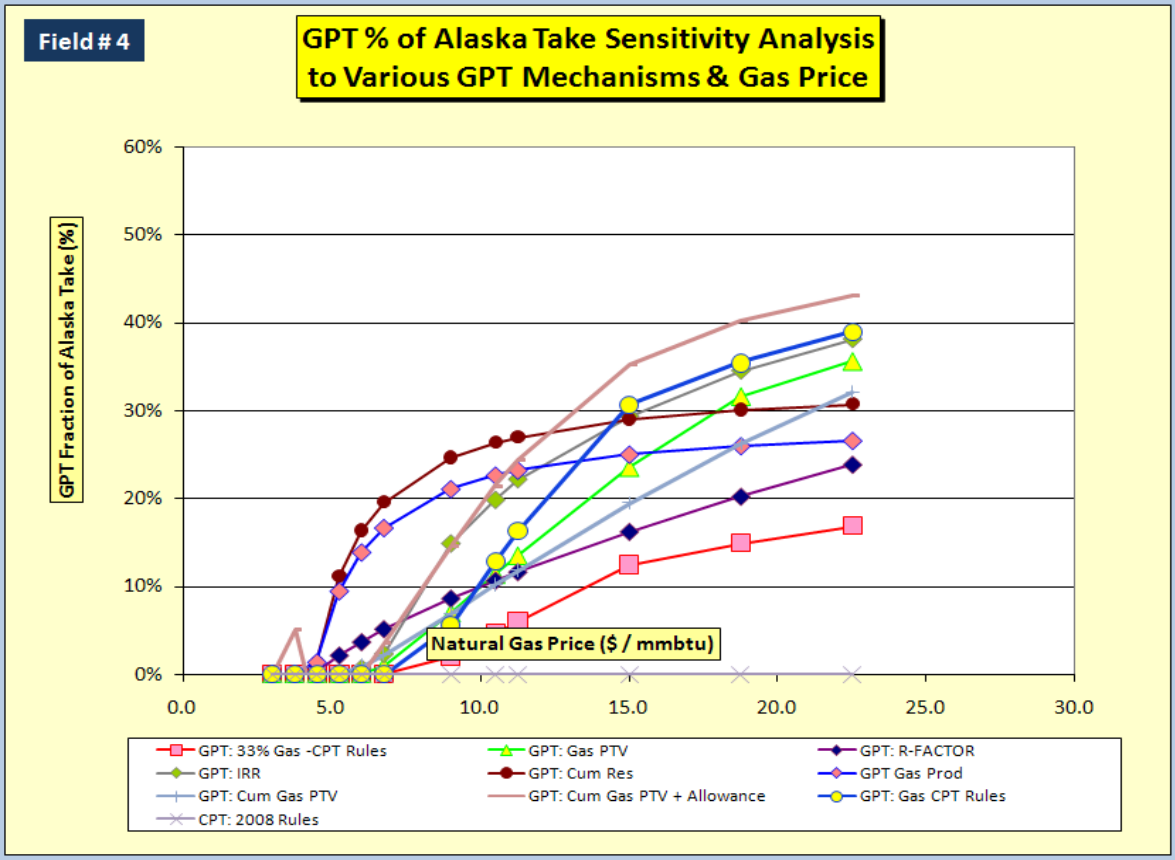
Gas Price ($/mmbtu) →

Alaska NPV Real ($/boe) to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	$/boe	16.8	0.0	3.9	6.1	8.7	11.4	14.1	22.4	28.1	31.1	46.3	61.4	76.6
GPT: Gas PTV	$/boe	17.0	0.0	3.9	6.1	8.7	11.4	14.2	22.9	29.0	32.2	49.1	67.6	85.9
GPT: R-FACTOR	Field # 4 $/boe	17.2	0.0	3.9	6.1	8.8	11.6	14.4	23.0	28.8	31.8	47.0	62.6	78.8
GPT: IRR	$/boe	17.3	0.0	3.9	6.1	8.7	11.4	14.2	23.7	30.2	33.6	50.7	68.8	87.2
GPT: Cum Res	$/boe	18.6	0.0	3.9	6.2	9.2	12.3	15.5	24.9	31.2	34.3	50.1	65.9	81.7
GPT Gas Prod	$/boe	18.5	0.0	3.9	6.2	9.2	12.3	15.4	24.7	31.0	34.1	49.8	65.5	81.2
GPT: Cum Gas PTV	$/boe	17.0	0.0	3.9	6.1	8.7	11.5	14.2	22.8	28.7	31.8	47.5	64.4	82.2
GPT: Cum Gas PTV + Allowance	$/boe	17.3	0.0	4.1	6.0	8.6	11.4	14.3	23.5	30.3	33.7	52.0	70.6	89.6
GPT: Gas CPT Rules	$/boe	16.8	0.0	3.9	6.1	8.7	11.4	14.1	22.7	29.2	32.7	51.4	69.5	88.1
CPT: 2008 Rules	$/boe	16.0	0.0	3.1	5.2	7.8	10.4	13.1	22.3	29.0	32.5	51.4	69.5	87.9
		16.0												

Gas Price ($/mmbtu) →

GPT % Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	4.6%	6.0%	12.4%	14.9%	16.8%
GPT: Gas PTV	%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	6.9%	11.3%	13.5%	23.5%	31.6%	35.6%
GPT: R-FACTOR	Field # 4 %	6.3%	0.0%	0.0%	0.2%	2.1%	3.6%	5.1%	8.6%	10.6%	11.6%	16.2%	20.2%	23.9%
GPT: IRR	%	8.2%	0.0%	0.0%	0.0%	0.0%	0.6%	2.3%	14.8%	19.8%	22.1%	29.3%	34.5%	38.1%
GPT: Cum Res	%	21.8%	0.0%	0.0%	1.3%	11.1%	16.3%	19.6%	24.6%	26.3%	27.0%	29.0%	30.0%	30.7%
GPT Gas Prod	%	18.6%	0.0%	0.0%	1.3%	9.4%	13.8%	16.6%	21.1%	22.6%	23.2%	25.0%	26.0%	26.6%
GPT: Cum Gas PTV	%	3.7%	0.0%	0.0%	0.0%	0.1%	1.0%	2.2%	6.9%	10.2%	11.8%	19.5%	26.2%	32.1%
GPT: Cum Gas PTV + Allowance	%	7.8%	0.0%	5.1%	-4.7%	-4.1%	-0.1%	3.6%	14.6%	21.4%	24.3%	35.2%	40.1%	43.1%
GPT: Gas CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	12.8%	16.3%	30.6%	35.4%	38.9%
CPT: 2008 Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		0.0%												





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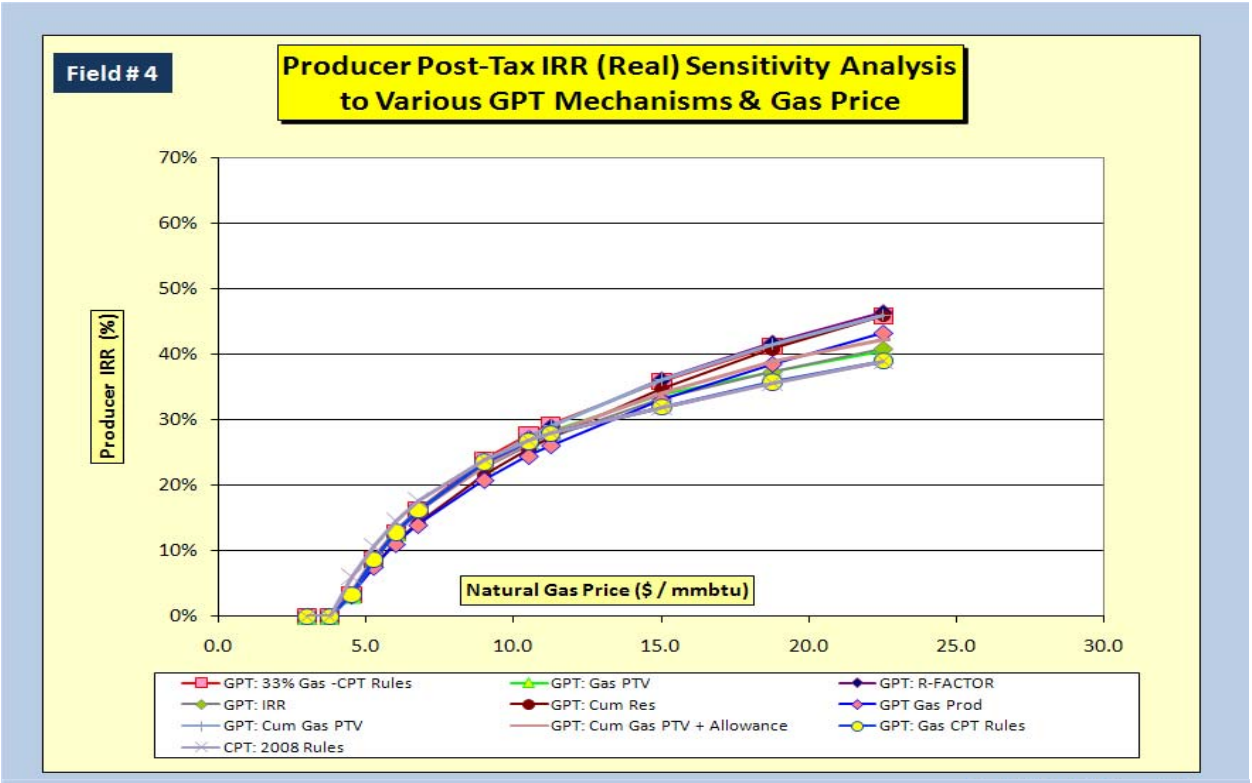
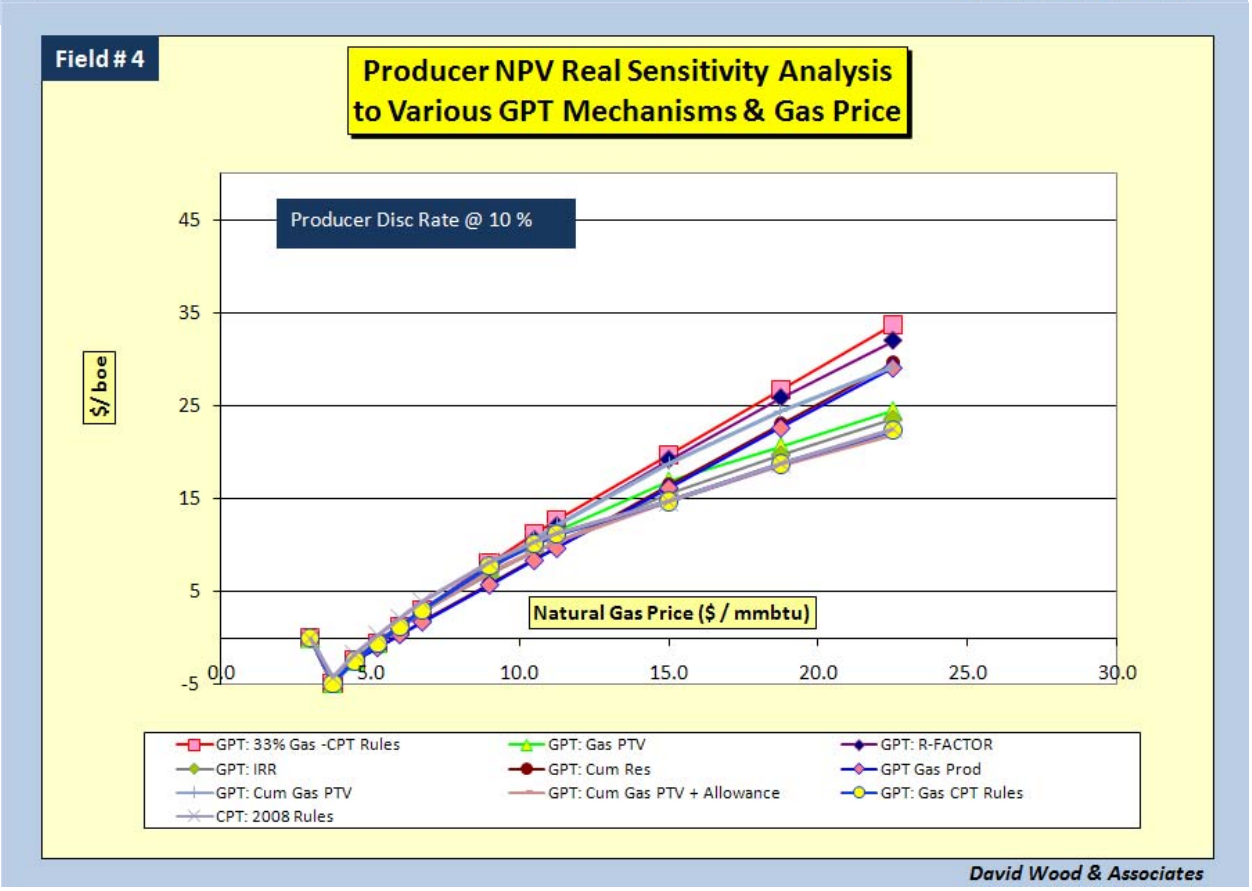

Field # 4
Producer Post-Tax IRR (Real) Sensitivity Analysis to Various GPT Mechanisms & Gas Price
Producer IRR (%)
70%
60%
50%
40%
30%
20%
10%
0%
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 4
Producer NPV Real Sensitivity Analysis to Various GPT Mechanisms & Gas Price
Producer Disc Rate @ 10 %
$/ boe
45
35
25
15
5
-5
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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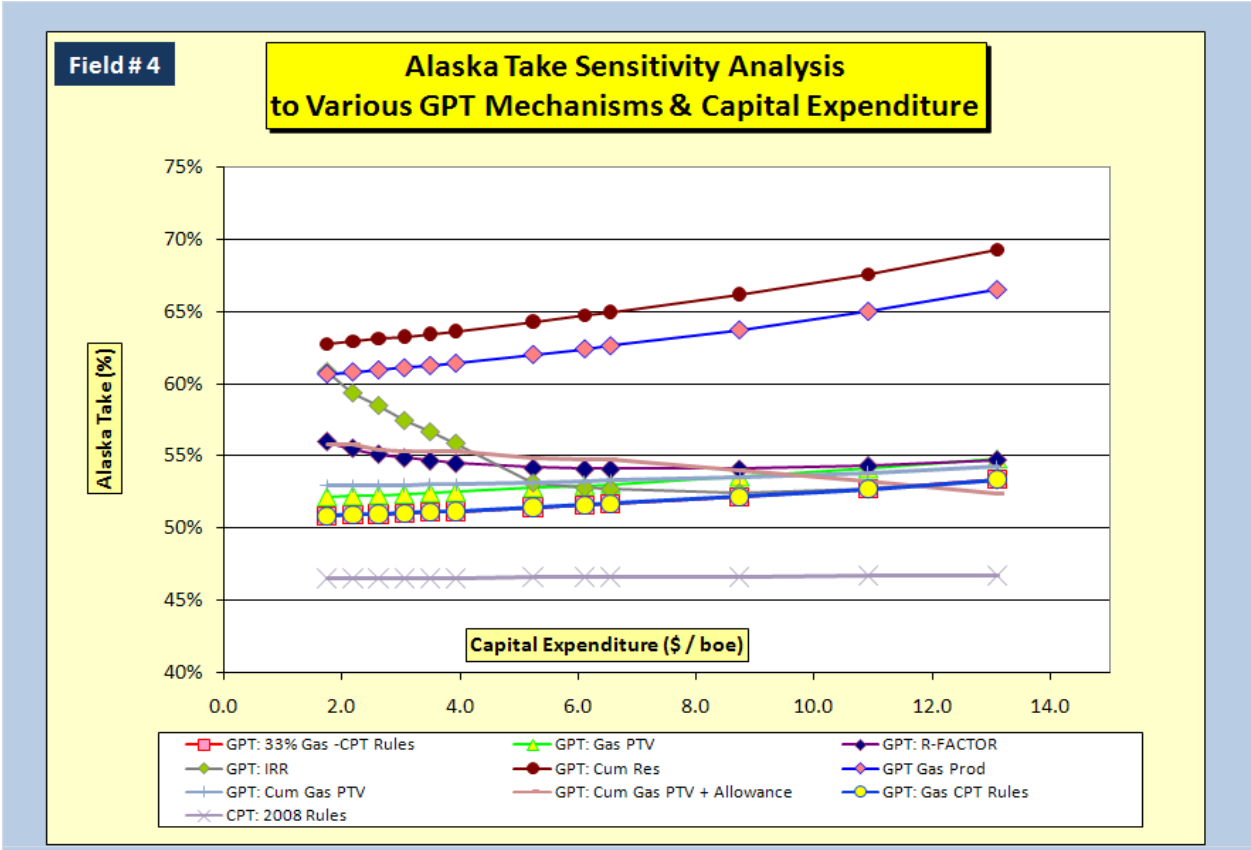
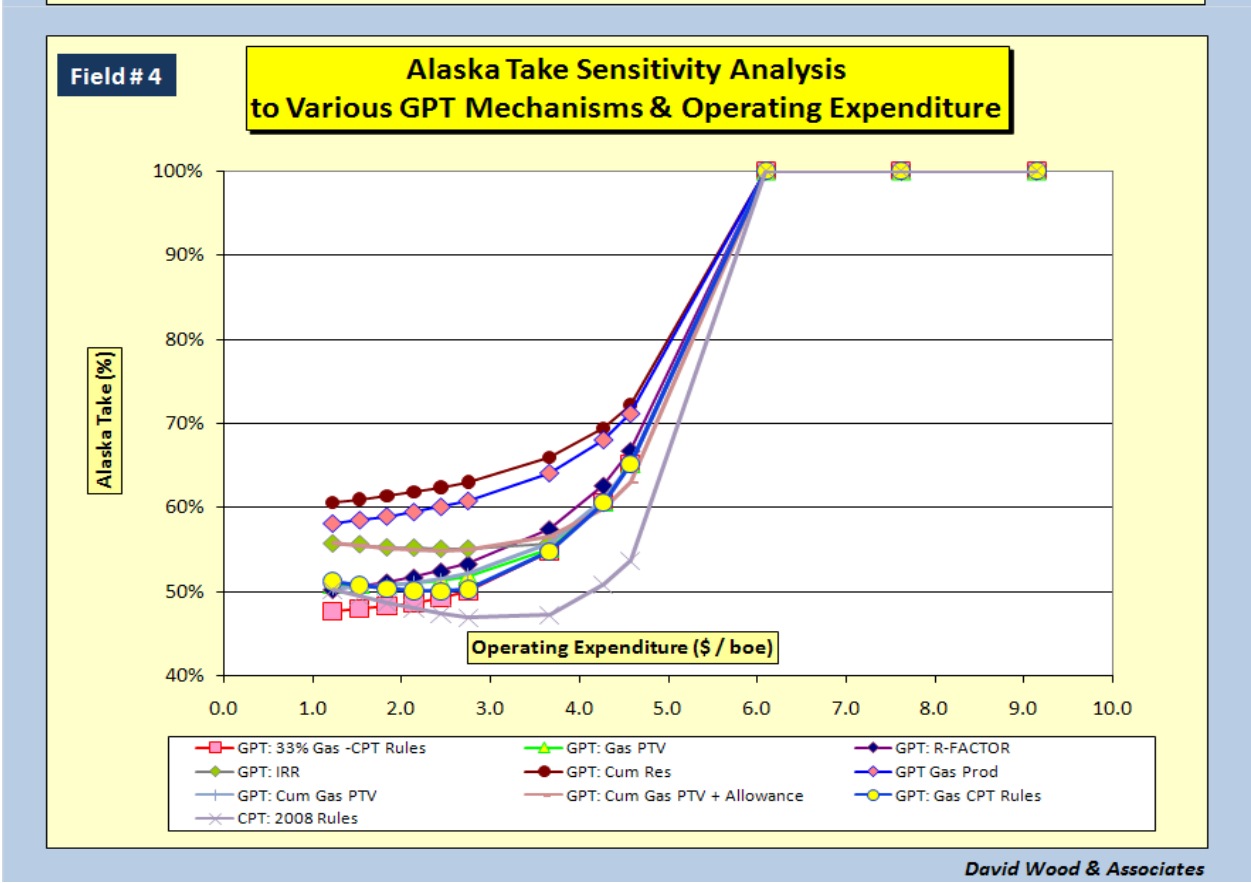
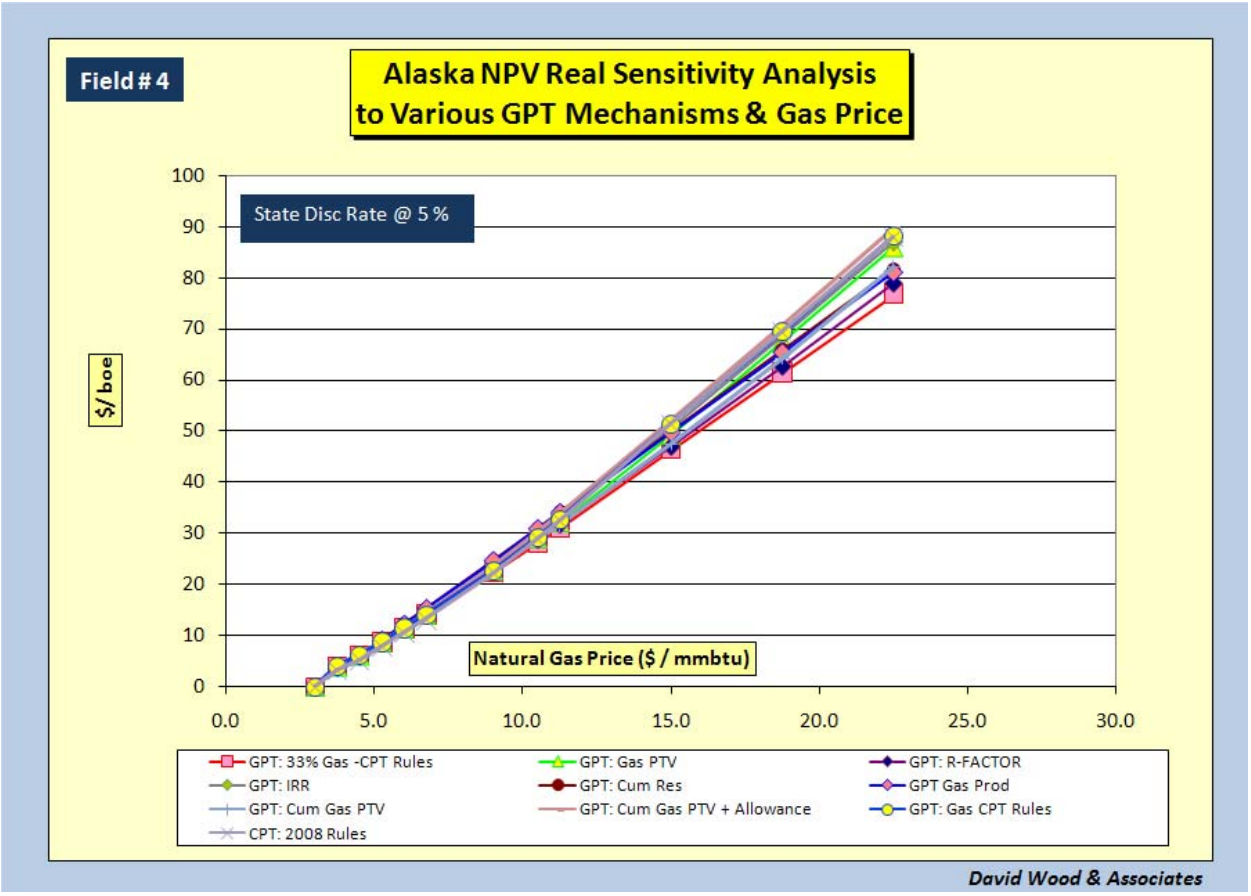

Field # 4
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Capital Expenditure
Alaska Take (%)
75%
70%
65%
60%
55%
50%
45%
40%
Capital Expenditure ($ / boe)
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 4
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Operating Expenditure
Alaska Take (%)
100%
90%
80%
70%
60%
50%
40%
Operating Expenditure ($ / boe)
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
David Wood & Associates


Field # 4
Alaska NPV Real Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
State Disc Rate @ 5 %
$/ boe
Natural Gas Price ($ / mmbtu)
100
90
80
70
60
50
40
30
20
10
0
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
David Wood & Associates

Gas Field #5 (1861 million boe produced)

Model Field Number:	5	Base Case Gas Reserves Produced:	9879.7 bcf	Cpy Disc Rate Applied:	10.0%	State Disc Rate Applied	5.0%

Sensitivity Analysis - changing selected input metrics by a factor to analyse field profitability

Input Variables	Base Case =1.00	1.00	0.40	0.50	0.60	0.70	0.80	0.90	1.20	1.40	1.50	2.00	2.50	3.00
Year 1 Gas Price ($/mmbtu)		8	3.0	3.8	4.5	5.3	6.0	6.8	9.0	10.5	11.3	15.0	18.8	22.5
Year 1 Oil Price ($ / Barrel)	Field # 5	80	32.0	40.0	48.0	56.0	64.0	72.0	96.0	112.0	120.0	160.0	200.0	240.0
Condensate Yield (barrels/mmcf)		20.0	8.0	10.0	12.0	14.0	16.0	18.0	24.0	28.0	30.0	40.0	50.0	60.0
Gas TT&T ($/ mcf)		4.5	1.8	2.3	2.7	3.2	3.6	4.1	5.4	6.3	6.8	9.0	11.3	13.5
Total Capex ($/boe)		4.35	1.74	2.17	2.61	3.04	3.48	3.91	5.22	6.09	6.52	8.70	10.87	13.05
Total Opex ($/boe)		2.46	0.98	1.23	1.48	1.72	1.97	2.21	2.95	3.44	3.69	4.92	6.15	7.38
Production Startup Accelerated (-) or Delayed (+) by Years		6					-2.0	-1.0	1.0	2.0	3.0			
Producer Base Case NPV Real $ millions:		2,374												
		2,374												

