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Mesozoic/Tertiary Foredeep Fold and Thrust, Assessment Unit 20190103
Assessment Results Summary

[MMBO, million barrels of oil. BCFG, billion cubic feet of gas. MMBNGL, million barrels of natural gas liquids. MFS, minimum field size assessed (MMBO or BCFG). Prob., probability (including both geologic and accessibility probabilities) of at least one field equal to or greater than the MFS. Results shown are fully risked estimates. For gas fields, all liquids are included under the NGL (natural gas liquids) category. F95 represents a 95 percent chance of at least the amount tabulated. Other fractiles are defined similarly. Fractiles are additive under the assumption of perfect positive correlation. Shading indicates not applicable]

Field Type	MFS	Prob. (0-1)	Undiscovered Resources												Largest Undiscovered Field (MMBO or BCFG)			
			Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)							
			F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean
Oil Fields	10	1.00	105	442	1,155	513	592	2,577	7,273	3,084	33	151	452	185	40	132	476	177
Gas Fields	60						2,677	11,090	26,149	12,334	110	473	1,214	543	613	2,071	6,581	2,604
Total		1.00	105	442	1,155	513	3,269	13,667	33,423	15,419	144	624	1,666	728				

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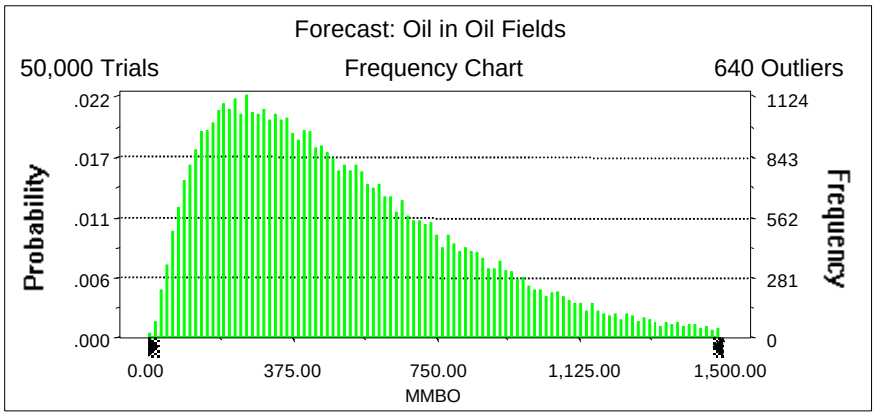
Monte Carlo Results

Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 1,500.00 MMBO
Entire range is from 10.56 to 2,893.02 MMBO
After 50,000 trials, the standard error of the mean is 1.51

Statistics:	Value
Trials	50000
Mean	513.08
Median	442.02
Mode	---
Standard Deviation	337.37
Variance	113,815.60
Skewness	1.17
Kurtosis	4.80
Coefficient of Variability	0.66
Range Minimum	10.56
Range Maximum	2,893.02
Range Width	2,882.46
Mean Standard Error	1.51



20190103
Mesozoic/Tertiary Foredeep Fold and Thrust
Monte Carlo Results

Forecast: Oil in Oil Fields (cont'd)

Percentiles:

Percentile	MMBO
100%	10.56
95%	105.04
90%	148.07
85%	186.14
80%	221.26
75%	255.90
70%	290.29
65%	326.40
60%	363.27
55%	402.55
50%	442.02
45%	484.91
40%	531.80
35%	581.32
30%	635.98
25%	698.78
20%	771.49
15%	858.08
10%	970.04
5%	1,155.03
0%	2,893.02

End of Forecast

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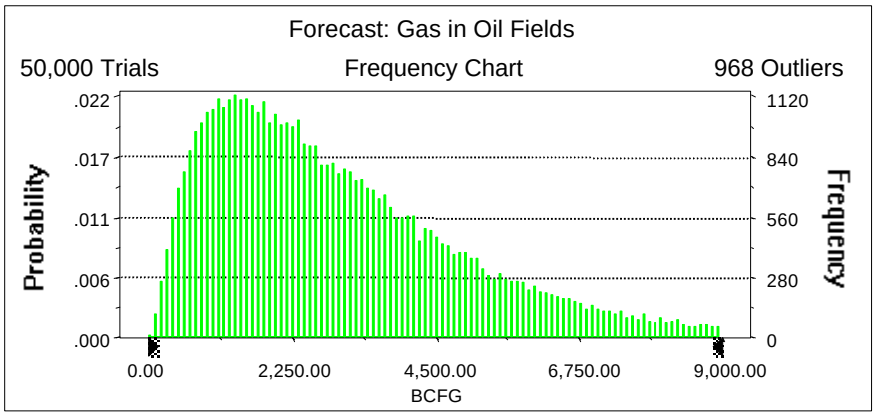
Mesozoic/Tertiary Foredeep Fold and Thrust
Monte Carlo Results

Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 9,000.00 BCFG
Entire range is from 45.44 to 19,569.79 BCFG
After 50,000 trials, the standard error of the mean is 9.70

Statistics:	Value
Trials	50000
Mean	3,084.22
Median	2,577.17
Mode	---
Standard Deviation	2,168.55
Variance	4,702,601.93
Skewness	1.41
Kurtosis	5.89
Coefficient of Variability	0.70
Range Minimum	45.44
Range Maximum	19,569.79
Range Width	19,524.35
Mean Standard Error	9.70



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Mesozoic/Tertiary Foredeep Fold and Thrust
Monte Carlo Results

Forecast: Gas in Oil Fields (cont'd)

Percentiles:

Percentile	BCFG
100%	45.44
95%	592.26
90%	840.66
85%	1,059.73
80%	1,267.11
75%	1,468.82
70%	1,671.91
65%	1,885.33
60%	2,107.39
55%	2,337.26
50%	2,577.17
45%	2,843.81
40%	3,134.43
35%	3,433.30
30%	3,774.29
25%	4,168.39
20%	4,621.51
15%	5,186.56
10%	5,987.20
5%	7,273.46
0%	19,569.79

End of Forecast

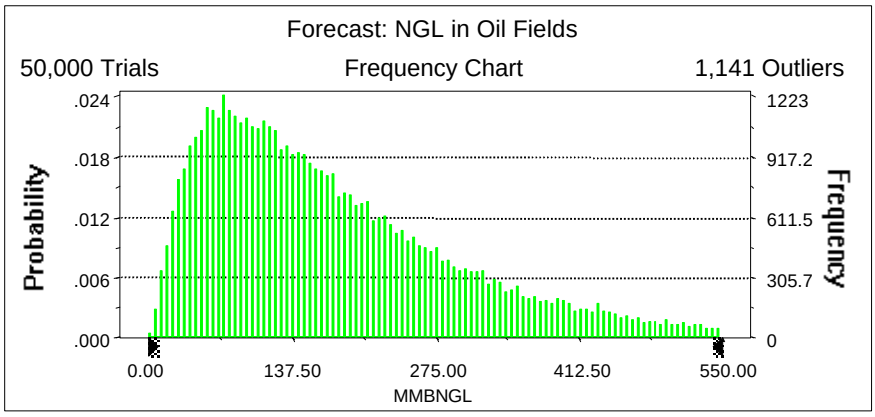
20190103
Mesozoic/Tertiary Foredeep Fold and Thrust
Monte Carlo Results

Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 550.00 MMBNGL
Entire range is from 2.02 to 1,407.91 MMBNGL
After 50,000 trials, the standard error of the mean is 0.62

Statistics:	Value
Trials	50000
Mean	185.37
Median	151.24
Mode	---
Standard Deviation	138.15
Variance	19,086.30
Skewness	1.63
Kurtosis	7.26
Coefficient of Variability	0.75
Range Minimum	2.02
Range Maximum	1,407.91
Range Width	1,405.89
Mean Standard Error	0.62



20190103
Mesozoic/Tertiary Foredeep Fold and Thrust
Monte Carlo Results

Forecast: NGL in Oil Fields (cont'd)

Percentiles:

Percentile	MMBNGL
100%	2.02
95%	33.39
90%	47.99
85%	60.50
80%	72.71
75%	84.46
70%	96.86
65%	109.61
60%	122.48
55%	136.42
50%	151.24
45%	166.92
40%	183.92
35%	203.42
30%	224.94
25%	249.27
20%	278.24
15%	316.10
10%	367.23
5%	451.82
0%	1,407.91