Gas Price ($/mmbtu) →

Total Government Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	68.4%	100.0%	100.0%	83.3%	75.6%	71.9%	69.8%	67.2%	67.0%	67.0%	67.7%	67.8%	68.1%
GPT: Gas PTV	Field # 5 %	69.3%	100.0%	100.0%	83.3%	75.6%	71.9%	70.2%	68.9%	69.3%	69.6%	72.3%	75.0%	76.6%
GPT: R-FACTOR	%	70.6%	100.0%	100.0%	83.5%	76.5%	73.4%	71.6%	69.5%	69.1%	69.1%	69.4%	70.4%	71.5%
GPT: IRR	%	70.5%	100.0%	100.0%	83.3%	75.6%	72.1%	70.5%	71.2%	71.8%	72.2%	73.9%	75.6%	77.1%
GPT: Cum Res	%	84.4%	100.0%	100.0%	85.6%	85.0%	84.7%	84.5%	84.3%	84.2%	84.2%	84.1%	84.1%	84.1%
GPT Gas Prod	%	78.0%	100.0%	100.0%	84.8%	81.3%	79.6%	78.6%	77.2%	76.8%	76.6%	76.1%	75.9%	75.7%
GPT: Cum Gas PTV	%	70.8%	100.0%	100.0%	83.3%	75.8%	72.7%	71.3%	71.0%	72.0%	72.6%	76.6%	79.3%	80.9%
GPT: Cum Gas PTV + Allowance	%	74.2%	100.0%	100.0%	81.4%	74.9%	73.3%	73.3%	76.9%	78.7%	79.4%	81.4%	82.3%	82.9%
GPT: Gas CPT Rules	%	68.5%	100.0%	100.0%	83.3%	75.6%	71.9%	69.8%	68.7%	70.0%	70.9%	75.3%	77.0%	78.5%
CPT: 2008 Rules	%	65.8%	100.0%	86.9%	70.3%	67.2%	65.6%	65.2%	67.6%	69.7%	70.8%	75.3%	76.9%	78.4%
[Take of mod Cash flow on Undiscounted basis]		65.8%												

Gas Price ($/mmbtu) →

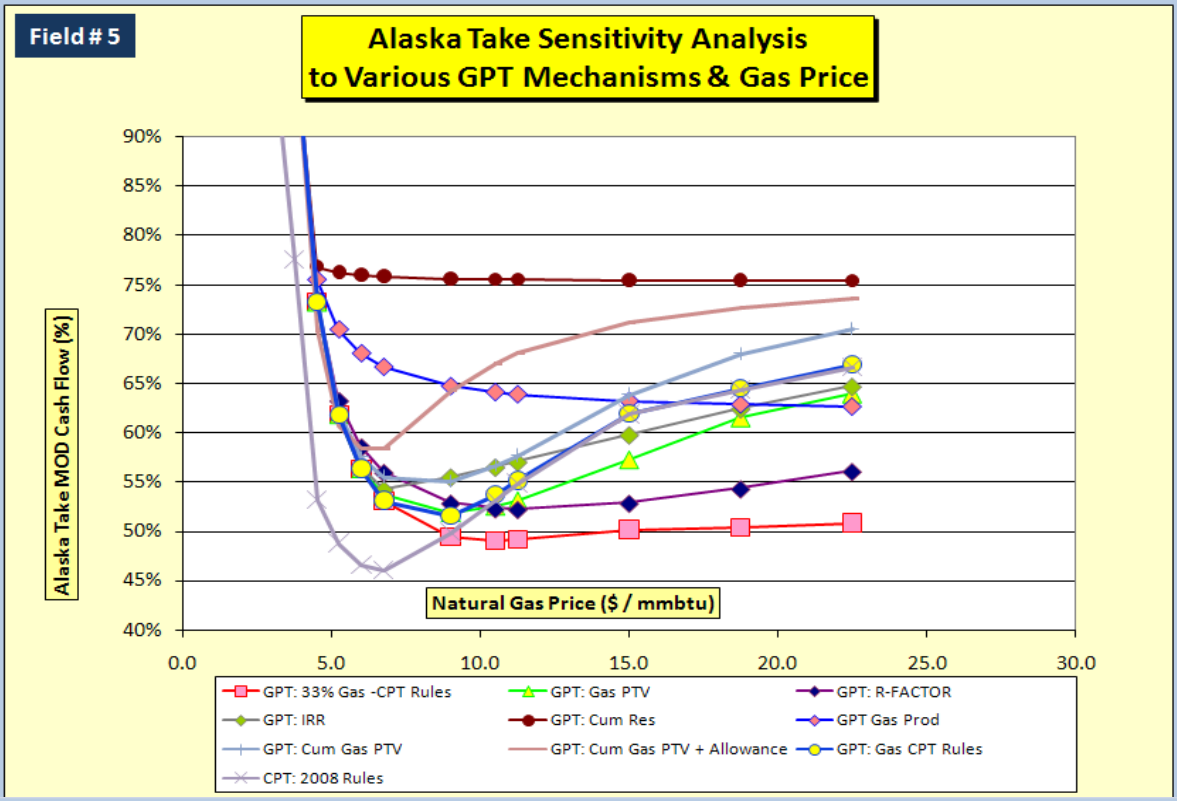
Total Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	51.0%	100.0%	100.0%	73.2%	61.8%	56.3%	53.1%	49.4%	49.0%	49.1%	50.2%	50.4%	50.8%
GPT: Gas PTV	%	52.5%	100.0%	100.0%	73.2%	61.8%	56.3%	53.7%	51.9%	52.5%	53.1%	57.3%	61.5%	63.9%
GPT: R-FACTOR	Field # 5 %	54.4%	100.0%	100.0%	73.6%	63.2%	58.6%	56.0%	52.9%	52.3%	52.2%	52.8%	54.3%	56.1%
GPT: IRR	%	54.3%	100.0%	100.0%	73.2%	61.8%	56.6%	54.2%	55.5%	56.5%	57.0%	59.8%	62.4%	64.7%
GPT: Cum Res	%	75.8%	100.0%	100.0%	76.8%	76.2%	76.0%	75.8%	75.6%	75.5%	75.5%	75.5%	75.4%	75.4%
GPT Gas Prod	%	65.8%	100.0%	100.0%	75.6%	70.5%	68.1%	66.7%	64.7%	64.1%	63.9%	63.2%	62.8%	62.6%
GPT: Cum Gas PTV	%	54.8%	100.0%	100.0%	73.2%	62.1%	57.5%	55.5%	55.1%	56.7%	57.7%	63.9%	68.0%	70.5%
GPT: Cum Gas PTV + Allowance	%	60.0%	100.0%	100.0%	70.4%	60.7%	58.5%	58.5%	64.3%	67.1%	68.1%	71.3%	72.7%	73.6%
GPT: Gas CPT Rules	%	51.2%	100.0%	100.0%	73.2%	61.8%	56.3%	53.1%	51.6%	53.7%	55.1%	61.9%	64.5%	66.9%
CPT: 2008 Rules	%	47.1%	100.0%	77.6%	53.2%	48.8%	46.6%	46.1%	49.9%	53.2%	54.9%	61.9%	64.4%	66.7%
[Take of mod Cash flow on Undiscounted basis]		47.1%												

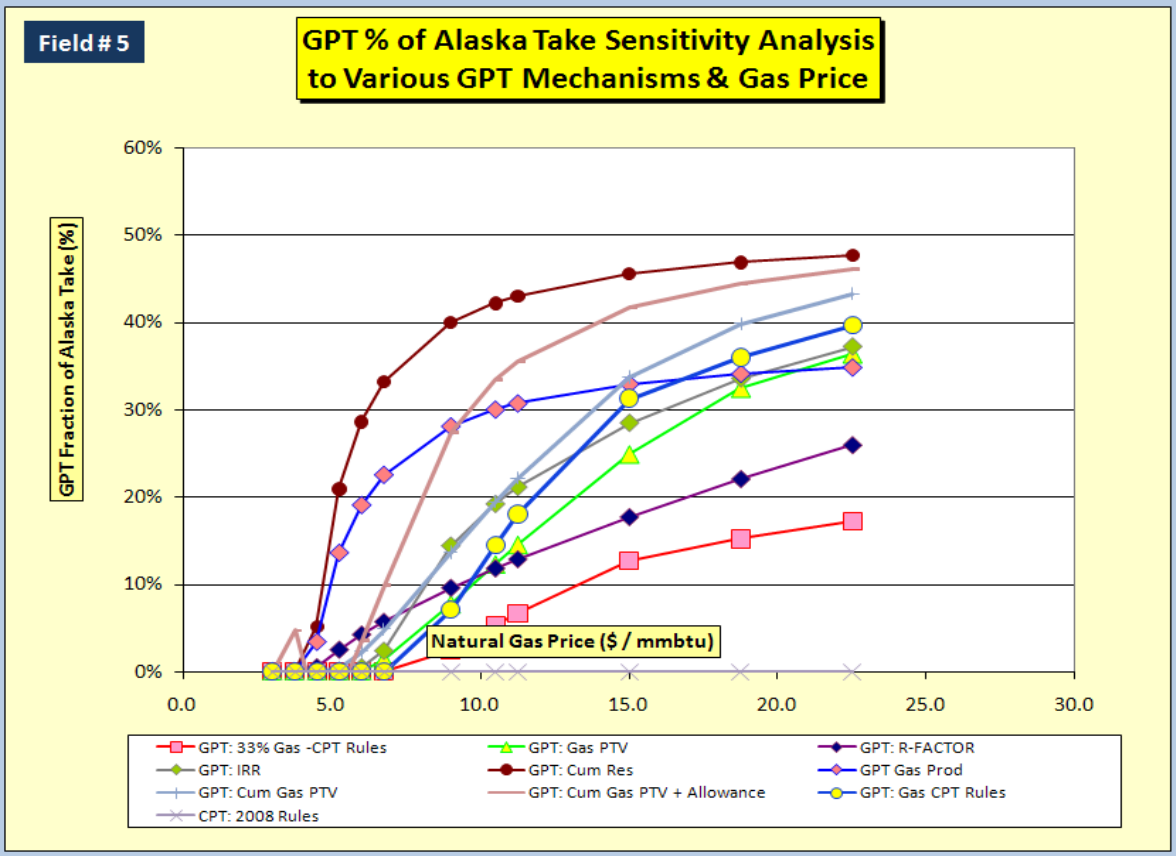
Gas Price ($/mmbtu) →

Alaska NPV Real ($/boe) to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	$/boe	16.9	0.0	4.0	6.3	8.9	11.5	14.2	22.5	28.3	31.2	46.5	61.5	76.8
GPT: Gas PTV	$/boe	17.1	0.0	4.0	6.3	8.9	11.5	14.3	23.0	29.2	32.4	49.5	67.9	86.2
GPT: R-FACTOR	Field # 5 $/boe	17.4	0.0	4.0	6.3	9.0	11.8	14.6	23.2	29.0	32.0	47.2	63.0	79.4
GPT: IRR	$/boe	17.3	0.0	4.0	6.3	8.9	11.6	14.3	23.7	30.2	33.5	50.5	68.3	86.6
GPT: Cum Res	$/boe	20.3	0.0	4.0	6.5	9.9	13.3	16.8	27.4	34.4	37.9	55.6	73.3	90.9
GPT Gas Prod	$/boe	19.4	0.0	4.0	6.4	9.6	12.8	16.1	26.0	32.6	35.9	52.5	69.2	85.8
GPT: Cum Gas PTV	$/boe	17.4	0.0	4.0	6.3	8.9	11.6	14.5	23.5	29.9	33.3	51.1	69.7	88.6
GPT: Cum Gas PTV + Allowance	$/boe	18.0	0.0	4.2	6.2	8.8	11.7	14.7	25.1	32.4	36.0	54.7	73.4	92.2
GPT: Gas CPT Rules	$/boe	16.9	0.0	4.0	6.3	8.9	11.5	14.2	22.9	29.5	33.0	51.6	69.7	88.4
CPT: 2008 Rules	$/boe	16.3	0.0	3.3	5.4	8.0	10.6	13.3	22.6	29.3	32.9	51.6	69.7	88.3
		16.3												

Gas Price ($/mmbtu) →

GPT % Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	5.2%	6.7%	12.7%	15.2%	17.2%
GPT: Gas PTV	%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	7.7%	12.2%	14.5%	24.8%	32.4%	36.3%
GPT: R-FACTOR	Field # 5 %	7.0%	0.0%	0.0%	0.5%	2.5%	4.2%	5.7%	9.6%	11.8%	12.9%	17.7%	22.1%	25.9%
GPT: IRR	%	6.8%	0.0%	0.0%	0.0%	0.0%	0.5%	2.4%	14.4%	19.2%	21.1%	28.4%	33.5%	37.2%
GPT: Cum Res	%	36.1%	0.0%	0.0%	5.1%	20.9%	28.6%	33.1%	39.9%	42.1%	43.0%	45.5%	46.8%	47.6%
GPT Gas Prod	%	24.9%	0.0%	0.0%	3.4%	13.6%	19.0%	22.5%	28.0%	30.0%	30.7%	32.9%	34.1%	34.8%
GPT: Cum Gas PTV	%	7.7%	0.0%	0.0%	0.0%	0.4%	2.3%	4.8%	13.7%	19.4%	22.1%	33.7%	39.8%	43.3%
GPT: Cum Gas PTV + Allowance	%	16.3%	0.0%	4.8%	-4.5%	-2.5%	3.6%	9.9%	27.4%	33.5%	35.5%	41.6%	44.4%	46.1%
GPT: Gas CPT Rules	%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	14.4%	18.0%	31.3%	36.0%	39.6%
CPT: 2008 Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		0.0%												





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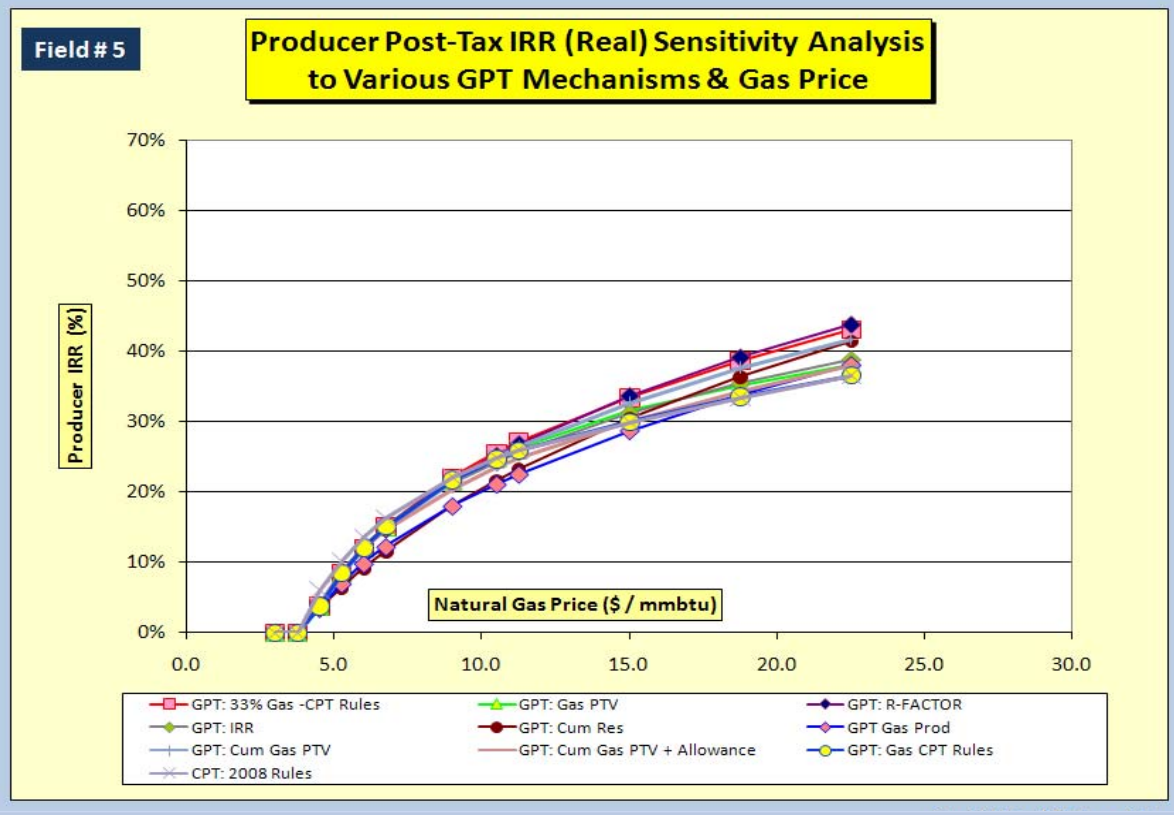

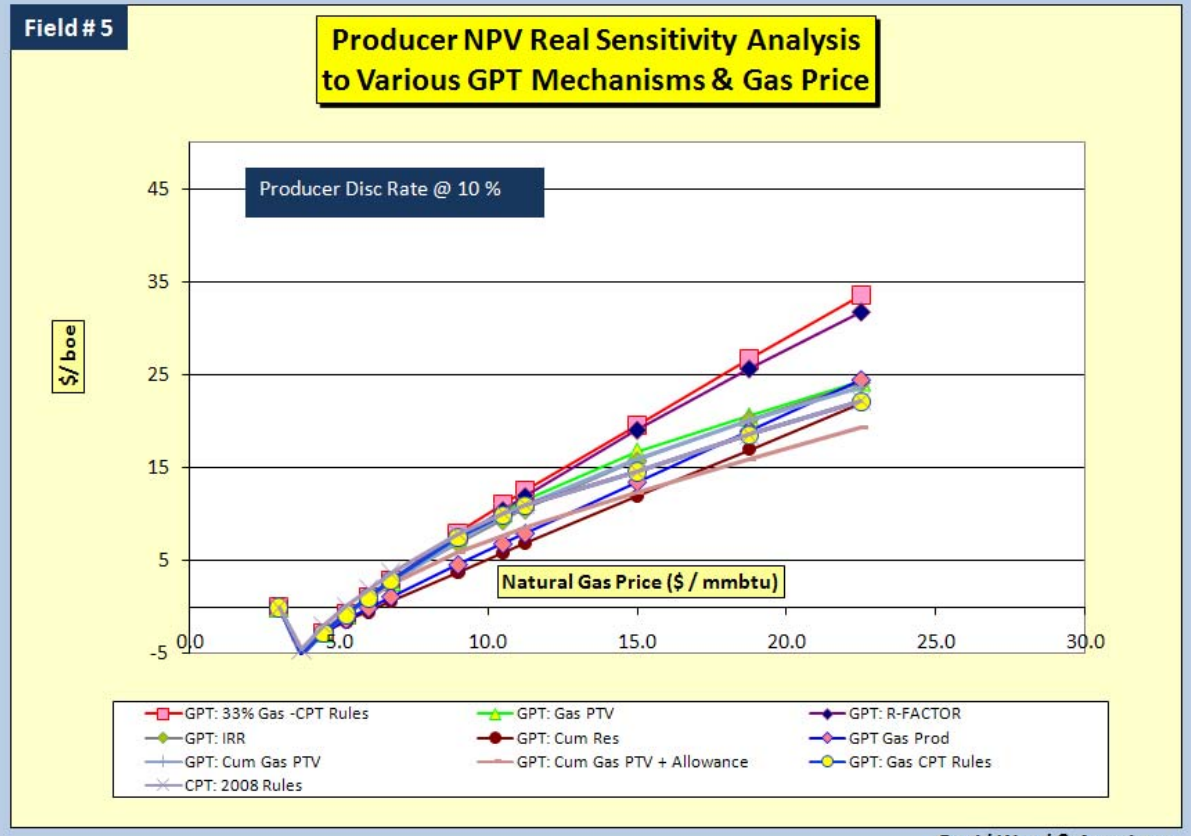

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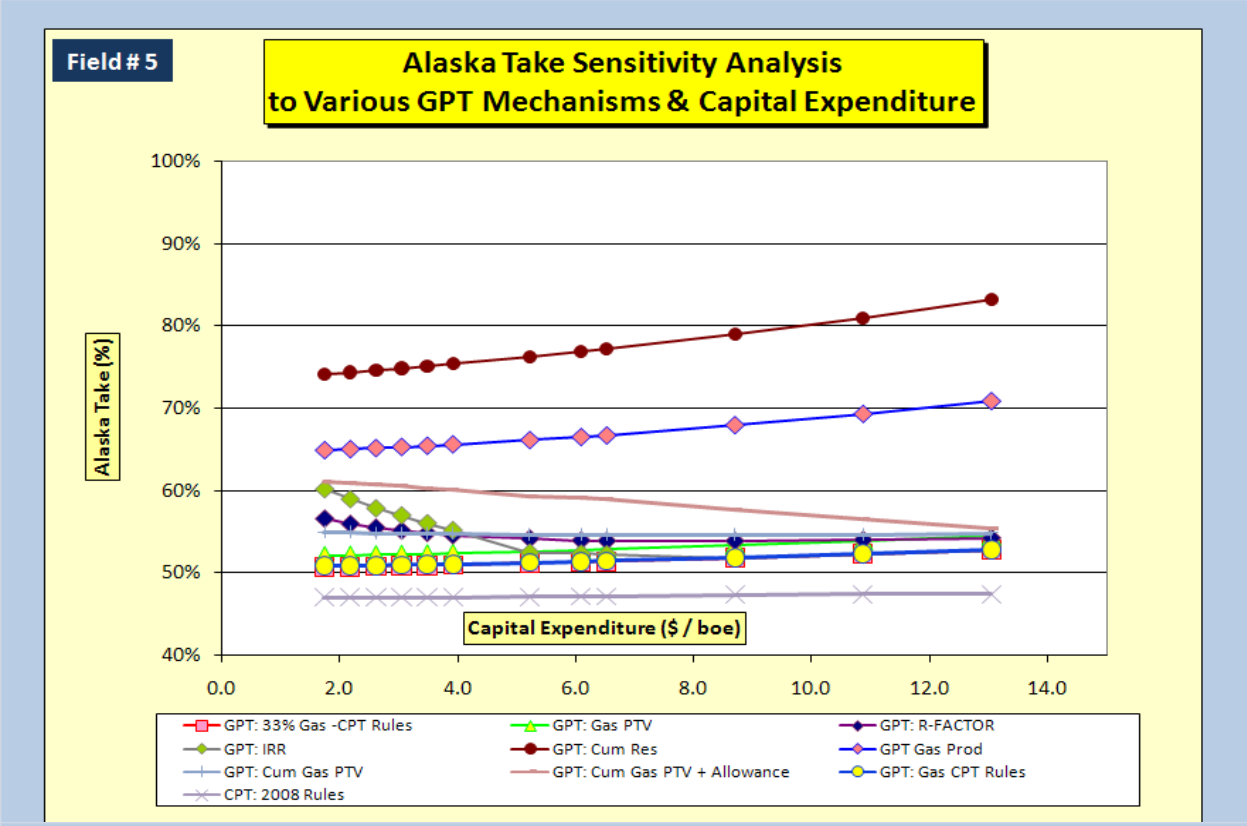
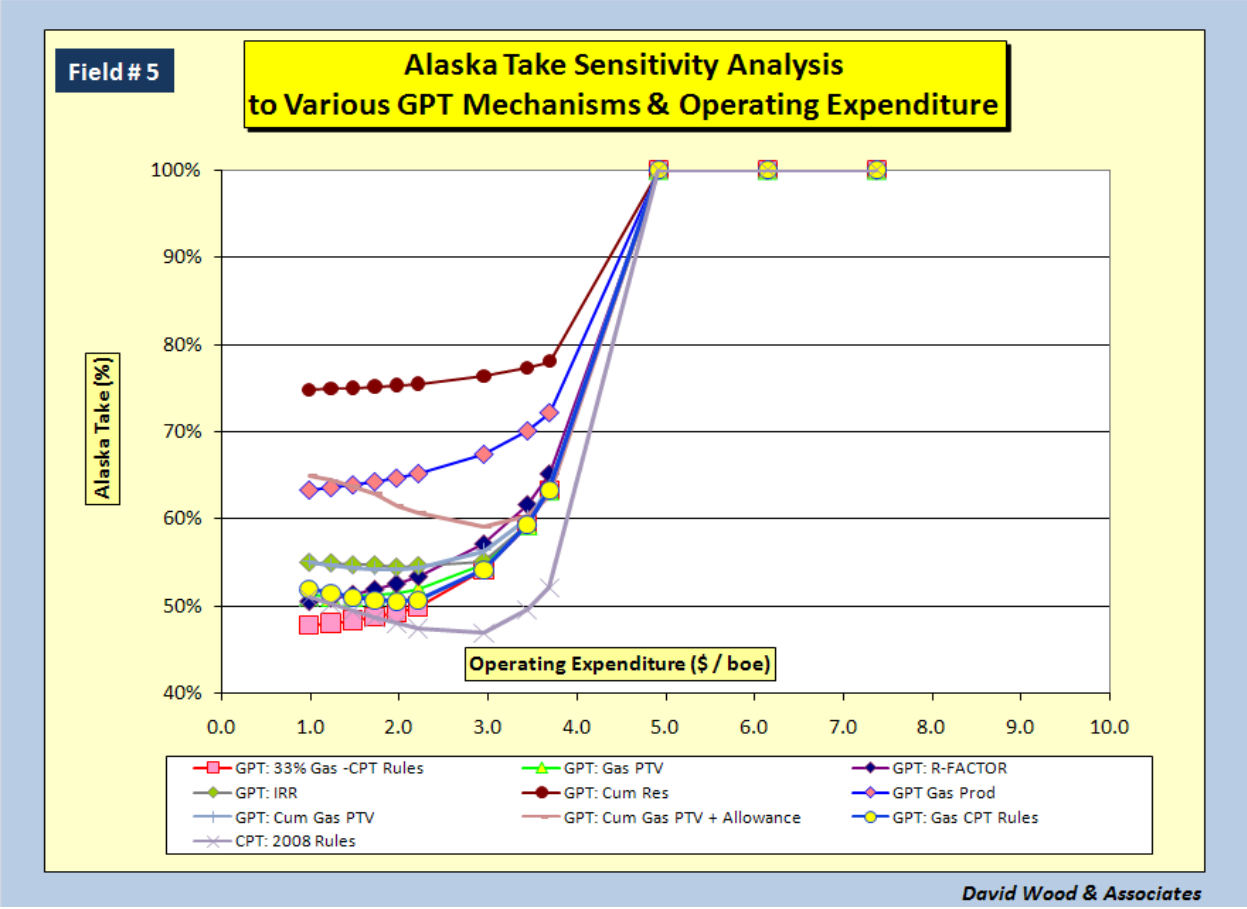

Field # 5
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Capital Expenditure
Alaska Take (%)
100%
90%
80%
70%
60%
50%
40%
Capital Expenditure ($ / boe)
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 5
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Operating Expenditure
Alaska Take (%)
100%
90%
80%
70%
60%
50%
40%
Operating Expenditure ($ / boe)
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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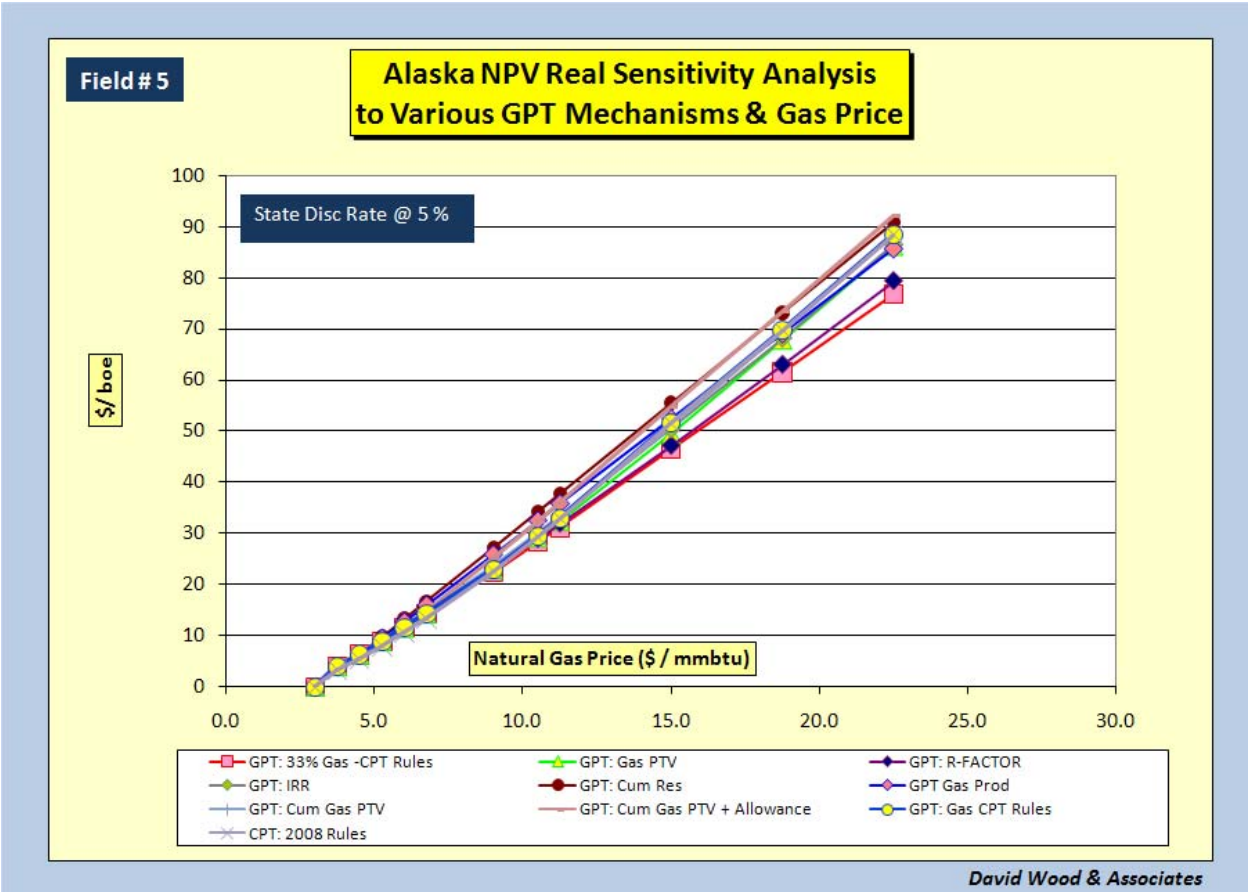
Field # 5
Alaska NPV Real Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
State Disc Rate @ 5 %
$/ boe
Natural Gas Price ($ / mmbtu)
100
90
80
70
60
50
40
30
20
10
0
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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Oil Field #6 (32 million boe produced)

Model Field Number:	6	Base Case Gas Reserves Produced:	19.7 bcf	Cpy Disc Rate Applied:	10.0%	State Disc Rate Applied	5.0%

Sensitivity Analysis - changing selected input metrics by a factor to analyse field profitability

Input Variables	Base Case =1.00	1.00	0.40	0.50	0.60	0.70	0.80	0.90	1.20	1.40	1.50	2.00	2.50	3.00
Year 1 Gas Price ($/mmbtu)		8	3.0	3.8	4.5	5.3	6.0	6.8	9.0	10.5	11.3	15.0	18.8	22.5
Year 1 Oil Price ($ / Barrel)	Field # 6	80	32.0	40.0	48.0	56.0	64.0	72.0	96.0	112.0	120.0	160.0	200.0	240.0
Condensate Yield (barrels/mmcf)		20.0	8.0	10.0	12.0	14.0	16.0	18.0	24.0	28.0	30.0	40.0	50.0	60.0
Gas TT&T ($/ mcf)		4.5	1.8	2.3	2.7	3.2	3.6	4.1	5.4	6.3	6.8	9.0	11.3	13.5
Total Capex ($/boe)		10.19	4.07	5.09	6.11	7.13	8.15	9.17	12.22	14.26	15.28	20.37	25.46	30.56
Total Opex ($/boe)		8.72	3.49	4.36	5.23	6.11	6.98	7.85	10.47	12.21	13.09	17.45	21.81	26.17
Production Startup Accelerated (-) or Delayed (+) by Years		4					-2.0	-1.0	1.0	2.0	3.0			
Producer Base Case NPV Real $ millions:		124												
		124												

Gas Price ($/mmbtu) →

Total Government Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	76.7%	77.6%	77.5%	77.3%	77.2%	77.0%	76.9%	76.5%	76.2%	76.2%	75.8%	75.5%	75.2%
GPT: Gas PTV	Field # 6 %	76.7%	77.6%	77.5%	77.3%	77.2%	77.0%	76.9%	76.5%	76.4%	76.3%	76.3%	76.5%	76.8%
GPT: R-FACTOR	%	76.8%	77.6%	77.5%	77.3%	77.2%	77.0%	76.9%	76.5%	76.3%	76.2%	75.7%	75.3%	75.0%
GPT: IRR	%	76.7%	77.6%	77.5%	77.3%	77.2%	77.0%	76.9%	76.5%	76.5%	76.4%	76.4%	76.6%	76.9%
GPT: Cum Res	%	76.7%	77.6%	77.5%	77.3%	77.2%	77.0%	76.9%	76.5%	76.2%	76.1%	75.4%	74.9%	74.3%
GPT Gas Prod	%	76.7%	77.6%	77.5%	77.3%	77.2%	77.0%	76.9%	76.5%	76.2%	76.1%	75.4%	74.9%	74.3%
GPT: Cum Gas PTV	%	76.7%	77.6%	77.5%	77.3%	77.2%	77.0%	76.9%	76.5%	76.2%	76.1%	75.4%	74.9%	74.3%
GPT: Cum Gas PTV + Allowance	%	76.7%	77.8%	77.5%	77.3%	77.1%	76.9%	76.8%	76.4%	76.1%	76.0%	75.4%	74.8%	74.3%
GPT: Gas CPT Rules	%	76.7%	77.6%	77.5%	77.3%	77.2%	77.0%	76.9%	76.5%	76.4%	76.4%	76.6%	76.9%	77.1%
CPT: 2008 Rules	%	75.6%	75.0%	75.1%	75.2%	75.3%	75.4%	75.5%	75.8%	76.0%	76.1%	76.6%	77.1%	77.4%
[Take of mod Cash flow on Undiscounted basis]		75.6%												

Gas Price ($/mmbtu) →

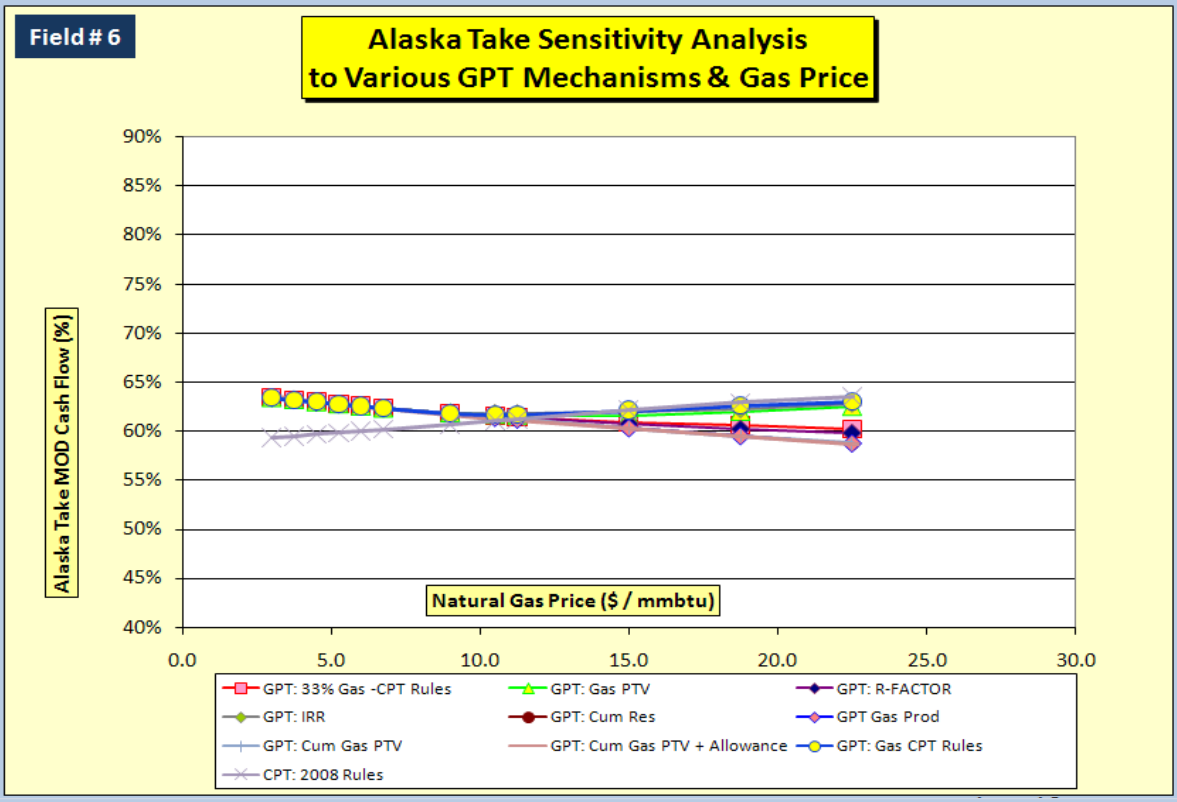
Total Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	62.2%	63.4%	63.2%	63.0%	62.8%	62.6%	62.4%	61.8%	61.5%	61.4%	60.9%	60.6%	60.2%
GPT: Gas PTV	%	62.2%	63.4%	63.2%	63.0%	62.8%	62.6%	62.4%	61.9%	61.7%	61.6%	61.6%	62.0%	62.5%
GPT: R-FACTOR	Field # 6 %	62.2%	63.4%	63.2%	63.0%	62.8%	62.6%	62.4%	61.9%	61.6%	61.4%	60.8%	60.2%	59.8%
GPT: IRR	%	62.2%	63.4%	63.2%	63.0%	62.8%	62.6%	62.4%	61.9%	61.8%	61.8%	61.9%	62.2%	62.8%
GPT: Cum Res	%	62.2%	63.4%	63.2%	63.0%	62.8%	62.6%	62.4%	61.8%	61.4%	61.2%	60.3%	59.5%	58.8%
GPT Gas Prod	%	62.2%	63.4%	63.2%	63.0%	62.8%	62.6%	62.4%	61.8%	61.4%	61.2%	60.3%	59.5%	58.8%
GPT: Cum Gas PTV	%	62.2%	63.4%	63.2%	63.0%	62.8%	62.6%	62.4%	61.8%	61.4%	61.2%	60.3%	59.5%	58.8%
GPT: Cum Gas PTV + Allowance	%	62.1%	63.7%	63.3%	63.0%	62.7%	62.4%	62.3%	61.7%	61.3%	61.1%	60.3%	59.5%	58.7%
GPT: Gas CPT Rules	%	62.2%	63.4%	63.2%	63.0%	62.8%	62.6%	62.4%	61.8%	61.7%	61.7%	62.2%	62.6%	63.1%
CPT: 2008 Rules	%	60.4%	59.4%	59.5%	59.7%	59.9%	60.1%	60.2%	60.8%	61.1%	61.3%	62.2%	62.9%	63.5%
[Take of mod Cash flow on Undiscounted basis]		60.4%												

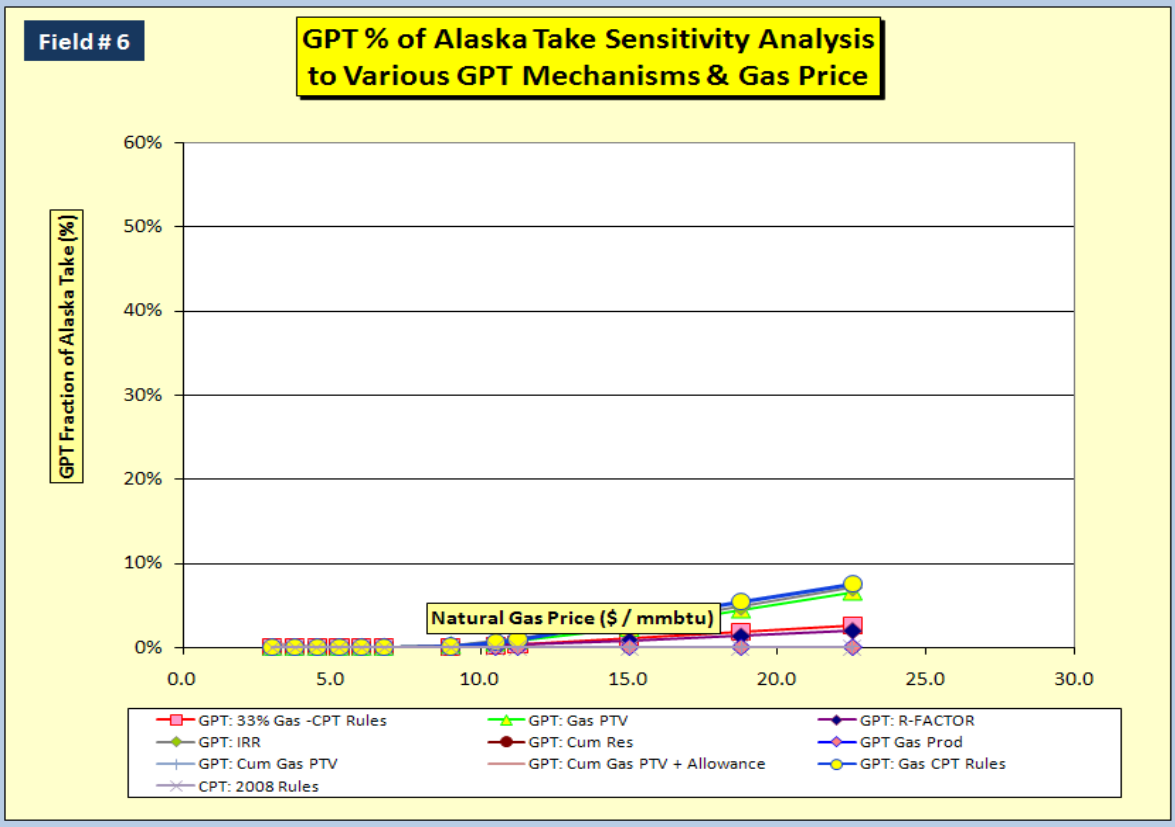
Gas Price ($/mmbtu) →

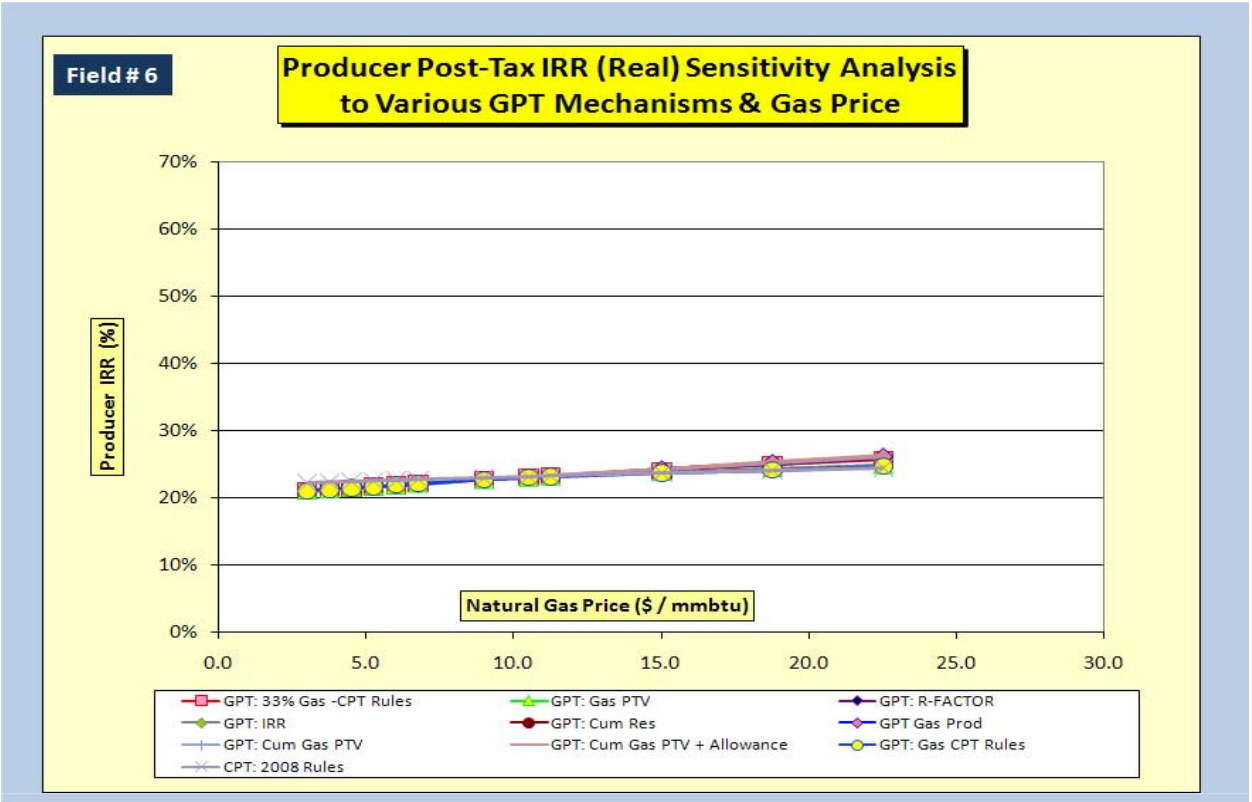
Alaska NPV Real ($/boe) to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	$/boe	41.7	39.8	40.1	40.4	40.7	41.0	41.3	42.3	43.0	43.3	45.0	46.8	48.6
GPT: Gas PTV	$/boe	41.7	39.8	40.1	40.4	40.7	41.0	41.3	42.3	43.0	43.4	45.3	47.4	49.5
GPT: R-FACTOR	Field # 6 $/boe	41.7	39.8	40.1	40.4	40.7	41.0	41.3	42.3	43.0	43.3	45.0	46.7	48.4
GPT: IRR	$/boe	41.7	39.8	40.1	40.4	40.7	41.0	41.3	42.3	43.0	43.4	45.4	47.4	49.6
GPT: Cum Res	$/boe	41.7	39.8	40.1	40.4	40.7	41.0	41.3	42.3	42.9	43.2	44.8	46.4	48.0
GPT Gas Prod	$/boe	41.7	39.8	40.1	40.4	40.7	41.0	41.3	42.3	42.9	43.2	44.8	46.4	48.0
GPT: Cum Gas PTV	$/boe	41.7	39.8	40.1	40.4	40.7	41.0	41.3	42.3	42.9	43.2	44.8	46.4	48.0
GPT: Cum Gas PTV + Allowance	$/boe	41.6	39.8	40.1	40.4	40.7	41.0	41.3	42.2	42.9	43.2	44.8	46.4	47.9
GPT: Gas CPT Rules	$/boe	41.7	39.8	40.1	40.4	40.7	41.0	41.3	42.3	43.0	43.4	45.5	47.6	49.8
CPT: 2008 Rules	$/boe	41.0	38.4	38.9	39.3	39.7	40.2	40.6	41.9	42.8	43.3	45.5	47.8	50.0
		41.0												

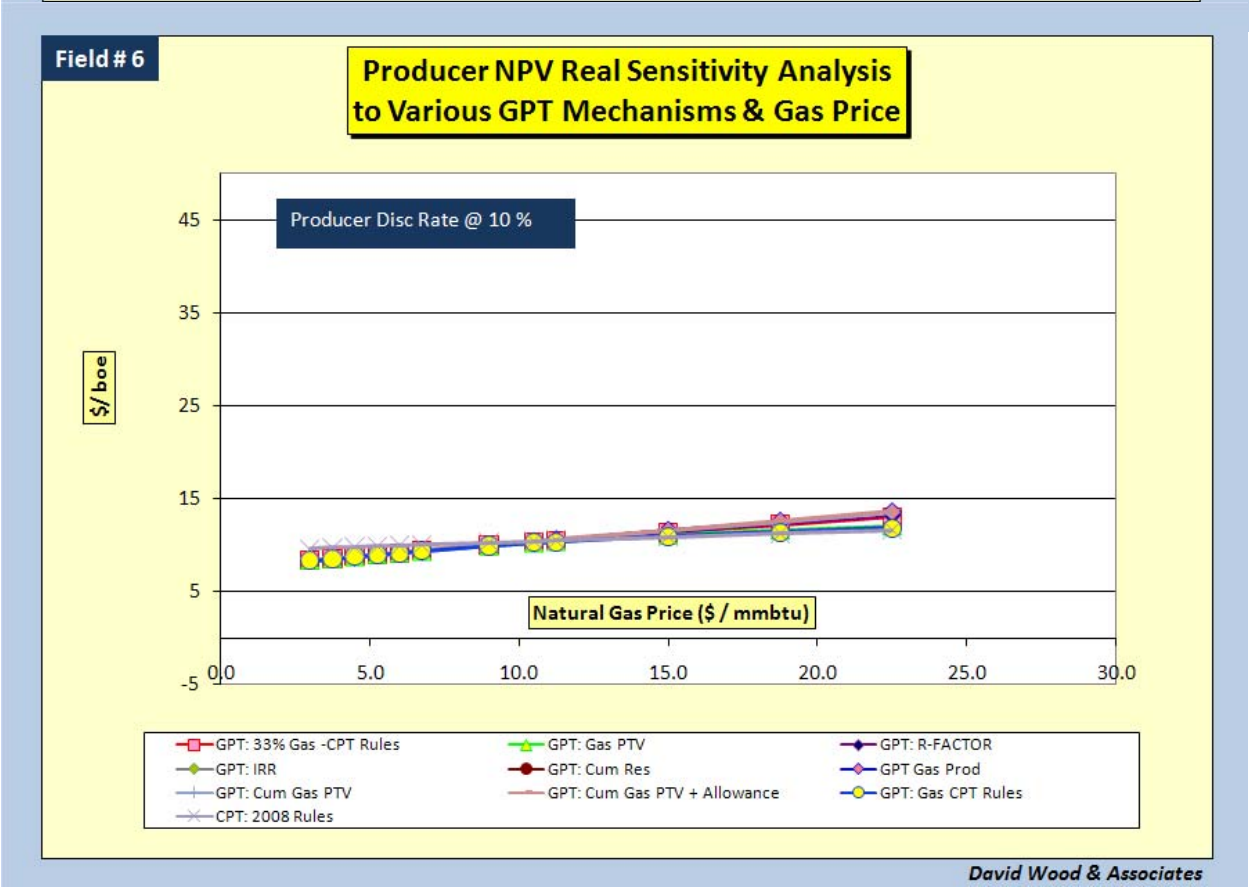
Gas Price ($/mmbtu) →

GPT % Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.3%	1.1%	1.9%	2.6%
GPT: Gas PTV	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.6%	0.8%	2.3%	4.4%	6.6%
GPT: R-FACTOR	Field # 6 %	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.3%	0.4%	0.8%	1.3%	1.9%
GPT: IRR	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.7%	1.0%	2.7%	4.8%	7.1%
GPT: Cum Res	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GPT Gas Prod	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GPT: Cum Gas PTV	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GPT: Cum Gas PTV + Allowance	%	-0.2%	0.4%	0.2%	0.0%	-0.2%	-0.3%	-0.2%	-0.2%	-0.2%	-0.1%	-0.1%	-0.1%	-0.1%
GPT: Gas CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.5%	0.9%	3.2%	5.4%	7.5%
CPT: 2008 Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		0.0%												


Field # 6
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
Alaska Take MOD Cash Flow (%)
90%
85%
80%
75%
70%
65%
60%
55%
50%
45%
40%
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 6
GPT % of Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
GPT Fraction of Alaska Take (%)
60%
50%
40%
30%
20%
10%
0%
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
David Wood & Associates


Field # 6
Producer Post-Tax IRR (Real) Sensitivity Analysis to Various GPT Mechanisms & Gas Price
Producer IRR (%)
70%
60%
50%
40%
30%
20%
10%
0%
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 6
Producer NPV Real Sensitivity Analysis to Various GPT Mechanisms & Gas Price
Producer Disc Rate @ 10 %
$/ boe
45
35
25
15
5
-5
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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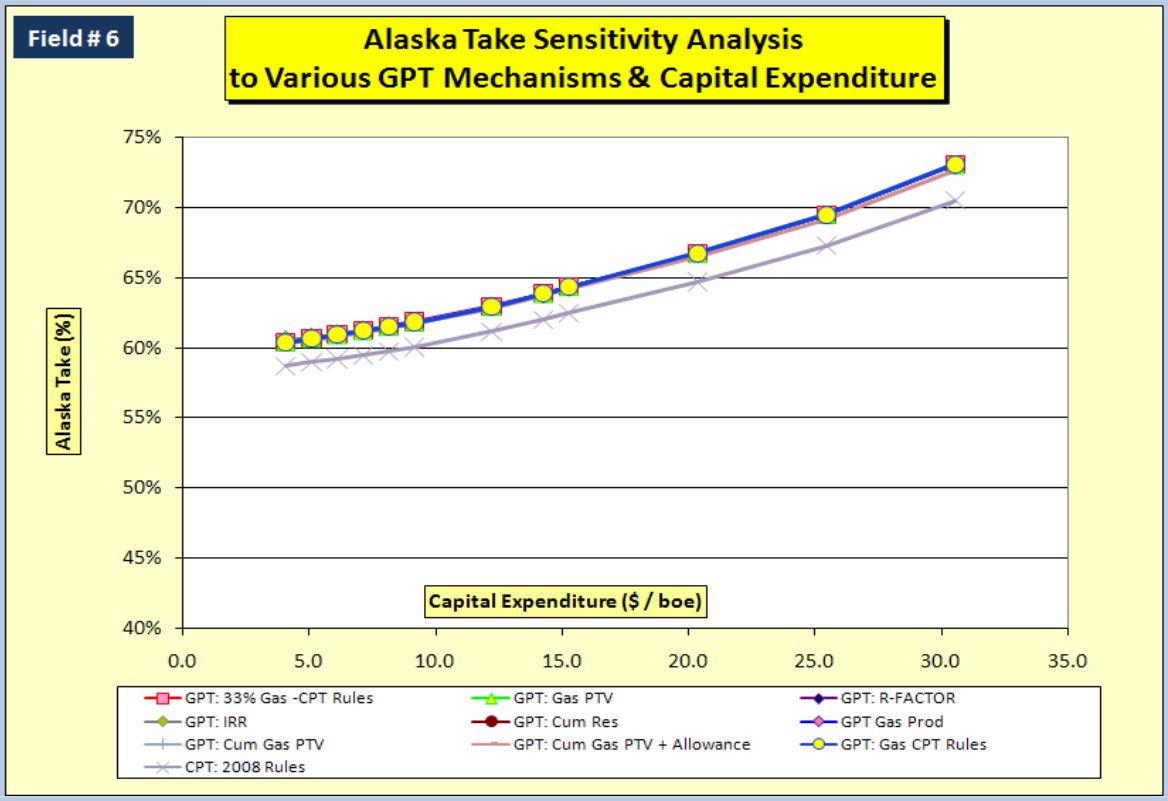