End of Forecast

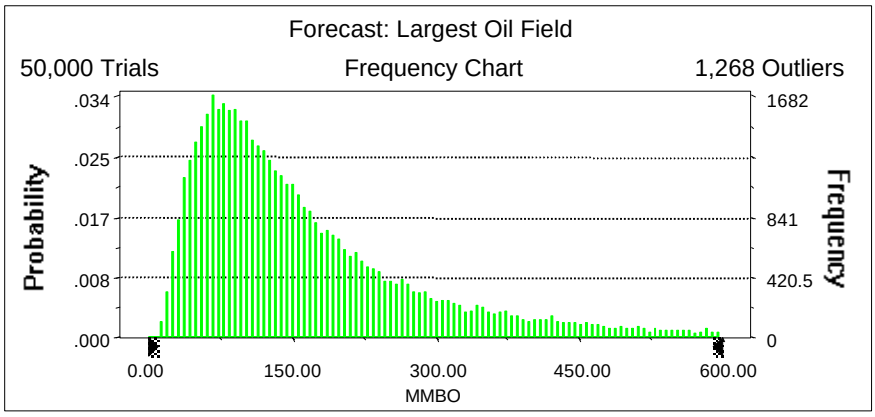
20190103
Mesozoic/Tertiary Foredeep Fold and Thrust
Monte Carlo Results

Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 600.00 MMBO
Entire range is from 10.56 to 997.34 MMBO
After 50,000 trials, the standard error of the mean is 0.65

Statistics:	Value
Trials	50000
Mean	176.79
Median	132.44
Mode	---
Standard Deviation	145.86
Variance	21,273.99
Skewness	2.08
Kurtosis	8.41
Coefficient of Variability	0.83
Range Minimum	10.56
Range Maximum	997.34
Range Width	986.78
Mean Standard Error	0.65



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Mesozoic/Tertiary Foredeep Fold and Thrust
Monte Carlo Results

Forecast: Largest Oil Field (cont'd)

Percentiles:

Percentile	MMBO
100%	10.56
95%	39.54
90%	51.39
85%	61.74
80%	70.93
75%	80.32
70%	89.74
65%	99.28
60%	109.48
55%	120.59
50%	132.44
45%	145.82
40%	160.29
35%	176.88
30%	197.01
25%	220.93
20%	252.31
15%	293.93
10%	359.79
5%	476.42
0%	997.34

End of Forecast

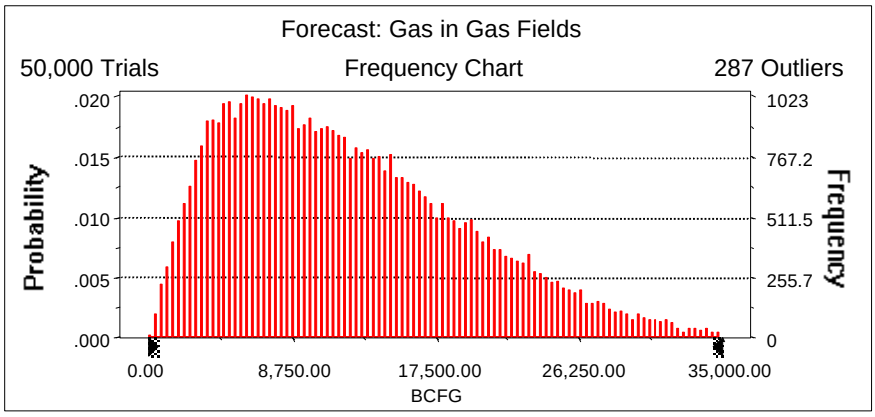
20190103
Mesozoic/Tertiary Foredeep Fold and Thrust
Monte Carlo Results

Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 35,000.00 BCFG
Entire range is from 182.07 to 51,308.14 BCFG
After 50,000 trials, the standard error of the mean is 33.11

Statistics:	Value
Trials	50000
Mean	12,334.33
Median	11,090.15
Mode	---
Standard Deviation	7,402.65
Variance	54,799,180.56
Skewness	0.79
Kurtosis	3.35
Coefficient of Variability	0.60
Range Minimum	182.07
Range Maximum	51,308.14
Range Width	51,126.07
Mean Standard Error	33.11



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Mesozoic/Tertiary Foredeep Fold and Thrust
Monte Carlo Results

Forecast: Gas in Gas Fields (cont'd)

Percentiles:

Percentile	BCFG
100%	182.07
95%	2,676.85
90%	3,777.42
85%	4,710.80
80%	5,615.40
75%	6,475.56
70%	7,352.37
65%	8,230.34
60%	9,132.79
55%	10,104.38
50%	11,090.15
45%	12,101.55
40%	13,221.25
35%	14,357.95
30%	15,585.23
25%	16,957.24
20%	18,559.69
15%	20,400.91
10%	22,759.33
5%	26,149.39
0%	51,308.14

End of Forecast

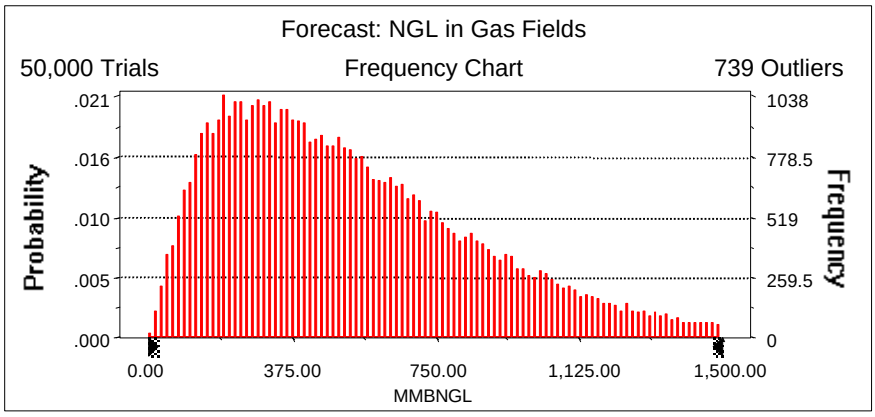
20190103
Mesozoic/Tertiary Foredeep Fold and Thrust
Monte Carlo Results

Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 1,500.00 MMBNGL
Entire range is from 6.43 to 3,139.96 MMBNGL
After 50,000 trials, the standard error of the mean is 1.57

Statistics:	Value
Trials	50000
Mean	543.11
Median	473.05
Mode	---
Standard Deviation	350.27
Variance	122,685.71
Skewness	1.04
Kurtosis	4.19
Coefficient of Variability	0.64
Range Minimum	6.43
Range Maximum	3,139.96
Range Width	3,133.53
Mean Standard Error	1.57



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Mesozoic/Tertiary Foredeep Fold and Thrust
Monte Carlo Results

Forecast: NGL in Gas Fields (cont'd)

Percentiles:

Percentile	MMBNGL
100%	6.43
95%	110.18
90%	156.65
85%	197.57
80%	234.99
75%	273.30
70%	310.54
65%	349.08
60%	387.76
55%	429.55
50%	473.05
45%	518.69
40%	566.13
35%	619.95
30%	676.78
25%	742.66
20%	819.48
15%	910.42
10%	1,031.56
5%	1,213.92
0%	3,139.96

End of Forecast

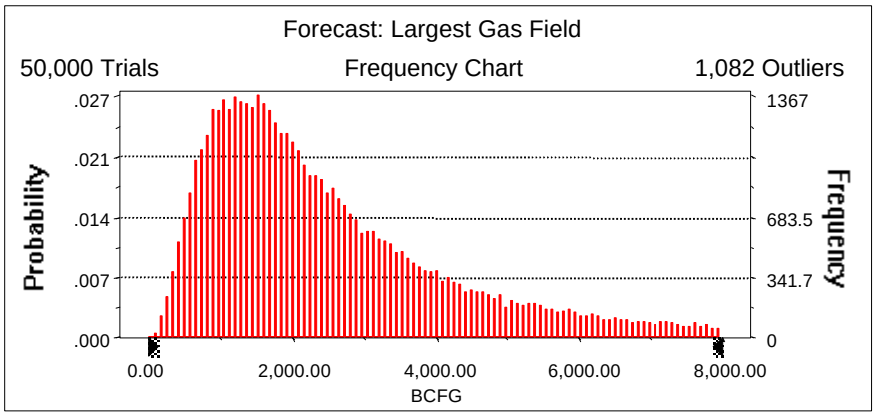
20190103
Mesozoic/Tertiary Foredeep Fold and Thrust
Monte Carlo Results

Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 8,000.00 BCFG
Entire range is from 84.96 to 9,999.47 BCFG
After 50,000 trials, the standard error of the mean is 8.31

Statistics:	Value
Trials	50000
Mean	2,603.79
Median	2,070.86
Mode	---
Standard Deviation	1,858.02
Variance	3,452,223.79
Skewness	1.44
Kurtosis	5.01
Coefficient of Variability	0.71
Range Minimum	84.96
Range Maximum	9,999.47
Range Width	9,914.51
Mean Standard Error	8.31



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Mesozoic/Tertiary Foredeep Fold and Thrust
Monte Carlo Results

Forecast: Largest Gas Field (cont'd)

Percentiles:

Percentile	BCFG
100%	84.96
95%	612.90
90%	808.88
85%	970.28
80%	1,123.41
75%	1,274.62
70%	1,423.00
65%	1,576.13
60%	1,726.51
55%	1,895.26
50%	2,070.86
45%	2,266.88
40%	2,493.08
35%	2,740.49
30%	3,035.36
25%	3,384.35
20%	3,814.57
15%	4,381.36
10%	5,228.37
5%	6,581.09
0%	9,999.47

End of Forecast

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Mesozoic/Tertiary Foredeep Fold and Thrust
Monte Carlo Results

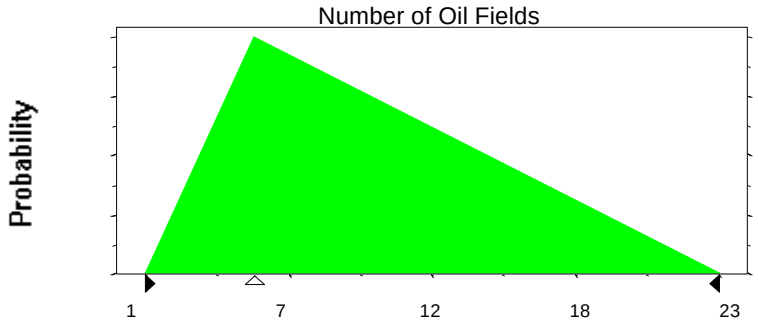
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	1
Likeliest	5
Maximum	23

Selected range is from 1 to 23
Mean value in simulation was 10



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	44.39	54.39
Standard Deviation	87.96	87.96
Selected range is from 0.00 to 990.00		10.00 to 1,000.00
Mean value in simulation was 42.81		52.81

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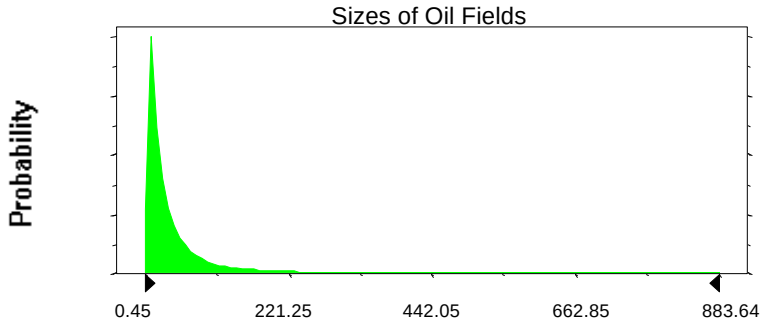
Assumption: Sizes of Oil Fields (cont'd)

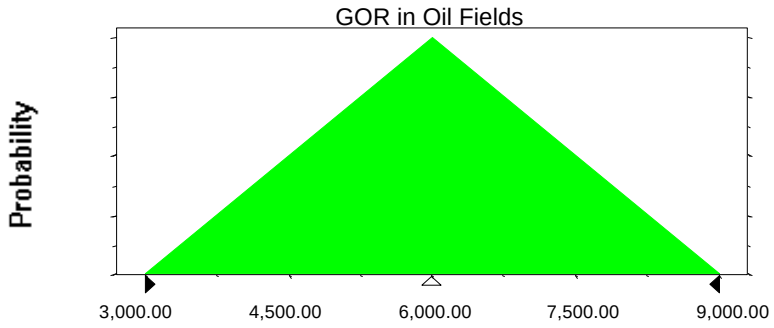


Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	3,000.00
Likeliest	6,000.00
Maximum	9,000.00

Selected range is from 3,000.00 to 9,000.00
Mean value in simulation was 6,008.09