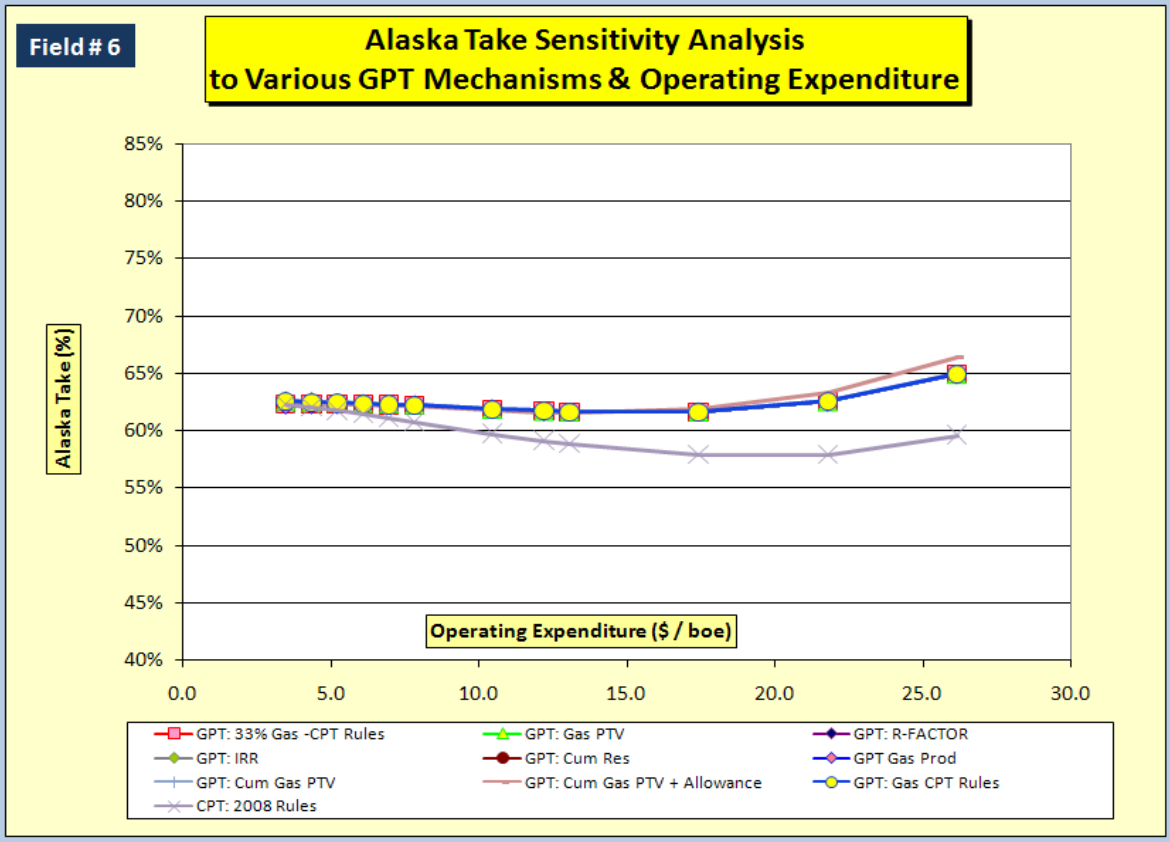

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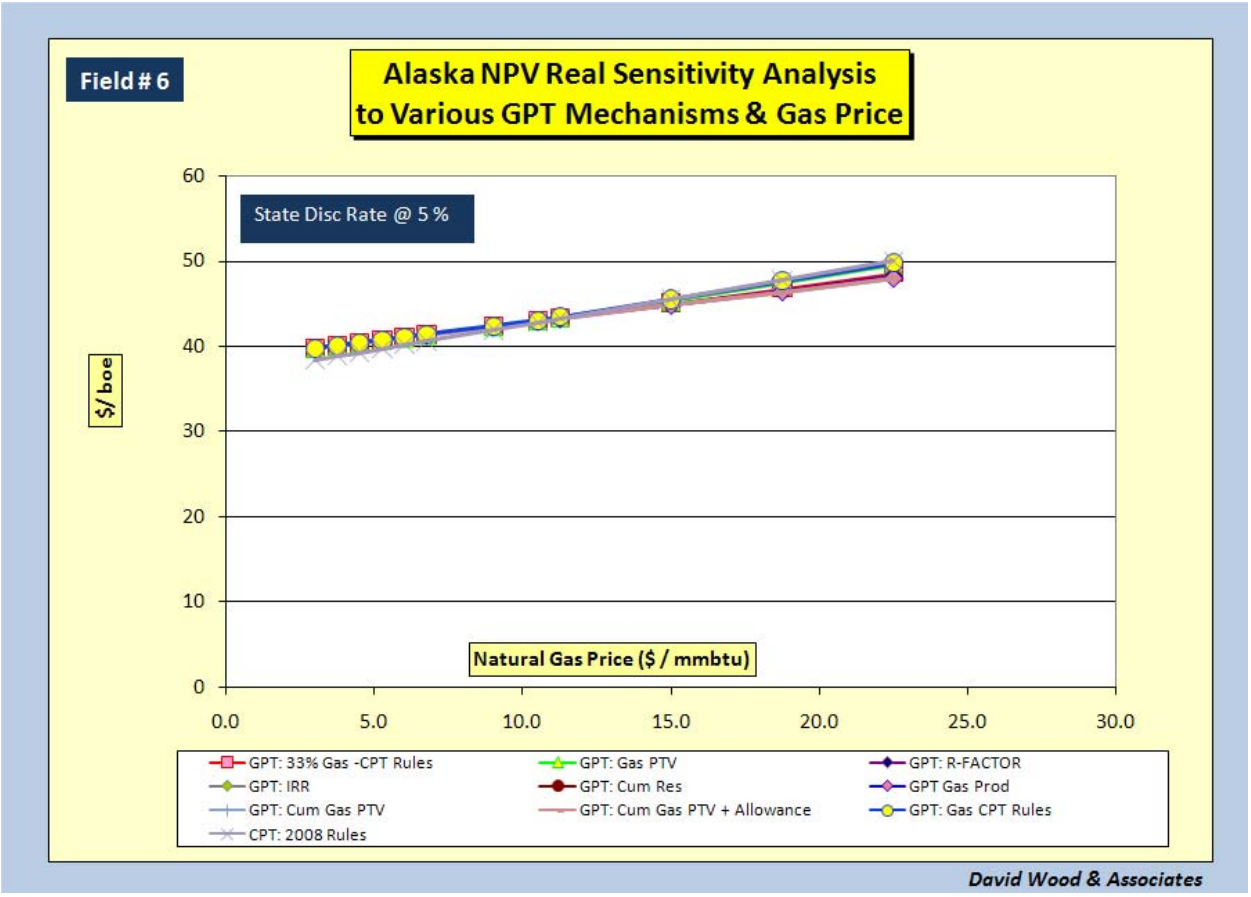

Field # 6
Alaska NPV Real Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
State Disc Rate @ 5 %
$/ boe
60
50
40
30
20
10
0
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
David Wood & Associates

Oil Field #7 (85 million boe produced)

Model Field Number:	7	Base Case Gas Reserves Produced:	49.7 bcf	Cpy Disc Rate Applied:	10.0%	State Disc Rate Applied	5.0%

Sensitivity Analysis - changing selected input metrics by a factor to analyse field profitability

Input Variables	Base Case =1.00	1.00	0.40	0.50	0.60	0.70	0.80	0.90	1.20	1.40	1.50	2.00	2.50	3.00
Year 1 Gas Price ($/mmbtu)		8	3.0	3.8	4.5	5.3	6.0	6.8	9.0	10.5	11.3	15.0	18.8	22.5
Year 1 Oil Price ($ / Barrel)	Field # 7	80	32.0	40.0	48.0	56.0	64.0	72.0	96.0	112.0	120.0	160.0	200.0	240.0
Condensate Yield (barrels/mmcf)		20.0	8.0	10.0	12.0	14.0	16.0	18.0	24.0	28.0	30.0	40.0	50.0	60.0
Gas TT&T ($/ mcf)		4.5	1.8	2.3	2.7	3.2	3.6	4.1	5.4	6.3	6.8	9.0	11.3	13.5
Total Capex ($/boe)		6.62	2.65	3.31	3.97	4.64	5.30	5.96	7.95	9.27	9.94	13.25	16.56	19.87
Total Opex ($/boe)		6.34	2.53	3.17	3.80	4.44	5.07	5.70	7.60	8.87	9.50	12.67	15.84	19.01
Production Startup Accelerated (-) or Delayed (+) by Years		5					-2.0	-1.0	1.0	2.0	3.0			
Producer Base Case NPV Real $ millions:		413												
		431												

Gas Price ($/mmbtu) →

Total Government Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	75.3%	76.0%	75.9%	75.7%	75.6%	75.5%	75.4%	75.1%	74.9%	74.8%	74.6%	74.4%	74.2%
GPT: Gas PTV	Field # 7 %	75.3%	76.0%	75.9%	75.7%	75.6%	75.5%	75.4%	75.1%	75.0%	75.0%	75.0%	75.3%	75.6%
GPT: R-FACTOR	%	75.3%	76.0%	75.9%	75.7%	75.6%	75.5%	75.4%	75.1%	75.0%	74.9%	74.6%	74.4%	74.2%
GPT: IRR	%	75.3%	76.0%	75.9%	75.7%	75.6%	75.5%	75.4%	75.3%	75.3%	75.3%	75.5%	75.8%	76.2%
GPT: Cum Res	%	75.3%	76.0%	75.9%	75.7%	75.6%	75.5%	75.4%	75.1%	74.8%	74.7%	74.2%	73.8%	73.3%
GPT Gas Prod	%	75.3%	76.0%	75.9%	75.7%	75.6%	75.5%	75.4%	75.1%	74.8%	74.7%	74.2%	73.8%	73.3%
GPT: Cum Gas PTV	%	75.3%	76.0%	75.9%	75.7%	75.6%	75.5%	75.4%	75.1%	74.8%	74.7%	74.2%	73.8%	73.4%
GPT: Cum Gas PTV + Allowance	%	75.2%	76.1%	75.9%	75.7%	75.6%	75.5%	75.4%	75.0%	74.8%	74.7%	74.2%	73.7%	73.4%
GPT: Gas CPT Rules	%	75.3%	76.0%	75.9%	75.7%	75.6%	75.5%	75.4%	75.1%	75.0%	75.1%	75.4%	75.6%	75.9%
CPT: 2008 Rules	%	74.3%	73.7%	73.8%	73.9%	74.0%	74.1%	74.2%	74.6%	74.8%	74.9%	75.4%	75.8%	76.1%
[Take of mod Cash flow on Undiscounted basis]		74.3%												

Gas Price ($/mmbtu) →

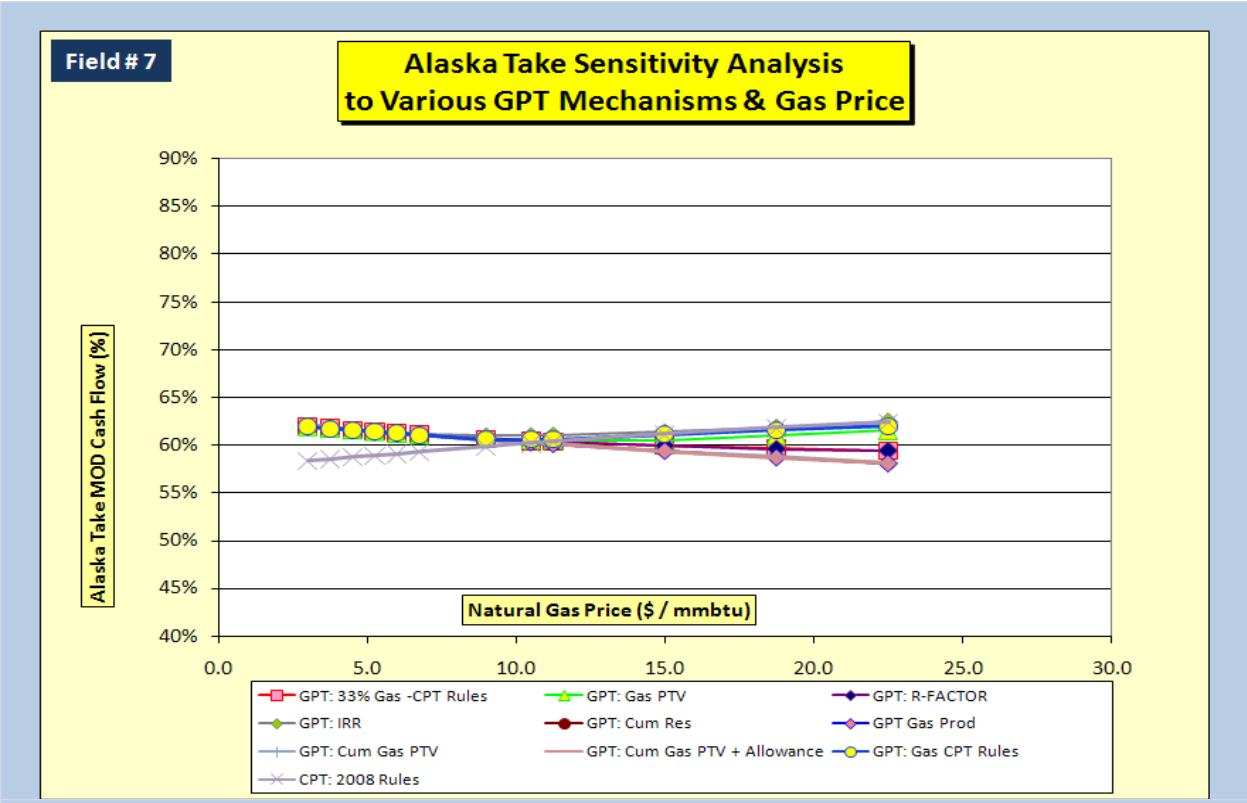
Total Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	60.9%	61.9%	61.8%	61.6%	61.4%	61.2%	61.1%	60.6%	60.4%	60.3%	60.0%	59.7%	59.4%
GPT: Gas PTV	%	60.9%	61.9%	61.8%	61.6%	61.4%	61.2%	61.1%	60.7%	60.6%	60.6%	60.6%	61.1%	61.5%
GPT: R-FACTOR	Field # 7 %	61.0%	61.9%	61.8%	61.6%	61.4%	61.3%	61.1%	60.7%	60.5%	60.4%	60.0%	59.7%	59.5%
GPT: IRR	%	61.0%	61.9%	61.8%	61.6%	61.4%	61.2%	61.1%	61.0%	61.0%	61.0%	61.4%	61.9%	62.5%
GPT: Cum Res	%	60.9%	61.9%	61.8%	61.6%	61.4%	61.2%	61.1%	60.6%	60.3%	60.1%	59.4%	58.7%	58.1%
GPT Gas Prod	%	60.9%	61.9%	61.8%	61.6%	61.4%	61.2%	61.1%	60.6%	60.3%	60.1%	59.4%	58.7%	58.1%
GPT: Cum Gas PTV	%	60.9%	61.9%	61.8%	61.6%	61.4%	61.2%	61.1%	60.6%	60.3%	60.1%	59.4%	58.7%	58.1%
GPT: Cum Gas PTV + Allowance	%	60.9%	62.1%	61.8%	61.6%	61.3%	61.2%	61.0%	60.6%	60.2%	60.1%	59.4%	58.7%	58.1%
GPT: Gas CPT Rules	%	60.9%	61.9%	61.8%	61.6%	61.4%	61.2%	61.1%	60.7%	60.6%	60.6%	61.1%	61.6%	62.0%
CPT: 2008 Rules	%	59.5%	58.4%	58.6%	58.8%	58.9%	59.1%	59.3%	59.8%	60.2%	60.4%	61.1%	61.8%	62.4%
[Take of mod Cash flow on Undiscounted basis]		59.5%												

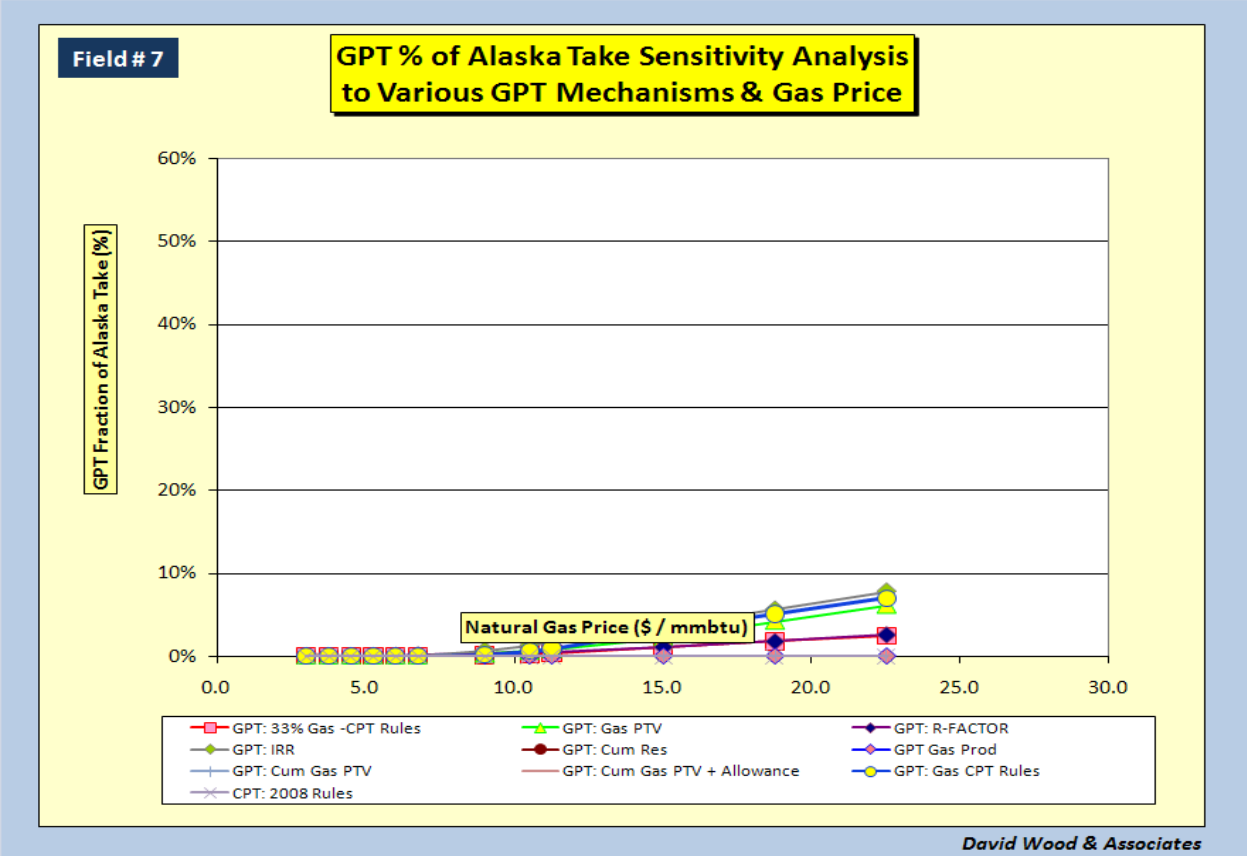
Gas Price ($/mmbtu) →

Alaska NPV Real ($/boe) to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	$/boe	45.0	43.2	43.5	43.8	44.1	44.4	44.7	45.6	46.2	46.6	48.2	49.9	51.5
GPT: Gas PTV	$/boe	45.0	43.2	43.5	43.8	44.1	44.4	44.7	45.7	46.3	46.7	48.5	50.5	52.5
GPT: R-FACTOR	Field # 7 $/boe	45.0	43.2	43.5	43.8	44.1	44.4	44.7	45.7	46.3	46.6	48.2	49.8	51.5
GPT: IRR	$/boe	45.0	43.2	43.5	43.8	44.1	44.4	44.7	45.7	46.5	46.8	48.8	50.8	52.9
GPT: Cum Res	$/boe	45.0	43.2	43.5	43.8	44.1	44.4	44.7	45.6	46.2	46.5	48.0	49.5	51.0
GPT Gas Prod	$/boe	45.0	43.2	43.5	43.8	44.1	44.4	44.7	45.6	46.2	46.5	48.0	49.5	51.0
GPT: Cum Gas PTV	$/boe	45.0	43.2	43.5	43.8	44.1	44.4	44.7	45.6	46.2	46.5	48.0	49.5	51.0
GPT: Cum Gas PTV + Allowance	$/boe	45.0	43.3	43.5	43.8	44.1	44.4	44.7	45.6	46.2	46.5	48.0	49.4	51.0
GPT: Gas CPT Rules	$/boe	45.0	43.2	43.5	43.8	44.1	44.4	44.7	45.6	46.3	46.7	48.7	50.7	52.7
CPT: 2008 Rules	$/boe	44.4	41.9	42.3	42.7	43.2	43.6	44.0	45.3	46.1	46.6	48.7	50.8	52.9
		44.4												

Gas Price ($/mmbtu) →

GPT % Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.3%	1.0%	1.7%	2.4%
GPT: Gas PTV	%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.6%	0.8%	2.2%	4.2%	6.1%
GPT: R-FACTOR	Field # 7 %	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.3%	0.4%	0.5%	1.1%	1.7%	2.5%
GPT: IRR	%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	1.3%	1.6%	3.5%	5.6%	7.8%
GPT: Cum Res	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GPT Gas Prod	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GPT: Cum Gas PTV	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GPT: Cum Gas PTV + Allowance	%	-0.1%	0.3%	0.1%	0.0%	-0.2%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	-0.1%	-0.1%	0.0%
GPT: Gas CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.6%	0.9%	3.1%	5.1%	7.0%
CPT: 2008 Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		0.0%												


Field # 7
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
Alaska Take MOD Cash Flow (%)
90%
85%
80%
75%
70%
65%
60%
55%
50%
45%
40%
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 7
GPT % of Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
GPT Fraction of Alaska Take (%)
60%
50%
40%
30%
20%
10%
0%
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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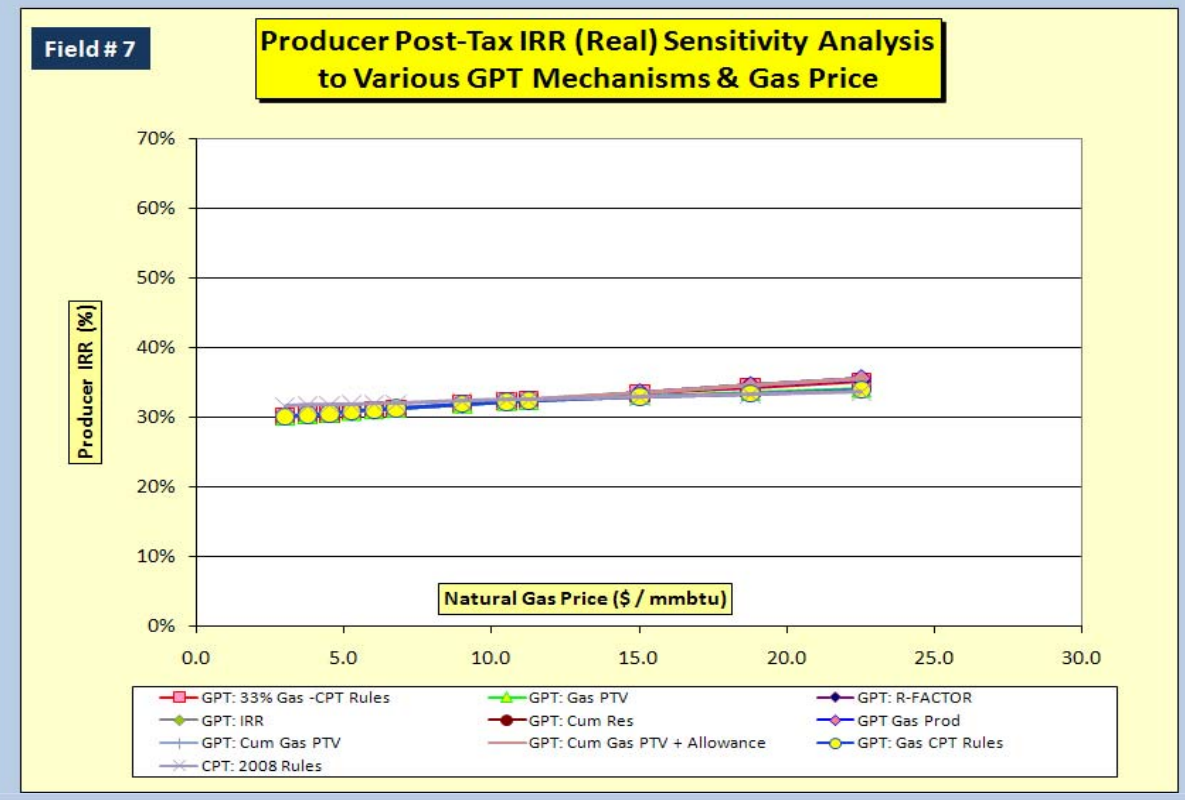

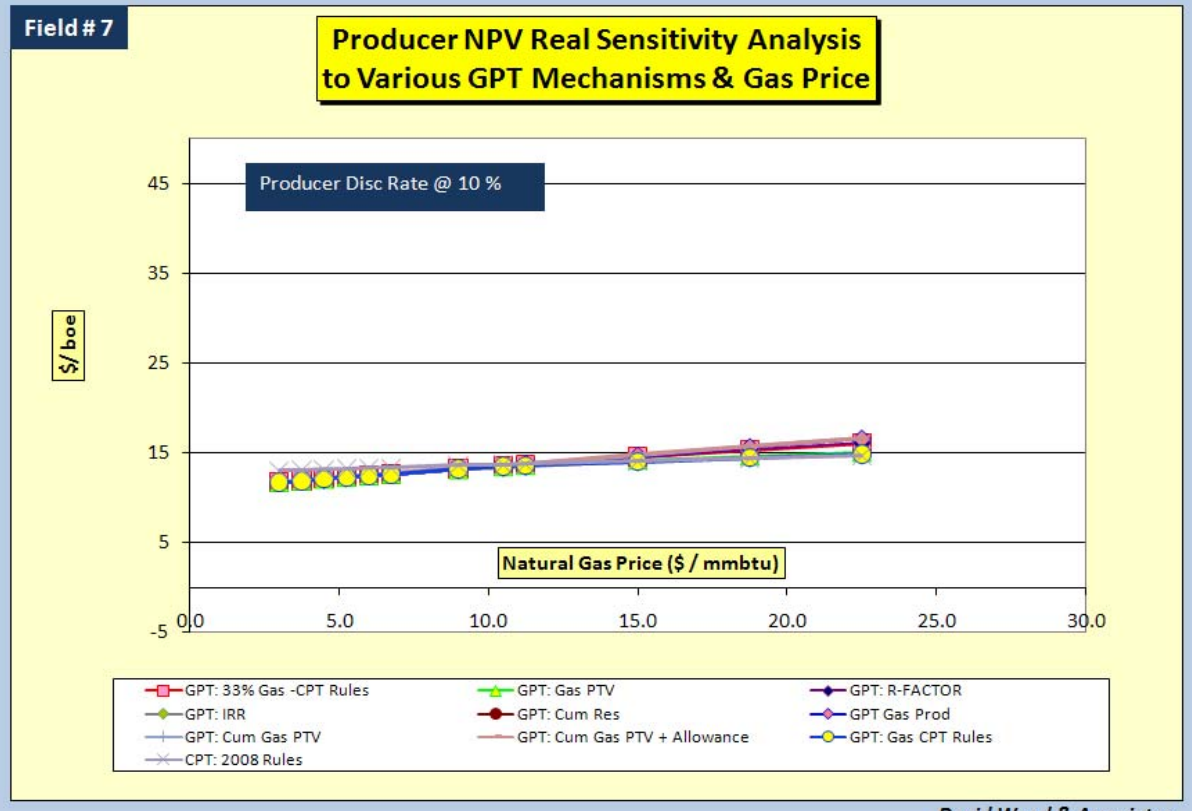

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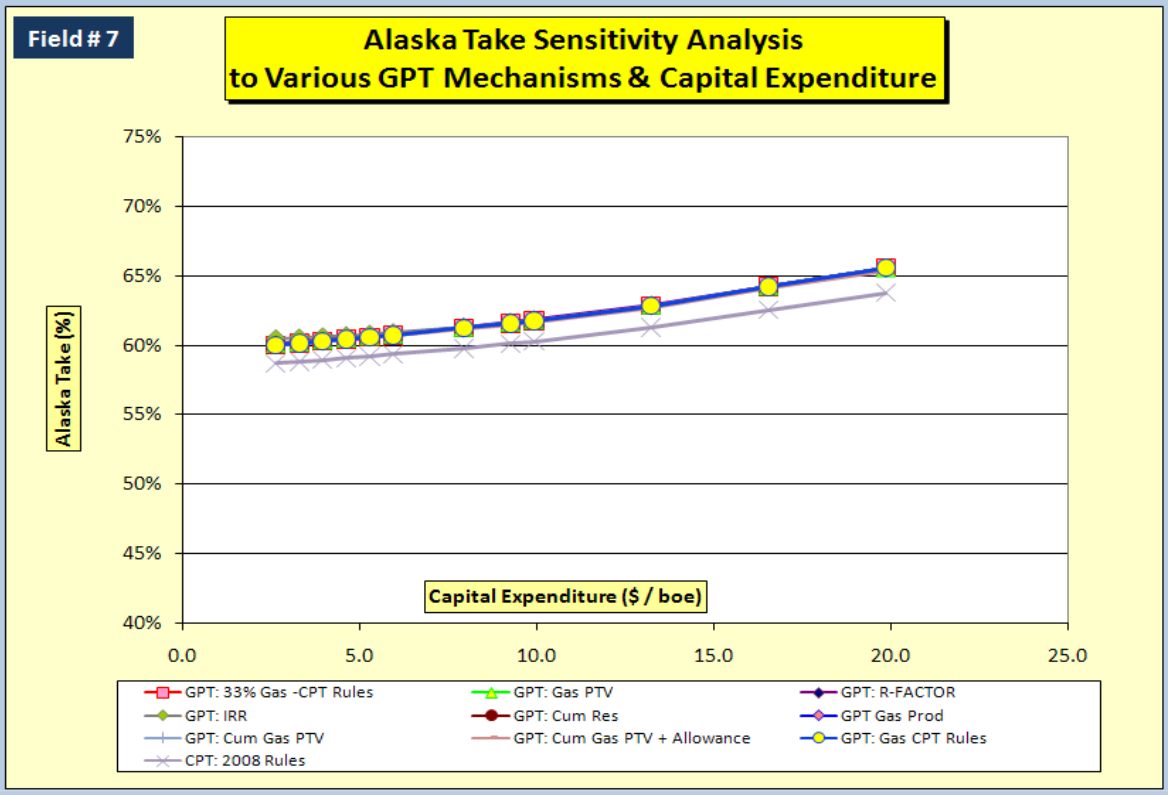

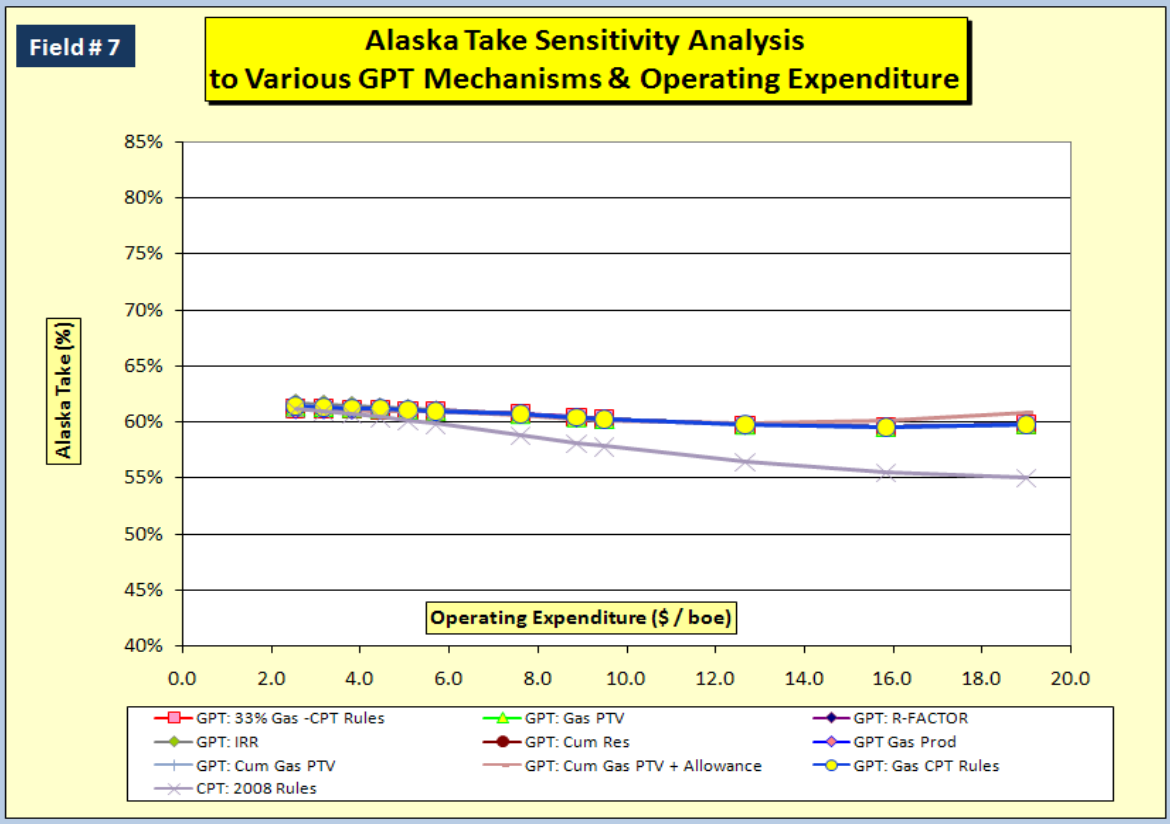

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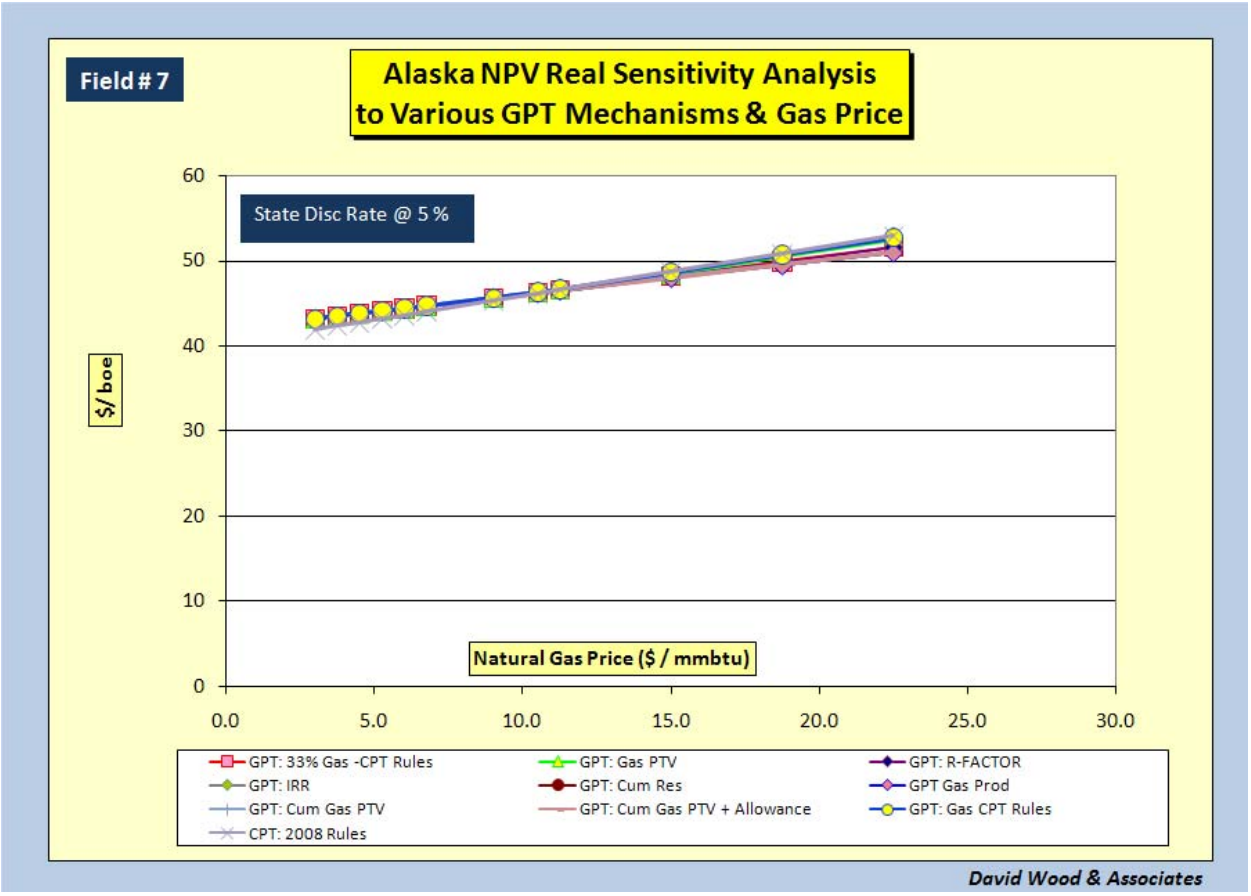

Field # 7
Alaska NPV Real Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
State Disc Rate @ 5 %
$/ boe
Natural Gas Price ($ / mmbtu)
0
10
20
30
40
50
60
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
David Wood & Associates

Oil Field #8 (113 million boe produced)

Model Field Number:	8	Base Case Gas Reserves Produced:	57.3 bcf	Cpy Disc Rate Applied:	10.0%	State Disc Rate Applied	5.0%

Sensitivity Analysis - changing selected input metrics by a factor to analyse field profitability

Input Variables	Base Case =1.00	1.00	0.40	0.50	0.60	0.70	0.80	0.90	1.20	1.40	1.50	2.00	2.50	3.00
Year 1 Gas Price ($/mmbtu)		8	3.0	3.8	4.5	5.3	6.0	6.8	9.0	10.5	11.3	15.0	18.8	22.5
Year 1 Oil Price ($ / Barrel)	Field # 8	80	32.0	40.0	48.0	56.0	64.0	72.0	96.0	112.0	120.0	160.0	200.0	240.0
Condensate Yield (barrels/mmcf)		20.0	8.0	10.0	12.0	14.0	16.0	18.0	24.0	28.0	30.0	40.0	50.0	60.0
Gas TT&T ($/ mcf)		4.5	1.8	2.3	2.7	3.2	3.6	4.1	5.4	6.3	6.8	9.0	11.3	13.5
Total Capex ($/boe)		5.52	2.21	2.76	3.31	3.86	4.41	4.97	6.62	7.72	8.28	11.04	13.79	16.55
Total Opex ($/boe)		5.90	2.36	2.95	3.54	4.13	4.72	5.31	7.09	8.27	8.86	11.81	14.76	17.71
Production Startup Accelerated (-) or Delayed (+) by Years		5					-2.0	-1.0	1.0	2.0	3.0			
Producer Base Case NPV Real $ millions:		580												
		580												

Gas Price ($/mmbtu) →

Total Government Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	74.9%	75.5%	75.4%	75.3%	75.2%	75.1%	75.0%	74.8%	74.6%	74.6%	74.4%	74.2%	74.1%
GPT: Gas PTV	Field # 8 %	75.0%	75.5%	75.4%	75.3%	75.2%	75.1%	75.0%	74.8%	74.8%	74.7%	74.8%	75.0%	75.3%
GPT: R-FACTOR	%	75.0%	75.5%	75.4%	75.3%	75.2%	75.1%	75.1%	74.9%	74.7%	74.7%	74.5%	74.3%	74.2%
GPT: IRR	%	75.0%	75.5%	75.4%	75.3%	75.2%	75.1%	75.1%	75.0%	75.0%	75.1%	75.3%	75.6%	76.0%
GPT: Cum Res	%	74.9%	75.5%	75.4%	75.3%	75.2%	75.1%	75.0%	74.8%	74.6%	74.5%	74.1%	73.7%	73.3%
GPT Gas Prod	%	74.9%	75.5%	75.4%	75.3%	75.2%	75.1%	75.0%	74.8%	74.6%	74.5%	74.1%	73.7%	73.3%
GPT: Cum Gas PTV	%	74.9%	75.5%	75.4%	75.3%	75.2%	75.1%	75.0%	74.8%	74.6%	74.5%	74.1%	73.7%	73.3%
GPT: Cum Gas PTV + Allowance	%	74.9%	75.6%	75.5%	75.3%	75.2%	75.1%	75.0%	74.7%	74.6%	74.5%	74.1%	73.7%	73.4%
GPT: Gas CPT Rules	%	74.9%	75.5%	75.4%	75.3%	75.2%	75.1%	75.0%	74.8%	74.8%	74.8%	75.1%	75.3%	75.5%
CPT: 2008 Rules	%	74.3%	73.7%	73.8%	73.9%	74.0%	74.1%	74.2%	74.5%	74.6%	74.7%	75.1%	75.4%	75.7%
[Take of mod Cash flow on Undiscounted basis]		74.3%												

Gas Price ($/mmbtu) →

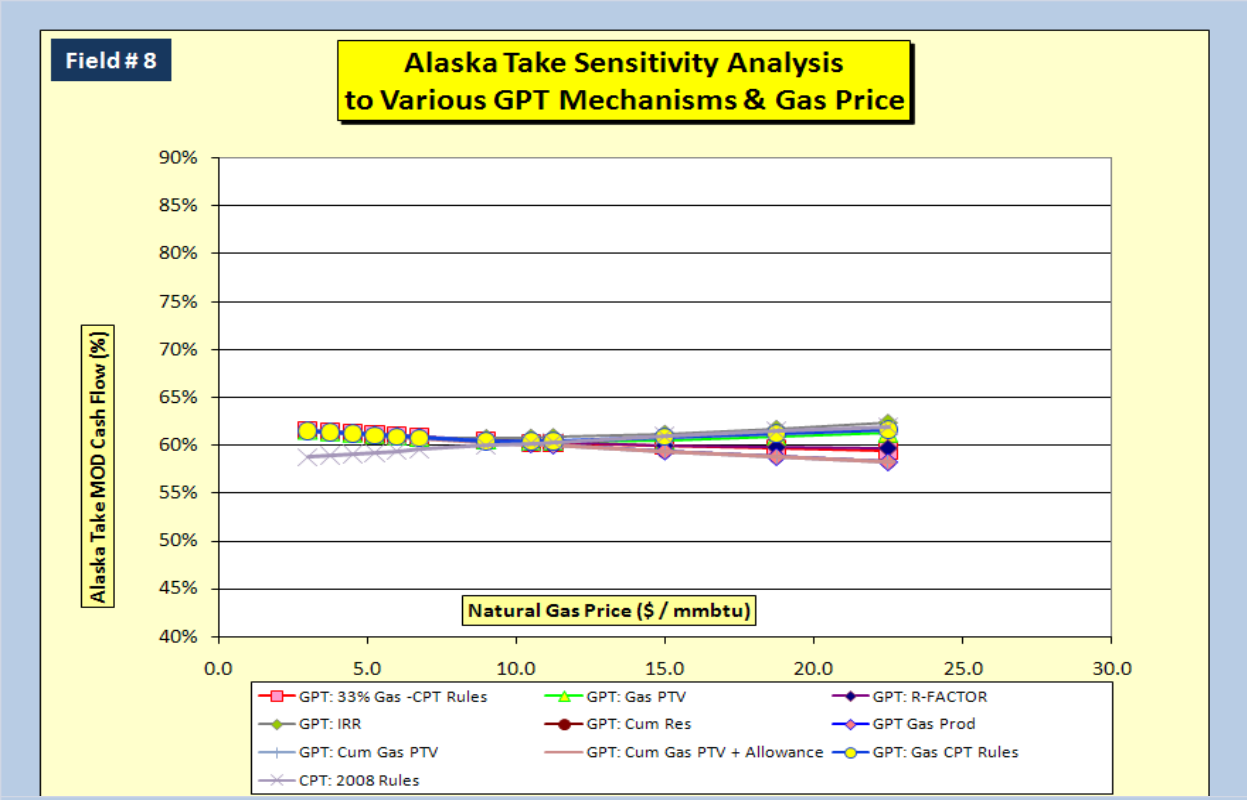
Total Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	60.7%	61.5%	61.4%	61.2%	61.1%	60.9%	60.8%	60.4%	60.2%	60.2%	59.9%	59.6%	59.4%
GPT: Gas PTV	%	60.7%	61.5%	61.4%	61.2%	61.1%	60.9%	60.8%	60.5%	60.4%	60.4%	60.5%	60.9%	61.3%
GPT: R-FACTOR	Field # 8 %	60.8%	61.5%	61.4%	61.2%	61.1%	61.0%	60.9%	60.6%	60.4%	60.3%	60.0%	59.8%	59.7%
GPT: IRR	%	60.8%	61.5%	61.4%	61.2%	61.1%	60.9%	60.8%	60.8%	60.9%	60.9%	61.3%	61.8%	62.4%
GPT: Cum Res	%	60.7%	61.5%	61.4%	61.2%	61.1%	60.9%	60.8%	60.4%	60.1%	60.0%	59.4%	58.8%	58.3%
GPT Gas Prod	%	60.7%	61.5%	61.4%	61.2%	61.1%	60.9%	60.8%	60.4%	60.1%	60.0%	59.4%	58.8%	58.3%
GPT: Cum Gas PTV	%	60.7%	61.5%	61.4%	61.2%	61.1%	60.9%	60.8%	60.4%	60.1%	60.0%	59.4%	58.8%	58.3%
GPT: Cum Gas PTV + Allowance	%	60.6%	61.7%	61.4%	61.2%	61.0%	60.9%	60.8%	60.4%	60.1%	60.0%	59.4%	58.8%	58.3%
GPT: Gas CPT Rules	%	60.7%	61.5%	61.4%	61.2%	61.1%	60.9%	60.8%	60.5%	60.4%	60.5%	60.9%	61.3%	61.7%
CPT: 2008 Rules	%	59.7%	58.8%	58.9%	59.1%	59.2%	59.4%	59.5%	59.9%	60.2%	60.3%	60.9%	61.5%	61.9%
[Take of mod Cash flow on Undiscounted basis]		59.7%												

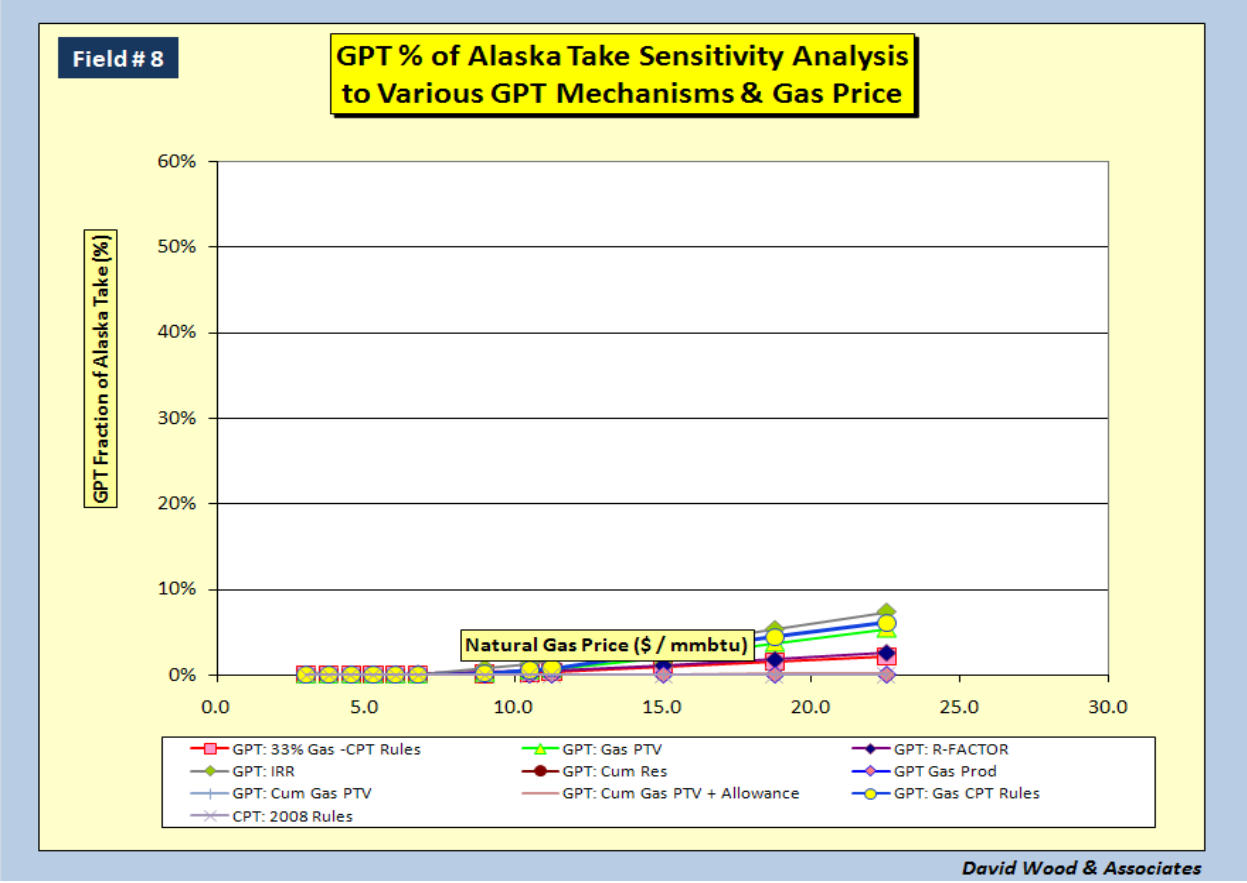
Gas Price ($/mmbtu) →

Alaska NPV Real ($/boe) to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	$/boe	46.2	44.7	44.9	45.2	45.4	45.7	45.9	46.7	47.3	47.6	49.0	50.4	51.9
GPT: Gas PTV	$/boe	46.2	44.7	44.9	45.2	45.4	45.7	45.9	46.8	47.3	47.6	49.2	51.0	52.7
GPT: R-FACTOR	Field # 8 $/boe	46.2	44.7	44.9	45.2	45.4	45.7	46.0	46.8	47.3	47.6	49.0	50.5	52.0
GPT: IRR	$/boe	46.3	44.7	44.9	45.2	45.4	45.7	46.0	46.9	47.5	47.9	49.6	51.4	53.2
GPT: Cum Res	$/boe	46.2	44.7	44.9	45.2	45.4	45.7	45.9	46.7	47.2	47.5	48.8	50.1	51.4
GPT Gas Prod	$/boe	46.2	44.7	44.9	45.2	45.4	45.7	45.9	46.7	47.2	47.5	48.8	50.1	51.4
GPT: Cum Gas PTV	$/boe	46.2	44.7	44.9	45.2	45.4	45.7	45.9	46.7	47.2	47.5	48.8	50.1	51.4
GPT: Cum Gas PTV + Allowance	$/boe	46.2	44.7	44.9	45.2	45.4	45.7	45.9	46.7	47.2	47.5	48.8	50.1	51.4
GPT: Gas CPT Rules	$/boe	46.2	44.7	44.9	45.2	45.4	45.7	45.9	46.8	47.4	47.7	49.4	51.2	52.9
CPT: 2008 Rules	$/boe	45.7	43.6	43.9	44.3	44.6	45.0	45.4	46.5	47.2	47.6	49.4	51.3	53.1
		45.7												

Gas Price ($/mmbtu) →

GPT % Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.3%	0.9%	1.5%	2.1%
GPT: Gas PTV	%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.5%	0.7%	1.9%	3.7%	5.4%
GPT: R-FACTOR	Field # 8 %	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.3%	0.4%	0.5%	1.1%	1.7%	2.6%
GPT: IRR	%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.8%	1.3%	1.6%	3.4%	5.3%	7.3%
GPT: Cum Res	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GPT Gas Prod	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GPT: Cum Gas PTV	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GPT: Cum Gas PTV + Allowance	%	-0.1%	0.3%	0.1%	0.0%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.1%
GPT: Gas CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.5%	0.8%	2.7%	4.4%	6.1%
CPT: 2008 Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		0.0%												