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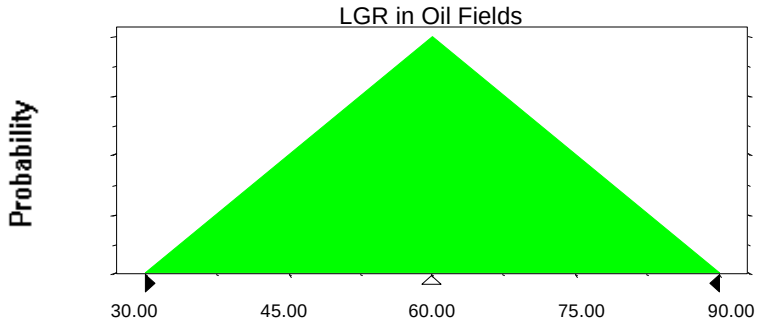
Assumption: LGR in Oil Fields

Triangular distribution with parameters:

Minimum	30.00
Likeliest	60.00
Maximum	90.00

Selected range is from 30.00 to 90.00
Mean value in simulation was 60.13



Assumption: Number of Gas Fields

Triangular distribution with parameters:

Minimum	2
Likeliest	16
Maximum	80

Selected range is from 2 to 80
Mean value in simulation was 33

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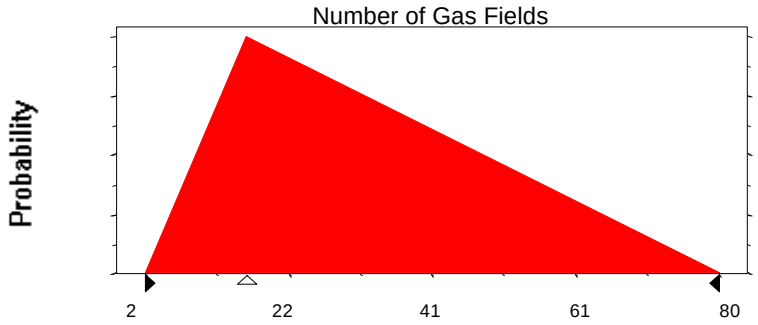
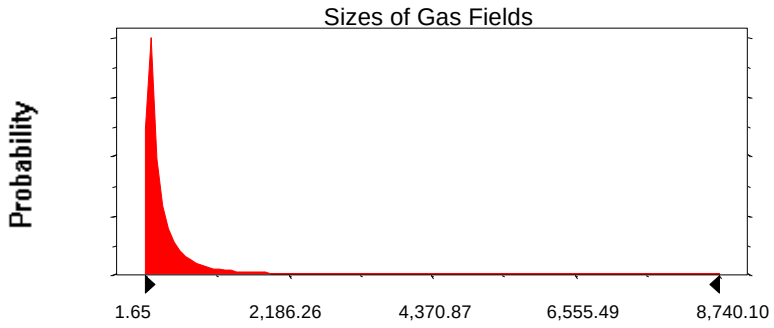
Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	333.31	393.31
Standard Deviation	863.72	863.72
Selected range is from 0.00 to 9,940.00		60.00 to 10,000.00
Mean value in simulation was 317.55		377.55



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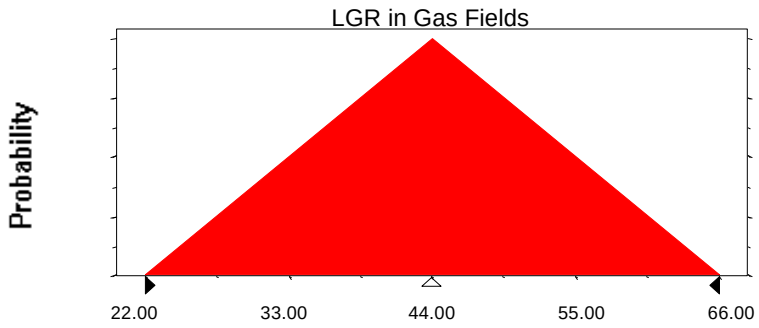
Monte Carlo Results

Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	22.00
Likeliest	44.00
Maximum	66.00

Selected range is from 22.00 to 66.00
Mean value in simulation was 44.05



End of Assumptions

Simulation started on 12/28/99 at 15:22:17
Simulation stopped on 12/28/99 at 15:50:58