Field # 8
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
Alaska Take MOD Cash Flow (%)
90%
85%
80%
75%
70%
65%
60%
55%
50%
45%
40%
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 8
GPT % of Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
GPT Fraction of Alaska Take (%)
60%
50%
40%
30%
20%
10%
0%
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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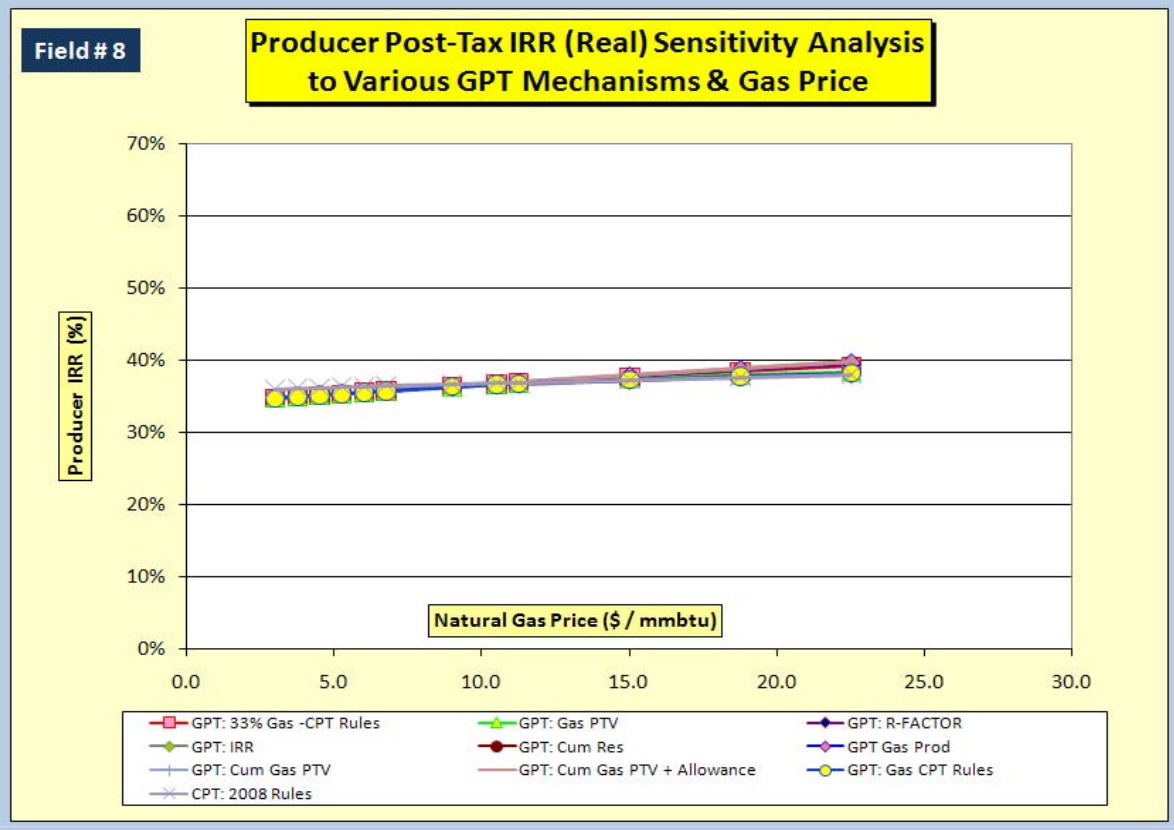

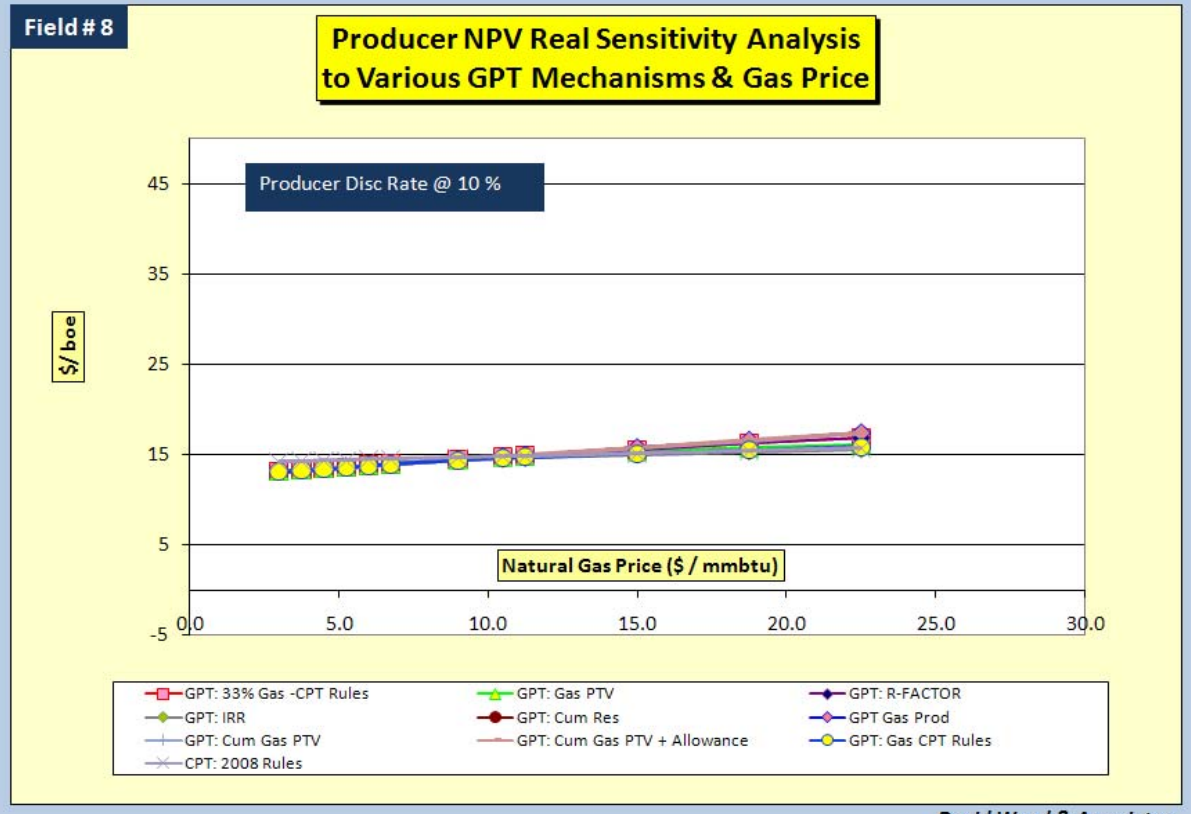

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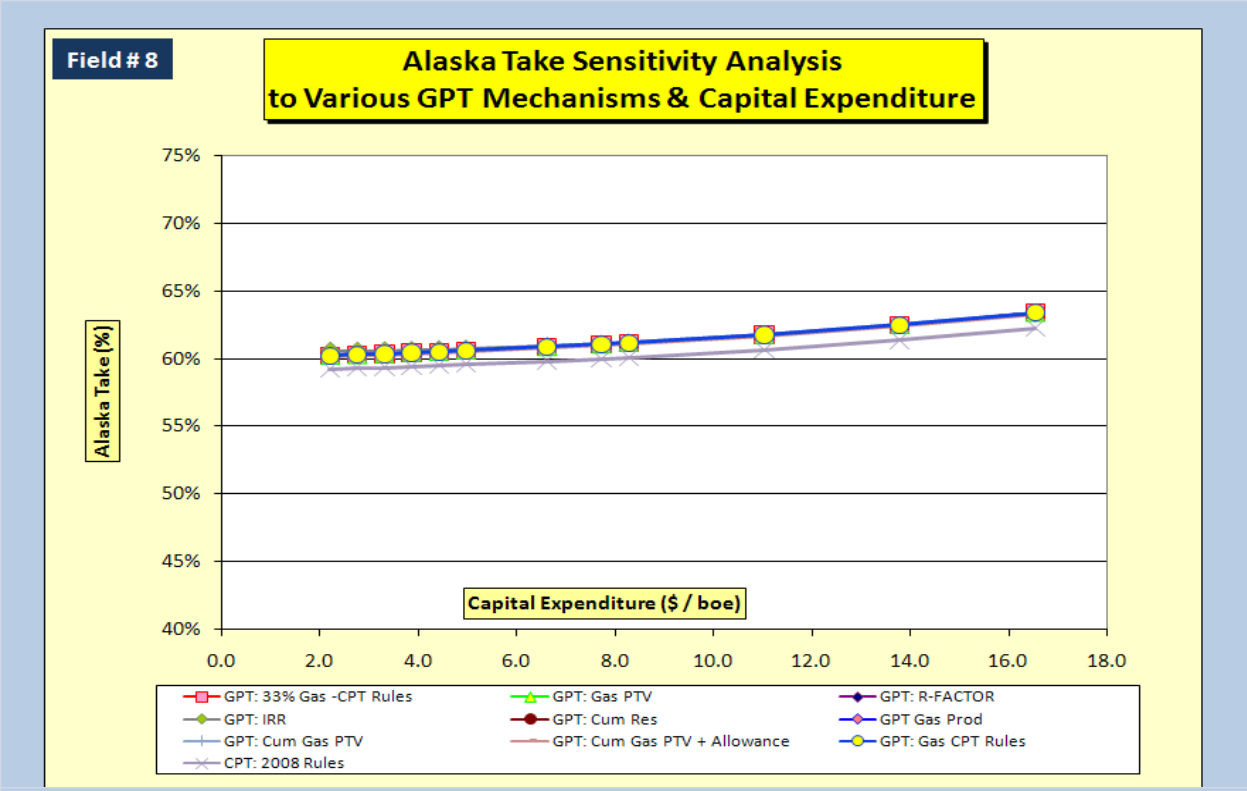
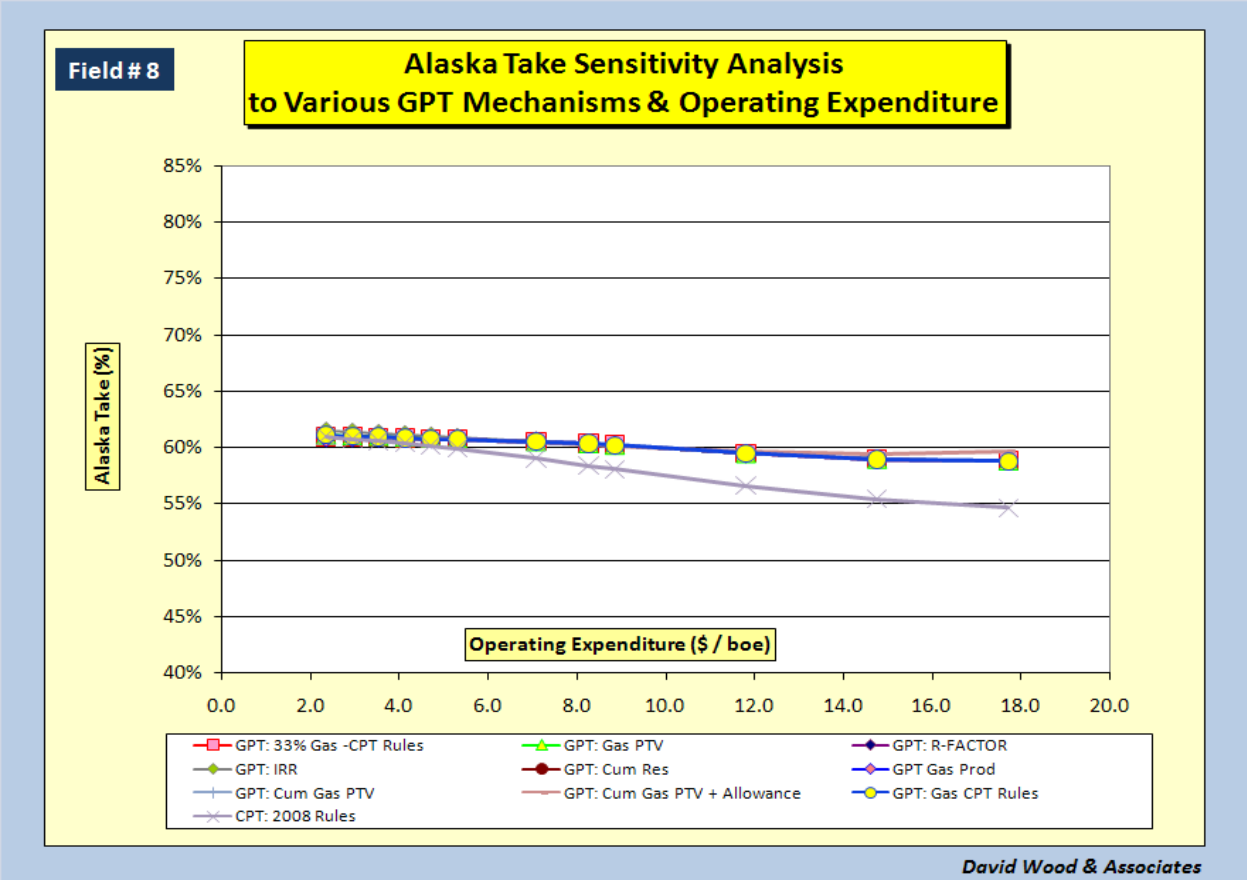
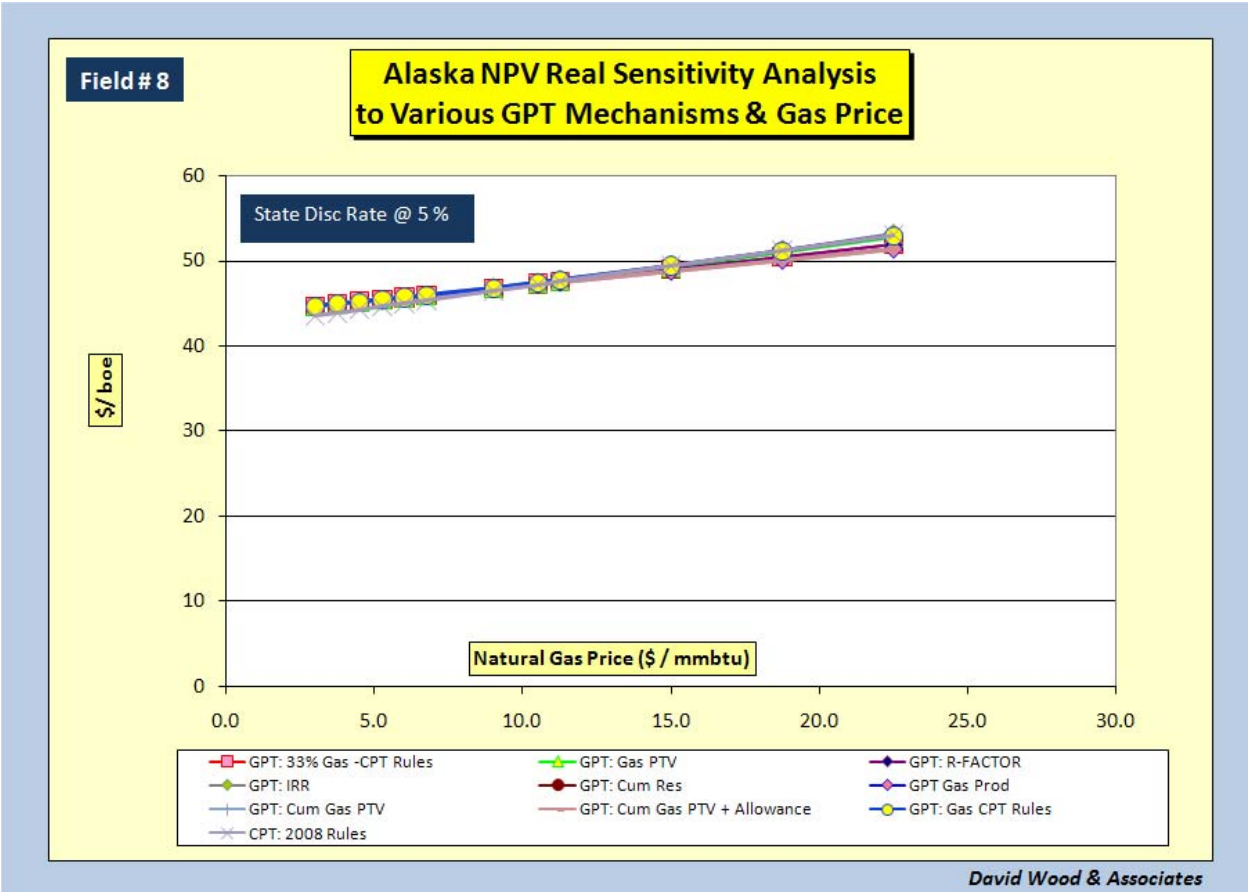

Field # 8
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Capital Expenditure
Alaska Take (%)
75%
70%
65%
60%
55%
50%
45%
40%
Capital Expenditure ($ / boe)
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
16.0
18.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 8
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Operating Expenditure
Alaska Take (%)
85%
80%
75%
70%
65%
60%
55%
50%
45%
40%
Operating Expenditure ($ / boe)
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
16.0
18.0
20.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
David Wood & Associates


Field # 8
Alaska NPV Real Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
State Disc Rate @ 5 %
$/ boe
60
50
40
30
20
10
0
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
David Wood & Associates

Oil Field #9 (184 million boe produced)

Model Field Number:	9	Base Case Gas Reserves Produced:	177.4 bcf	Cpy Disc Rate Applied:	10.0%	State Disc Rate Applied	5.0%

Sensitivity Analysis - changing selected input metrics by a factor to analyse field profitability

Input Variables	Base Case =1.00	1.00	0.40	0.50	0.60	0.70	0.80	0.90	1.20	1.40	1.50	2.00	2.50	3.00
Year 1 Gas Price ($/mmbtu)		8	3.0	3.8	4.5	5.3	6.0	6.8	9.0	10.5	11.3	15.0	18.8	22.5
Year 1 Oil Price ($ / Barrel)	Field # 9	80	32.0	40.0	48.0	56.0	64.0	72.0	96.0	112.0	120.0	160.0	200.0	240.0
Condensate Yield (barrels/mmcf)		20.0	8.0	10.0	12.0	14.0	16.0	18.0	24.0	28.0	30.0	40.0	50.0	60.0
Gas TT&T ($/ mcf)		4.5	1.8	2.3	2.7	3.2	3.6	4.1	5.4	6.3	6.8	9.0	11.3	13.5
Total Capex ($/boe)		5.09	2.04	2.55	3.05	3.56	4.07	4.58	6.11	7.13	7.64	10.18	12.73	15.27
Total Opex ($/boe)		6.11	2.44	3.06	3.67	4.28	4.89	5.50	7.33	8.56	9.17	12.22	15.28	18.33
Production Startup Accelerated (-) or Delayed (+) by Years		6					-2.0	-1.0	1.0	2.0	3.0			
Producer Base Case NPV Real $ millions:		880												
		880												

Gas Price ($/mmbtu) →

Total Government Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	74.8%	76.0%	75.8%	75.5%	75.3%	75.2%	75.0%	74.4%	74.2%	74.1%	73.8%	73.5%	73.2%
GPT: Gas PTV	Field # 9 %	74.8%	76.0%	75.8%	75.5%	75.3%	75.2%	75.0%	74.6%	74.4%	74.4%	74.5%	75.0%	75.4%
GPT: R-FACTOR	%	74.9%	76.0%	75.8%	75.5%	75.4%	75.2%	75.0%	74.6%	74.4%	74.3%	73.9%	73.7%	73.6%
GPT: IRR	%	75.0%	76.0%	75.8%	75.5%	75.3%	75.2%	75.1%	75.1%	75.2%	75.2%	75.8%	76.5%	77.3%
GPT: Cum Res	%	74.8%	76.0%	75.8%	75.5%	75.3%	75.2%	75.0%	74.4%	74.1%	73.9%	73.2%	72.5%	71.9%
GPT Gas Prod	%	74.8%	76.0%	75.8%	75.5%	75.3%	75.2%	75.0%	74.4%	74.1%	73.9%	73.2%	72.5%	71.9%
GPT: Cum Gas PTV	%	74.8%	76.0%	75.8%	75.5%	75.3%	75.2%	75.0%	74.4%	74.1%	73.9%	73.2%	72.6%	72.0%
GPT: Cum Gas PTV + Allowance	%	74.7%	76.1%	75.8%	75.5%	75.3%	75.1%	74.9%	74.4%	74.1%	73.9%	73.3%	72.7%	72.2%
GPT: Gas CPT Rules	%	74.8%	76.0%	75.8%	75.5%	75.3%	75.2%	75.0%	74.5%	74.5%	74.5%	75.0%	75.5%	75.9%
CPT: 2008 Rules	%	73.4%	72.2%	72.4%	72.6%	72.8%	73.0%	73.2%	73.8%	74.1%	74.3%	75.1%	75.6%	75.9%
[Take of mod Cash flow on Undiscounted basis]		73.4%												

Gas Price ($/mmbtu) →

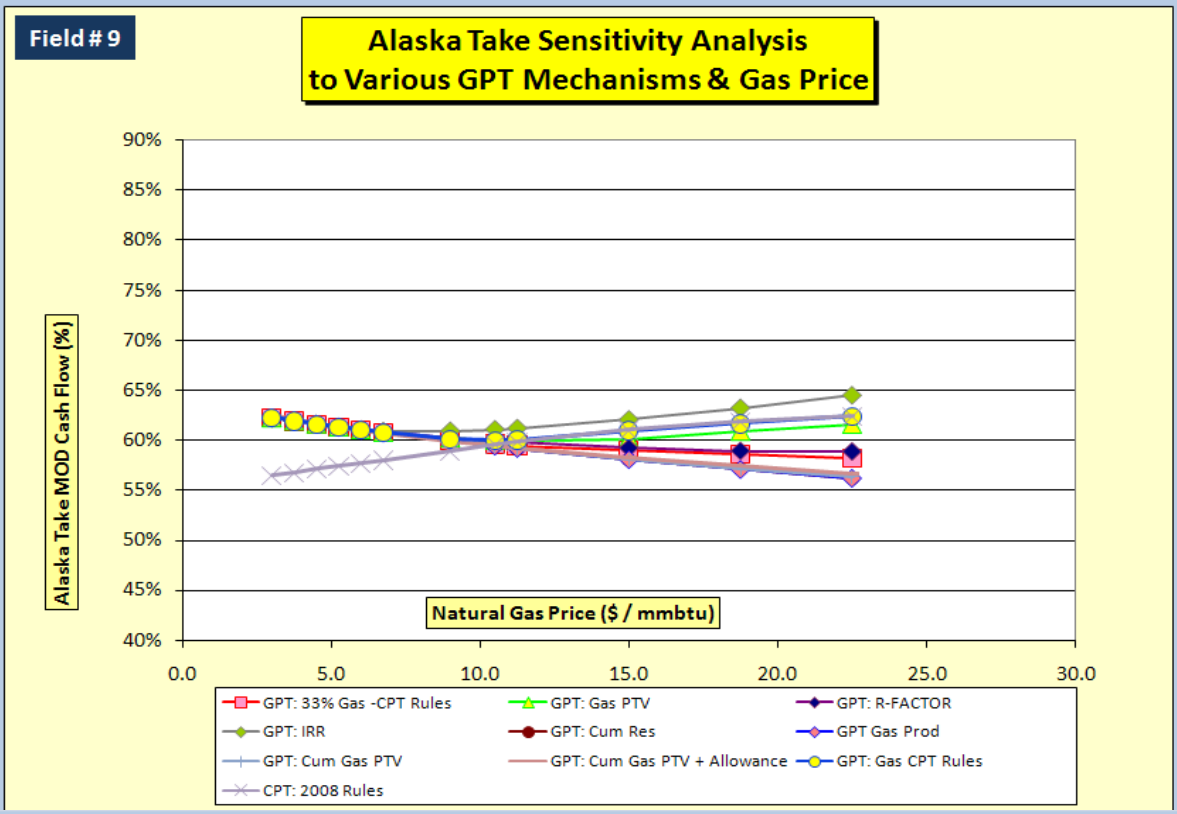
Total Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	60.5%	62.3%	62.0%	61.7%	61.4%	61.1%	60.8%	60.0%	59.7%	59.5%	59.1%	58.6%	58.3%
GPT: Gas PTV	%	60.6%	62.3%	62.0%	61.7%	61.4%	61.1%	60.8%	60.2%	60.0%	60.0%	60.1%	60.9%	61.6%
GPT: R-FACTOR	Field # 9 %	60.7%	62.3%	62.0%	61.7%	61.4%	61.1%	60.9%	60.3%	60.0%	59.8%	59.3%	59.0%	58.9%
GPT: IRR	%	60.9%	62.3%	62.0%	61.7%	61.4%	61.1%	60.9%	61.0%	61.1%	61.2%	62.1%	63.3%	64.5%
GPT: Cum Res	%	60.5%	62.3%	62.0%	61.7%	61.4%	61.1%	60.8%	60.0%	59.5%	59.2%	58.1%	57.1%	56.2%
GPT Gas Prod	%	60.5%	62.3%	62.0%	61.7%	61.4%	61.1%	60.8%	60.0%	59.5%	59.2%	58.1%	57.1%	56.2%
GPT: Cum Gas PTV	%	60.5%	62.3%	62.0%	61.7%	61.4%	61.1%	60.8%	60.0%	59.5%	59.2%	58.1%	57.2%	56.4%
GPT: Cum Gas PTV + Allowance	%	60.4%	62.6%	62.1%	61.6%	61.2%	61.0%	60.7%	59.9%	59.4%	59.2%	58.2%	57.4%	56.6%
GPT: Gas CPT Rules	%	60.5%	62.3%	62.0%	61.7%	61.4%	61.1%	60.8%	60.1%	60.0%	60.1%	61.0%	61.7%	62.4%
CPT: 2008 Rules	%	58.3%	56.5%	56.8%	57.1%	57.4%	57.7%	58.0%	59.0%	59.6%	59.8%	61.0%	61.9%	62.4%
[Take of mod Cash flow on Undiscounted basis]		58.3%												

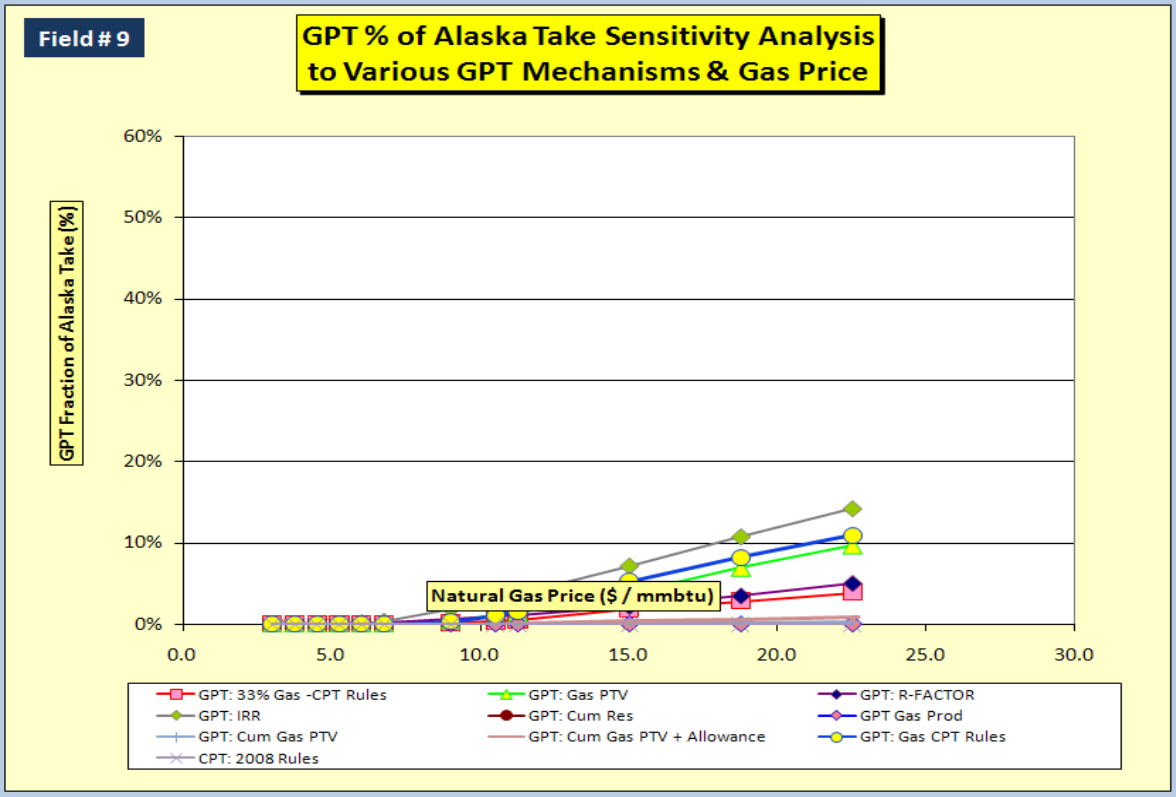
Gas Price ($/mmbtu) →

Alaska NPV Real ($/boe) to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	$/boe	43.7	40.7	41.2	41.7	42.2	42.7	43.2	44.7	45.7	46.2	49.0	51.8	54.5
GPT: Gas PTV	$/boe	43.7	40.7	41.2	41.7	42.2	42.7	43.2	44.7	45.9	46.4	49.5	52.8	56.1
GPT: R-FACTOR	Field # 9 $/boe	43.7	40.7	41.2	41.7	42.2	42.7	43.2	44.8	45.8	46.4	49.1	51.8	54.7
GPT: IRR	$/boe	43.8	40.7	41.2	41.7	42.2	42.7	43.2	45.0	46.3	46.9	50.3	53.8	57.5
GPT: Cum Res	$/boe	43.7	40.7	41.2	41.7	42.2	42.7	43.2	44.7	45.6	46.1	48.6	51.1	53.5
GPT Gas Prod	$/boe	43.7	40.7	41.2	41.7	42.2	42.7	43.2	44.7	45.6	46.1	48.6	51.1	53.5
GPT: Cum Gas PTV	$/boe	43.7	40.7	41.2	41.7	42.2	42.7	43.2	44.7	45.6	46.1	48.6	51.1	53.6
GPT: Cum Gas PTV + Allowance	$/boe	43.6	40.8	41.2	41.7	42.1	42.6	43.1	44.6	45.6	46.1	48.6	51.2	53.7
GPT: Gas CPT Rules	$/boe	43.7	40.7	41.2	41.7	42.2	42.7	43.2	44.7	45.9	46.5	49.8	53.2	56.5
CPT: 2008 Rules	$/boe	42.8	38.7	39.4	40.0	40.7	41.4	42.1	44.2	45.6	46.3	49.8	53.3	56.6
		42.8												

Gas Price ($/mmbtu) →

GPT % Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.3%	0.5%	1.8%	2.8%	3.9%
GPT: Gas PTV	%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	1.0%	1.3%	3.7%	6.9%	9.7%
GPT: R-FACTOR	Field # 9 %	0.3%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.6%	0.9%	1.1%	2.2%	3.5%	5.0%
GPT: IRR	%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	1.8%	3.0%	3.6%	7.1%	10.8%	14.2%
GPT: Cum Res	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GPT Gas Prod	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GPT: Cum Gas PTV	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.3%
GPT: Cum Gas PTV + Allowance	%	-0.1%	0.5%	0.2%	-0.1%	-0.3%	-0.2%	-0.2%	-0.1%	0.0%	0.0%	0.3%	0.5%	0.8%
GPT: Gas CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	1.0%	1.6%	5.2%	8.2%	10.9%
CPT: 2008 Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		0.0%												





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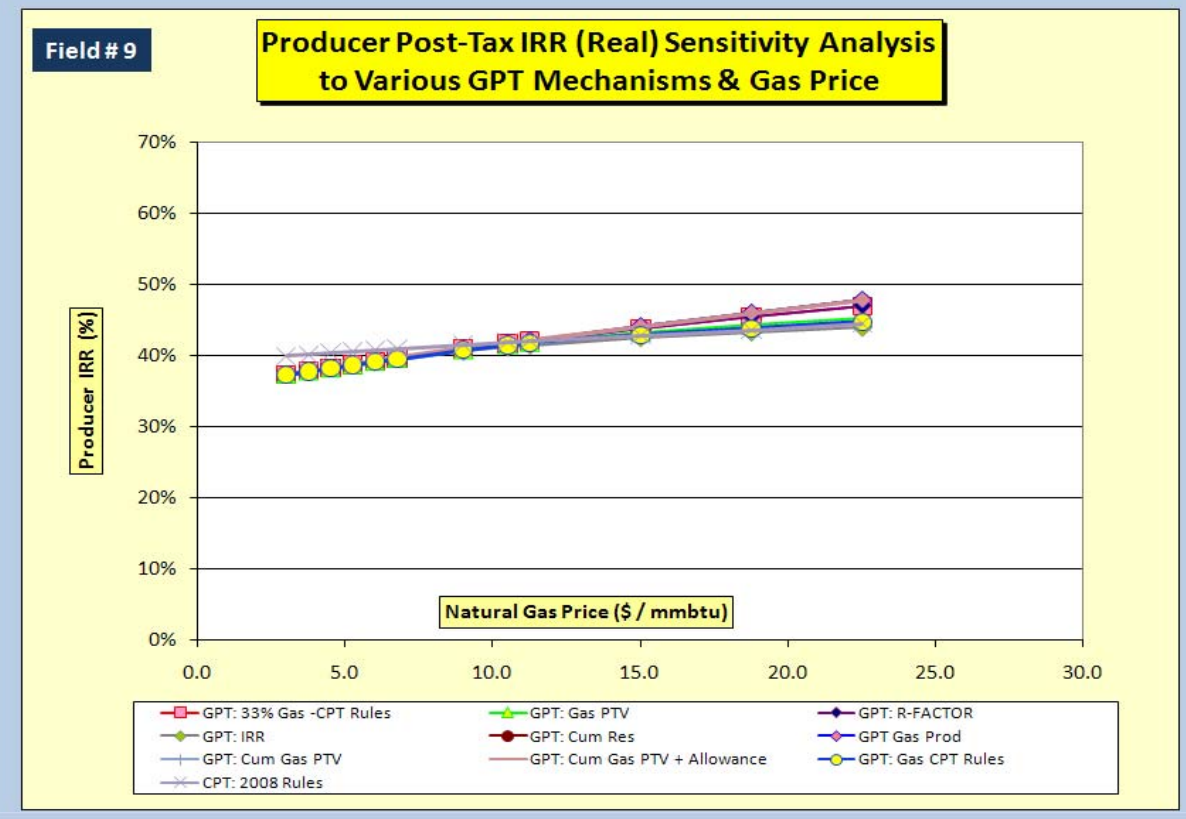

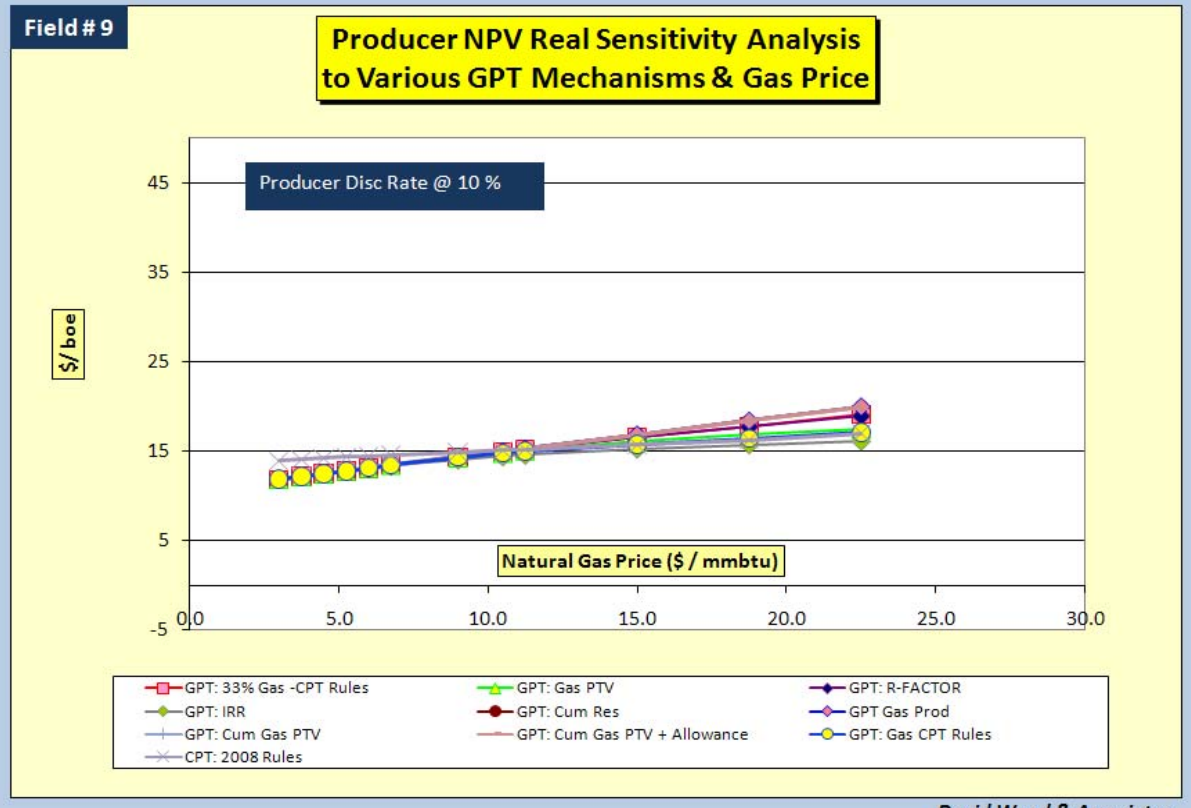

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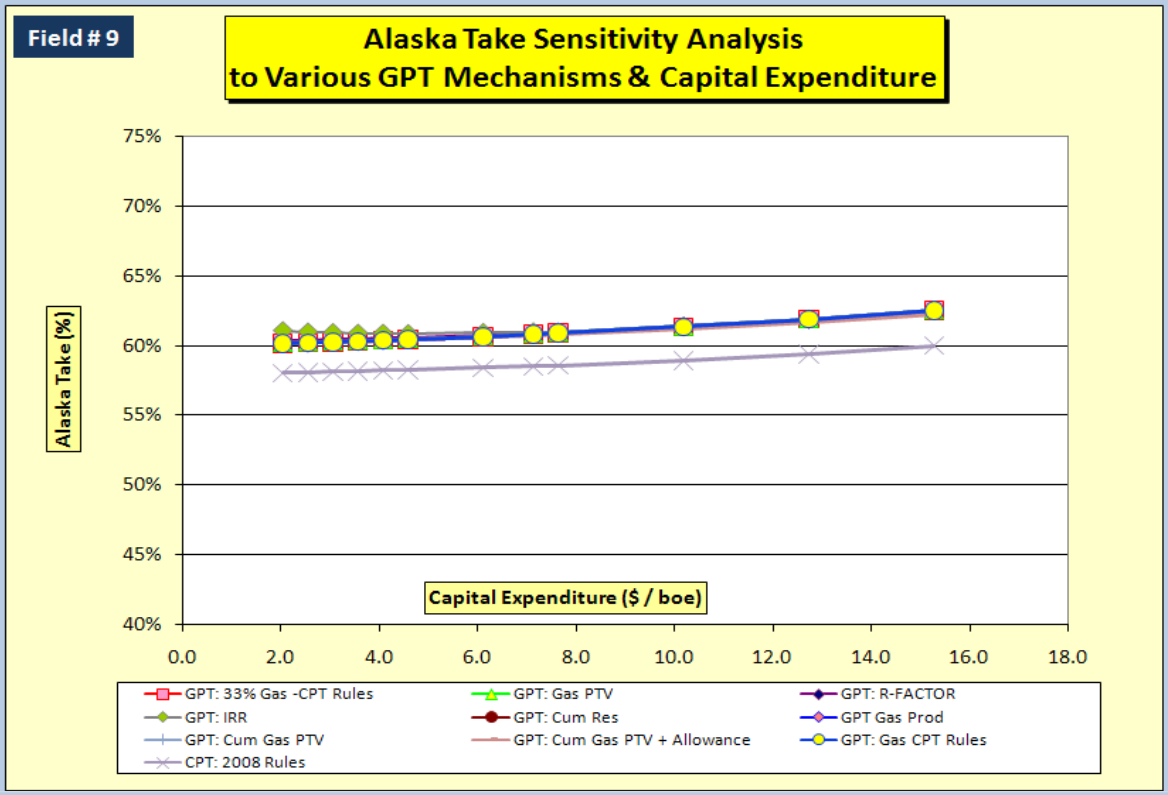

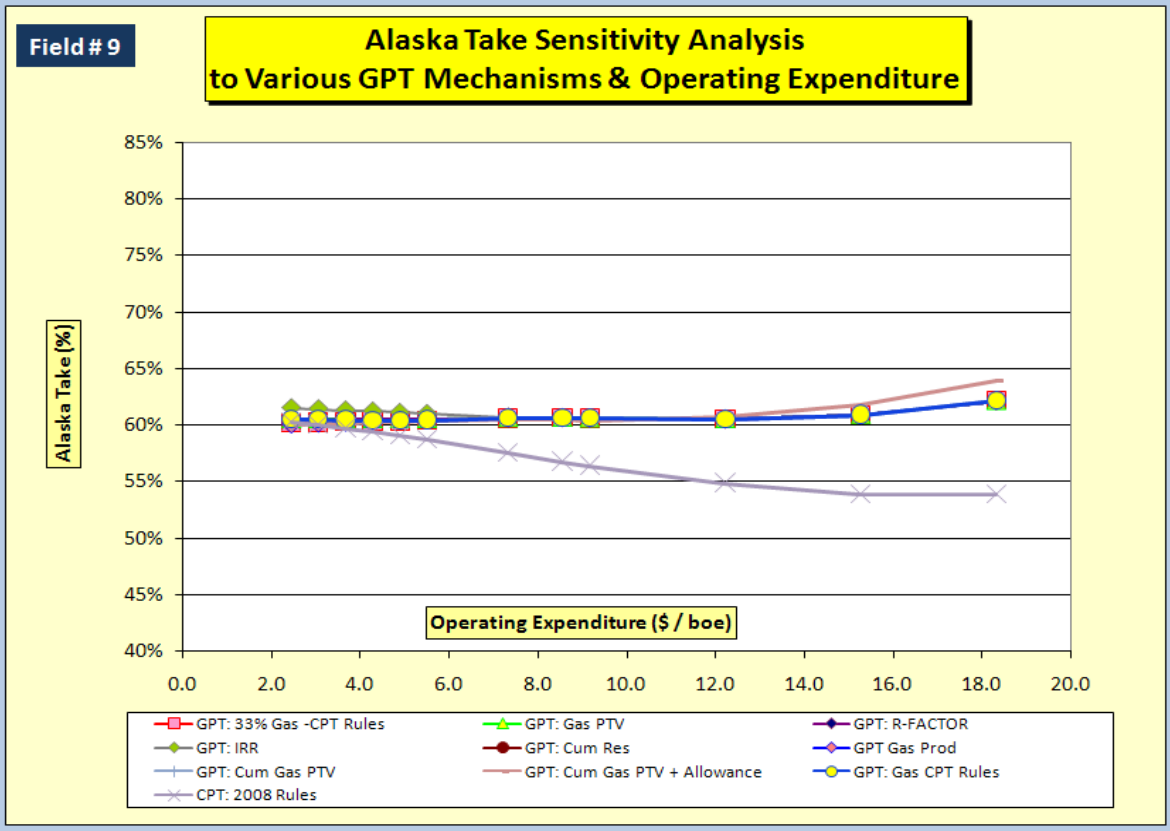

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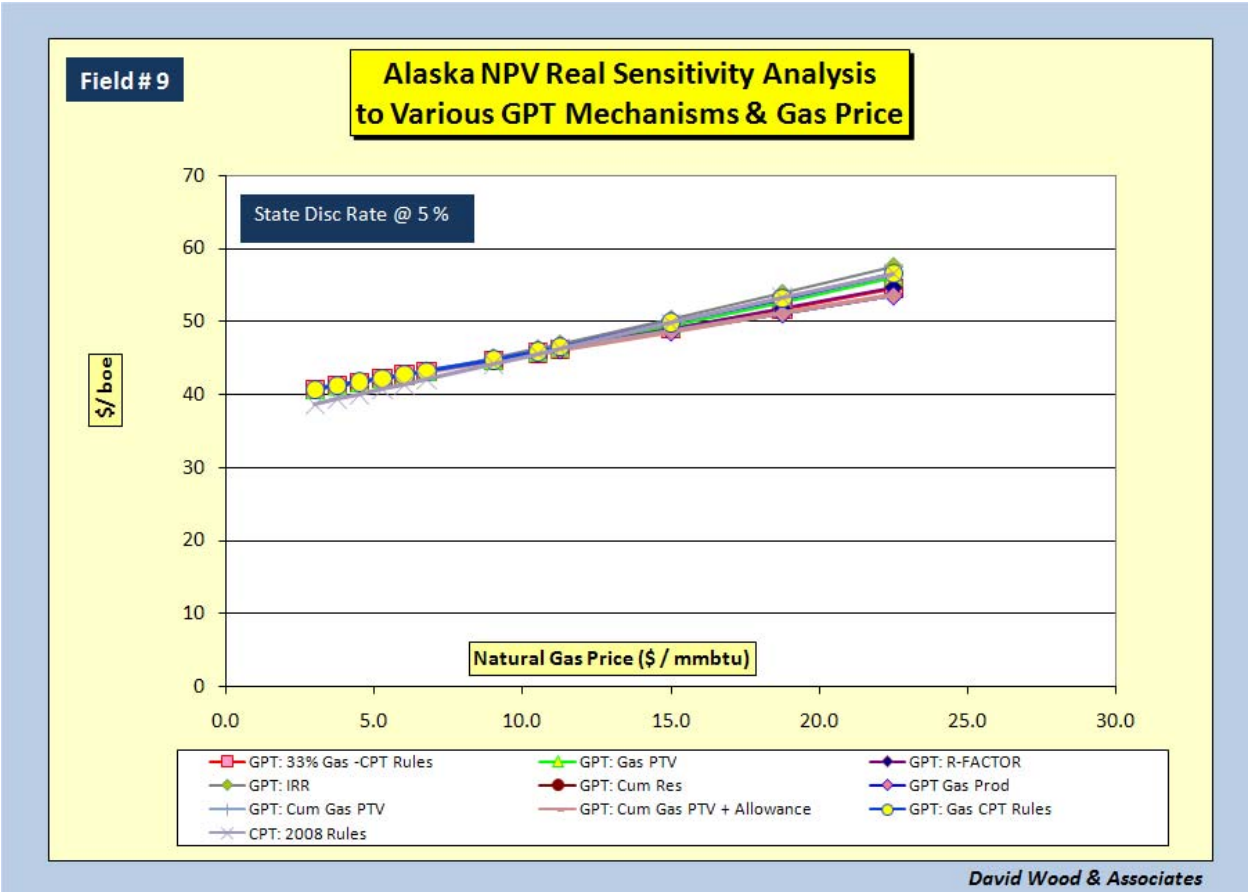

Field # 9
Alaska NPV Real Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
State Disc Rate @ 5 %
$/ boe
70
60
50
40
30
20
10
0
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
David Wood & Associates

Oil Field #10 (615 million boe produced)

Model Field Number:	10	Base Case Gas Reserves Produced:	690.0 bcf	Cpy Disc Rate Applied:	10.0%	State Disc Rate Applied	5.0%

Sensitivity Analysis - changing selected input metrics by a factor to analyse field profitability

Input Variables	Base Case =1.00	1.00	0.40	0.50	0.60	0.70	0.80	0.90	1.20	1.40	1.50	2.00	2.50	3.00
Year 1 Gas Price ($/mmbtu)		8	3.0	3.8	4.5	5.3	6.0	6.8	9.0	10.5	11.3	15.0	18.8	22.5
Year 1 Oil Price ($ / Barrel)	Field # 10	80	32.0	40.0	48.0	56.0	64.0	72.0	96.0	112.0	120.0	160.0	200.0	240.0
Condensate Yield (barrels/mmcf)		20.0	8.0	10.0	12.0	14.0	16.0	18.0	24.0	28.0	30.0	40.0	50.0	60.0
Gas TT&T ($/ mcf)		4.5	1.8	2.3	2.7	3.2	3.6	4.1	5.4	6.3	6.8	9.0	11.3	13.5
Total Capex ($/boe)		5.53	2.21	2.77	3.32	3.87	4.42	4.98	6.64	7.74	8.30	11.06	13.83	16.59
Total Opex ($/boe)		7.11	2.84	3.55	4.26	4.97	5.68	6.40	8.53	9.95	10.66	14.21	17.76	21.32
Production Startup Accelerated (-) or Delayed (+) by Years		7					-2.0	-1.0	1.0	2.0	3.0			
Producer Base Case NPV Real $ millions:		2,027												
		2,027												

Gas Price ($/mmbtu) →

Total Government Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	75.6%	77.1%	76.9%	76.6%	76.3%	76.1%	75.8%	75.2%	74.9%	74.8%	74.4%	74.0%	73.7%
GPT: Gas PTV	Field # 10 %	75.7%	77.1%	76.9%	76.6%	76.3%	76.1%	75.8%	75.4%	75.2%	75.1%	75.3%	75.8%	76.3%
GPT: R-FACTOR	%	75.7%	77.1%	76.9%	76.6%	76.3%	76.1%	75.9%	75.4%	75.1%	75.0%	74.5%	74.2%	74.1%
GPT: IRR	%	75.8%	77.1%	76.9%	76.6%	76.3%	76.1%	75.9%	75.7%	75.7%	75.7%	76.0%	76.4%	77.0%
GPT: Cum Res	%	75.7%	77.1%	76.9%	76.6%	76.3%	76.1%	75.9%	75.3%	74.9%	74.7%	73.9%	73.1%	72.5%
GPT Gas Prod	%	75.6%	77.1%	76.9%	76.6%	76.3%	76.1%	75.8%	75.1%	74.7%	74.5%	73.6%	72.8%	72.1%
GPT: Cum Gas PTV	%	75.6%	77.1%	76.9%	76.6%	76.3%	76.1%	75.8%	75.2%	74.8%	74.6%	73.8%	73.1%	72.6%
GPT: Cum Gas PTV + Allowance	%	75.6%	77.4%	76.9%	76.5%	76.2%	76.0%	75.8%	75.2%	74.8%	74.7%	74.0%	73.5%	73.3%
GPT: Gas CPT Rules	%	75.6%	77.1%	76.9%	76.6%	76.3%	76.1%	75.8%	75.3%	75.2%	75.3%	75.9%	76.3%	76.9%
CPT: 2008 Rules	%	74.4%	73.1%	73.3%	73.5%	73.8%	74.0%	74.2%	74.8%	75.2%	75.3%	75.9%	76.3%	76.6%
[Take of mod Cash flow on Undiscounted basis]		74.4%												

Gas Price ($/mmbtu) →

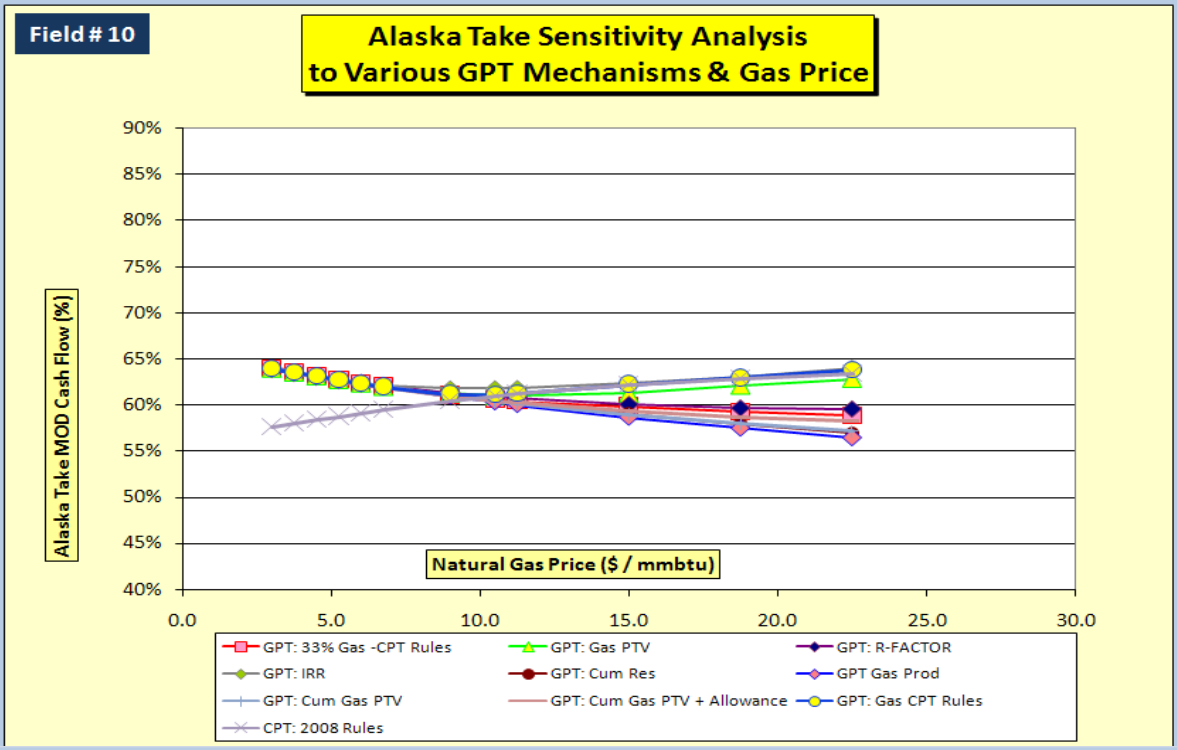
Total Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	61.6%	63.9%	63.5%	63.1%	62.7%	62.3%	62.0%	61.0%	60.6%	60.4%	59.8%	59.3%	58.8%
GPT: Gas PTV	%	61.7%	63.9%	63.5%	63.1%	62.7%	62.3%	62.0%	61.3%	61.0%	61.0%	61.2%	62.1%	62.8%
GPT: R-FACTOR	Field # 10 %	61.8%	63.9%	63.5%	63.1%	62.7%	62.4%	62.1%	61.3%	60.9%	60.7%	60.0%	59.6%	59.5%
GPT: IRR	%	61.9%	63.9%	63.5%	63.1%	62.7%	62.3%	62.0%	61.8%	61.8%	61.8%	62.3%	63.1%	64.0%
GPT: Cum Res	%	61.7%	63.9%	63.5%	63.1%	62.7%	62.4%	62.0%	61.1%	60.6%	60.3%	59.1%	58.0%	57.1%
GPT Gas Prod	%	61.6%	63.9%	63.5%	63.1%	62.7%	62.3%	62.0%	60.9%	60.3%	60.0%	58.7%	57.5%	56.4%
GPT: Cum Gas PTV	%	61.6%	63.9%	63.5%	63.1%	62.7%	62.3%	62.0%	61.0%	60.4%	60.1%	58.9%	58.0%	57.2%
GPT: Cum Gas PTV + Allowance	%	61.6%	64.2%	63.6%	63.0%	62.5%	62.2%	61.9%	61.0%	60.5%	60.3%	59.3%	58.6%	58.3%
GPT: Gas CPT Rules	%	61.6%	63.9%	63.5%	63.1%	62.7%	62.3%	62.0%	61.2%	61.1%	61.2%	62.3%	62.9%	63.8%
CPT: 2008 Rules	%	59.8%	57.6%	58.0%	58.4%	58.8%	59.1%	59.5%	60.4%	61.0%	61.2%	62.3%	62.9%	63.4%
[Take of mod Cash flow on Undiscounted basis]		59.8%												

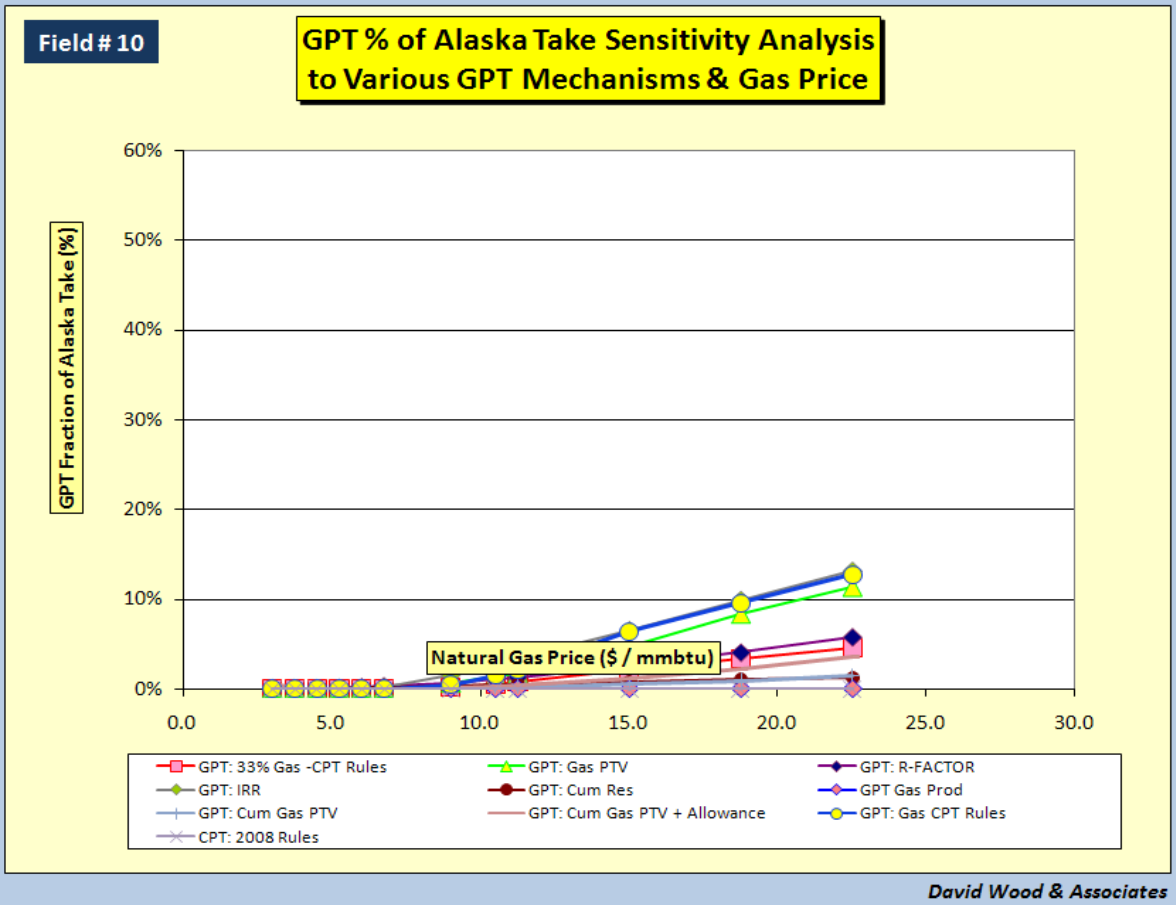
Gas Price ($/mmbtu) →

Alaska NPV Real ($/boe) to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	$/boe	42.7	39.3	39.8	40.4	41.0	41.5	42.1	43.9	45.1	45.7	48.9	52.1	55.3
GPT: Gas PTV	$/boe	42.7	39.3	39.8	40.4	41.0	41.5	42.1	44.0	45.3	45.9	49.5	53.4	57.2
GPT: R-FACTOR	Field # 10 $/boe	42.8	39.3	39.8	40.4	41.0	41.6	42.2	44.0	45.2	45.8	48.9	52.2	55.5
GPT: IRR	$/boe	42.8	39.3	39.8	40.4	41.0	41.5	42.1	44.1	45.5	46.2	49.9	53.8	57.8
GPT: Cum Res	$/boe	42.7	39.3	39.8	40.4	41.0	41.6	42.1	43.9	45.1	45.6	48.6	51.5	54.4
GPT Gas Prod	$/boe	42.7	39.3	39.8	40.4	41.0	41.5	42.1	43.8	45.0	45.6	48.4	51.3	54.1
GPT: Cum Gas PTV	$/boe	42.7	39.3	39.8	40.4	41.0	41.5	42.1	43.8	45.0	45.6	48.5	51.5	54.4
GPT: Cum Gas PTV + Allowance	$/boe	42.7	39.4	39.9	40.4	40.9	41.5	42.1	43.8	45.0	45.6	48.6	51.7	54.9
GPT: Gas CPT Rules	$/boe	42.7	39.3	39.8	40.4	41.0	41.5	42.1	43.9	45.3	46.0	49.9	53.8	57.7
CPT: 2008 Rules	$/boe	41.9	37.1	37.9	38.7	39.5	40.3	41.1	43.5	45.1	45.9	49.9	53.8	57.6
		41.9												

Gas Price ($/mmbtu) →

GPT % Alaska State Take to Gas Price Sensitivity		7.50	3.00	3.75	4.50	5.25	6.00	6.75	9.00	10.50	11.25	15.00	18.75	22.50
GPT: 33% Gas -CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.5%	0.7%	2.2%	3.4%	4.5%
GPT: Gas PTV	%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	1.3%	1.7%	4.6%	8.3%	11.3%
GPT: R-FACTOR	Field # 10 %	0.4%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.7%	1.1%	1.3%	2.5%	4.0%	5.8%
GPT: IRR	%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	1.5%	2.6%	3.2%	6.5%	9.8%	13.1%
GPT: Cum Res	%	0.2%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.3%	0.4%	0.5%	0.8%	1.0%	1.2%
GPT Gas Prod	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GPT: Cum Gas PTV	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.2%	0.5%	0.9%	1.5%
GPT: Cum Gas PTV + Allowance	%	0.0%	0.6%	0.2%	-0.1%	-0.3%	-0.2%	-0.1%	0.2%	0.3%	0.4%	1.2%	2.2%	3.5%
GPT: Gas CPT Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	1.5%	2.1%	6.4%	9.6%	12.7%
CPT: 2008 Rules	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		0.0%												


Field # 10
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
Alaska Take MOD Cash Flow (%)
90%
85%
80%
75%
70%
65%
60%
55%
50%
45%
40%
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 10
GPT % of Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
GPT Fraction of Alaska Take (%)
60%
50%
40%
30%
20%
10%
0%
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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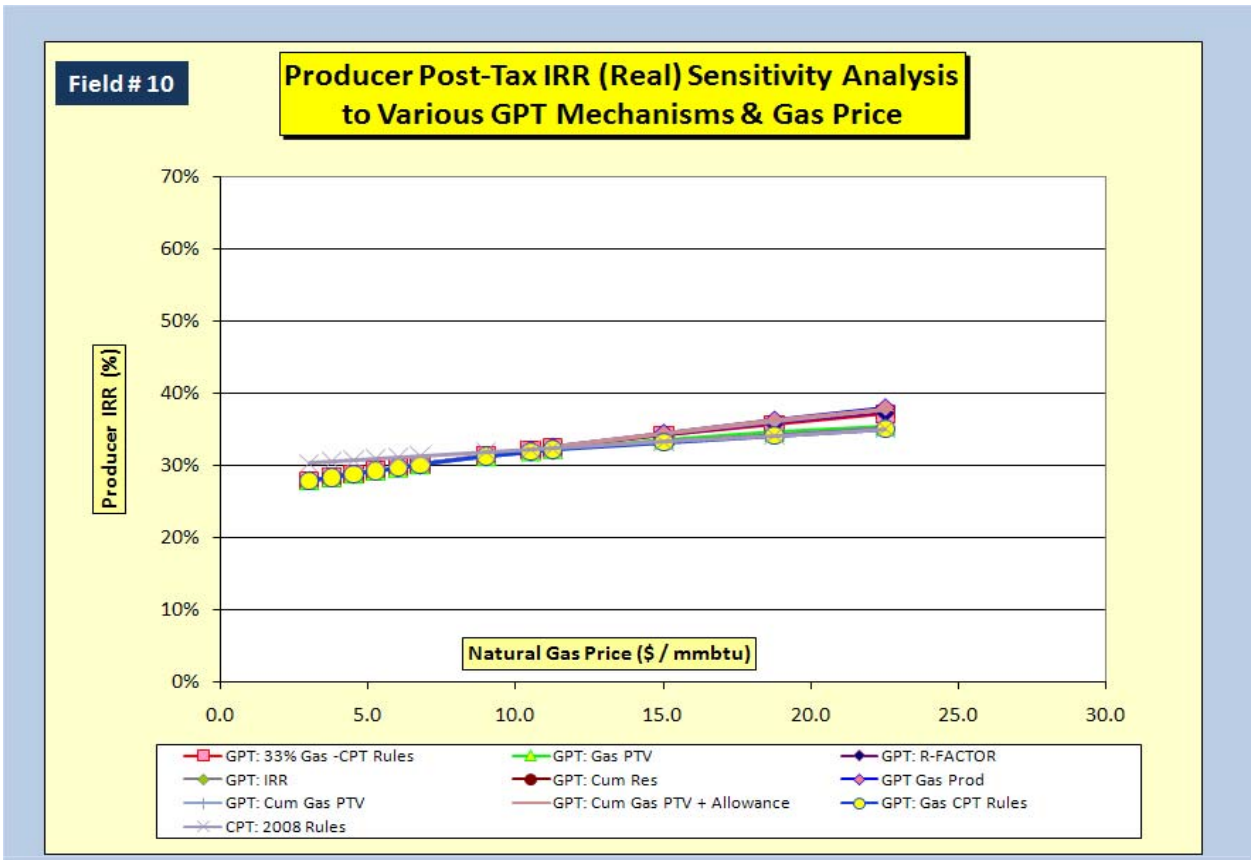
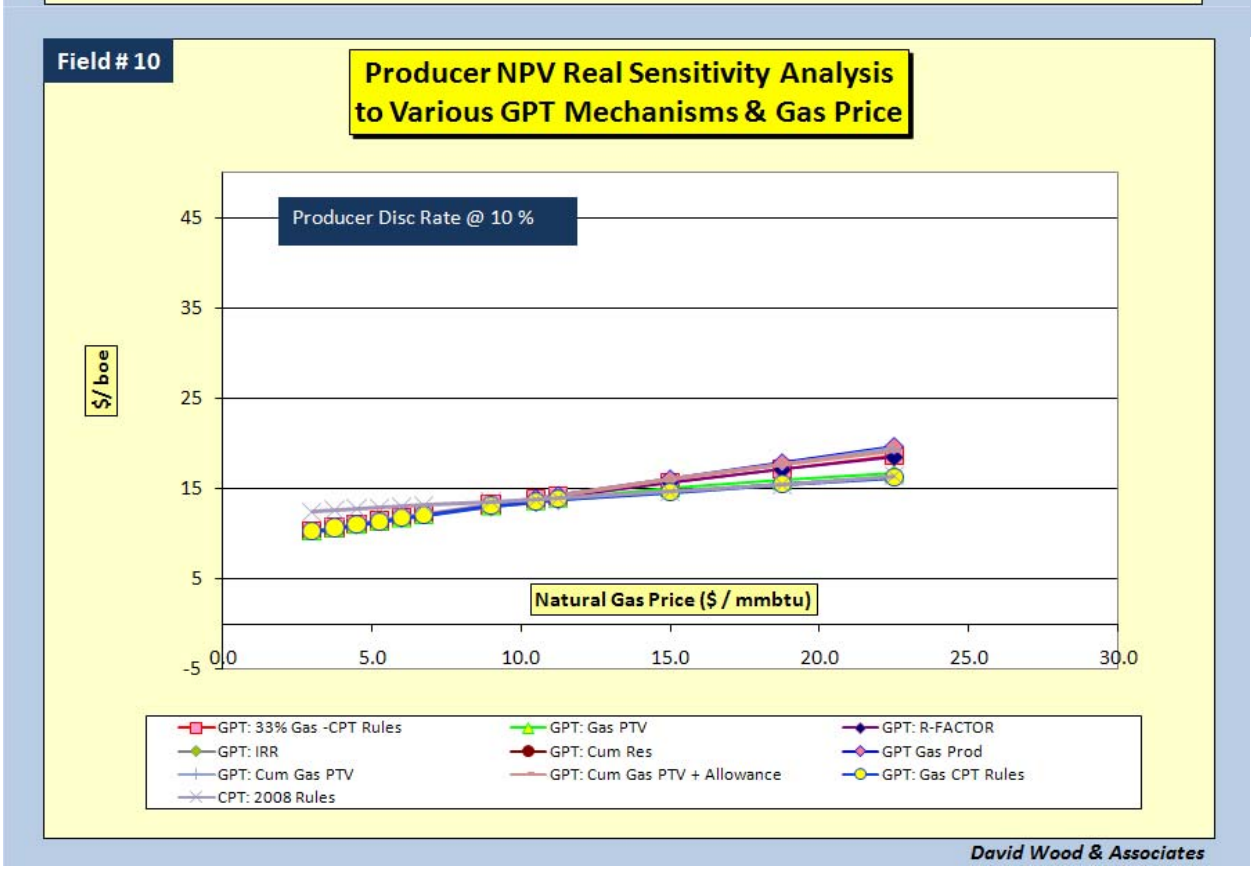

Field # 10
Producer Post-Tax IRR (Real) Sensitivity Analysis to Various GPT Mechanisms & Gas Price
Producer IRR (%)
70%
60%
50%
40%
30%
20%
10%
0%
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 10
Producer NPV Real Sensitivity Analysis to Various GPT Mechanisms & Gas Price
Producer Disc Rate @ 10 %
$/ boe
45
35
25
15
5
-5
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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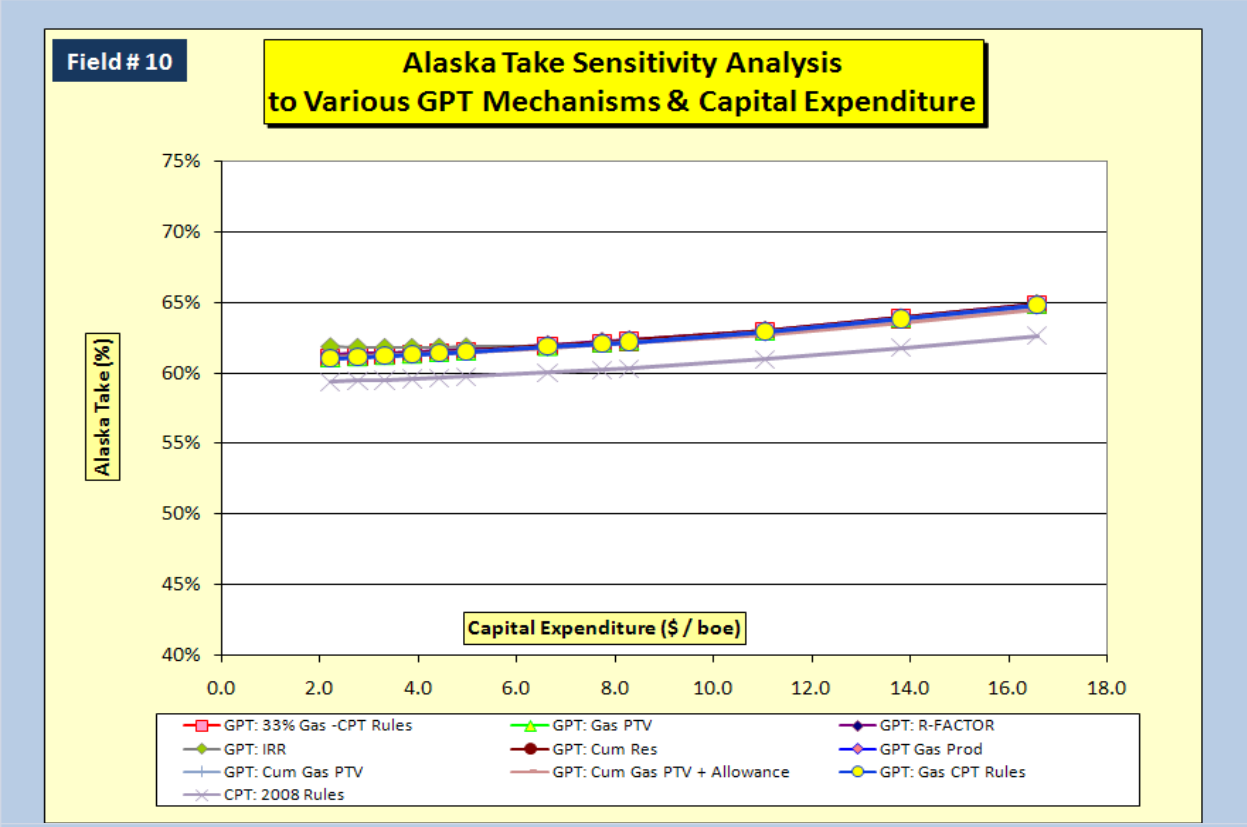
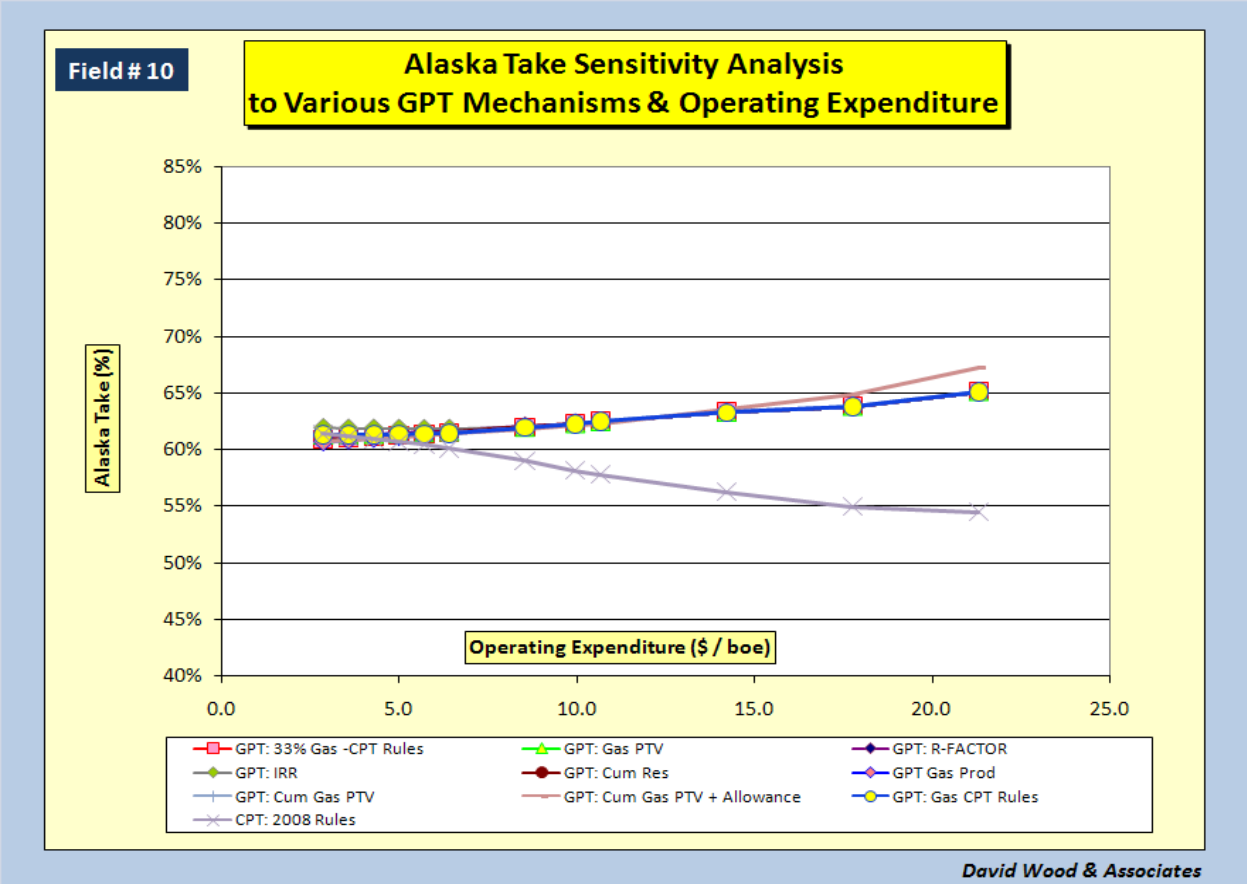

Field # 10
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Capital Expenditure
Alaska Take (%)
75%
70%
65%
60%
55%
50%
45%
40%
Capital Expenditure ($ / boe)
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
16.0
18.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules


Field # 10
Alaska Take Sensitivity Analysis
to Various GPT Mechanisms & Operating Expenditure
Alaska Take (%)
85%
80%
75%
70%
65%
60%
55%
50%
45%
40%
Operating Expenditure ($ / boe)
0.0
5.0
10.0
15.0
20.0
25.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
CPT: 2008 Rules
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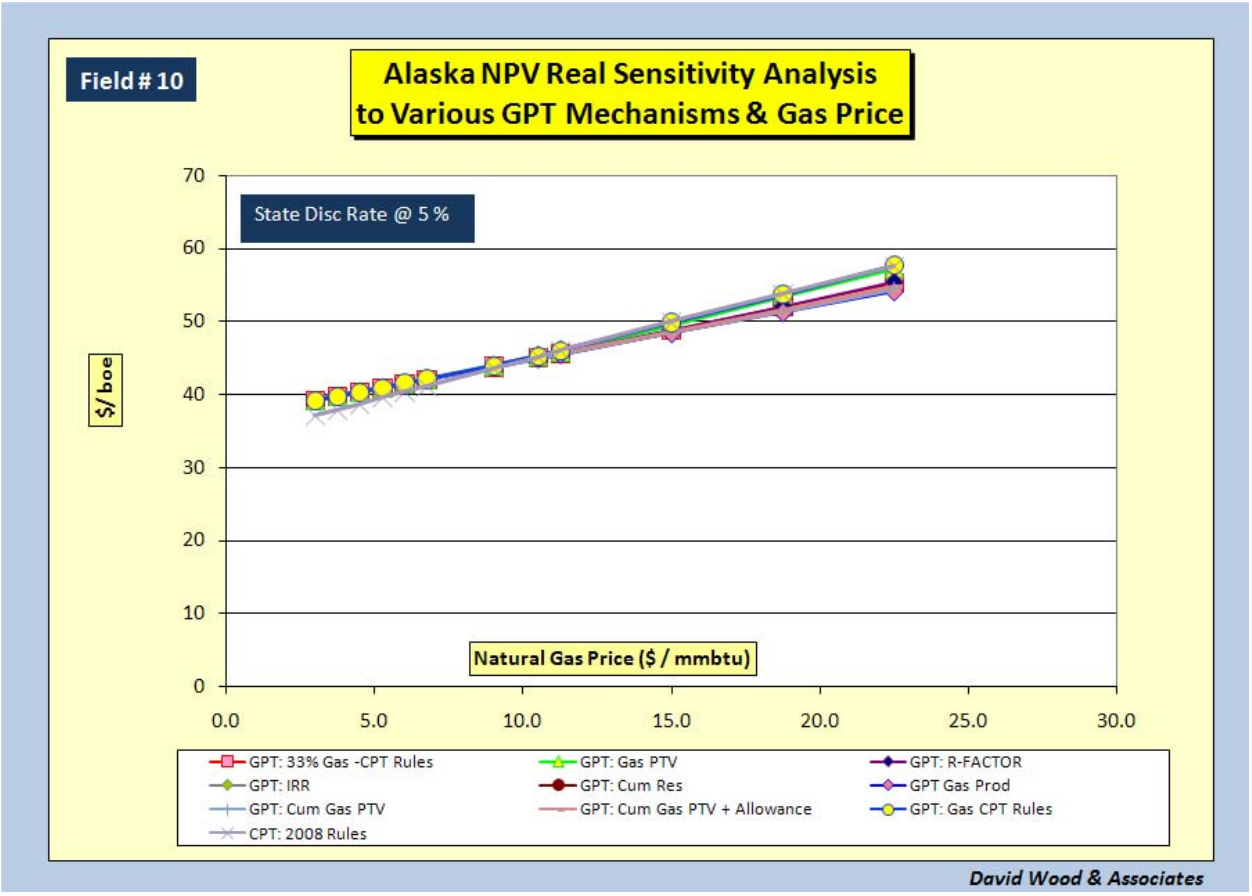
Field # 10
Alaska NPV Real Sensitivity Analysis
to Various GPT Mechanisms & Gas Price
State Disc Rate @ 5 %
$/boe
70
60
50
40
30
20
10
0
Natural Gas Price ($ / mmbtu)
0.0
5.0
10.0
15.0
20.0
25.0
30.0
GPT: 33% Gas -CPT Rules
GPT: Gas PTV
GPT: R-FACTOR
GPT: IRR
GPT: Cum Res
GPT Gas Prod
GPT: Cum Gas PTV
GPT: Cum Gas PTV + Allowance
GPT: Gas CPT Rules
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