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Carboniferous-Lower Permian Clastics, Assessment Unit 10090101
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	3	1.00	86	235	466	251	158	457	997	502	9	27	63	30	20	51	147	63
Gas Fields	18						6,828	13,981	22,375	14,233	168	402	773	427	517	1,119	2,192	1,207
Total		1.00	86	235	466	251	6,986	14,438	23,372	14,735	177	428	836	457				

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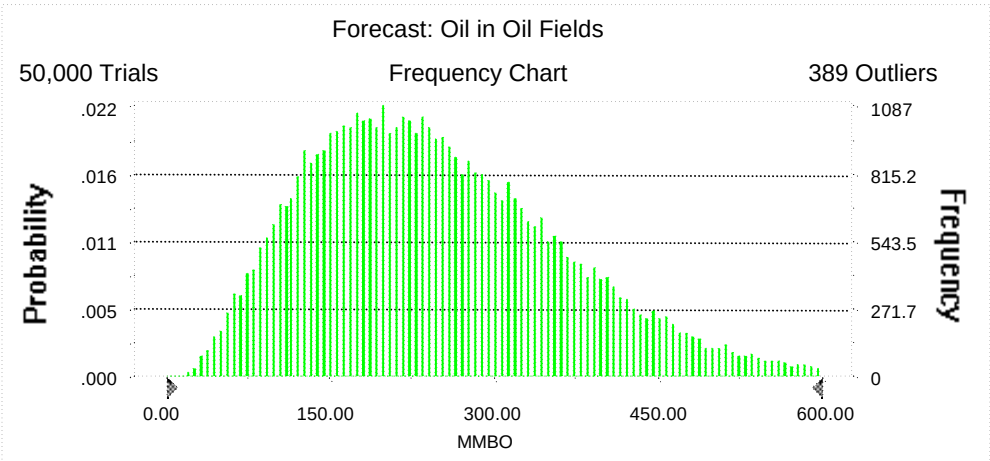
Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 600.00 MMBO
Entire range is from 17.44 to 931.68 MMBO
After 50,000 trials, the standard error of the mean is 0.53

Statistics:	Value
Trials	50000
Mean	250.70
Median	235.40
Mode	---
Standard Deviation	118.48
Variance	14,038.25
Skewness	0.73
Kurtosis	3.56
Coefficient of Variability	0.47
Range Minimum	17.44
Range Maximum	931.68
Range Width	914.24
Mean Standard Error	0.53



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Carboniferous-Lower Permian Clastics
Monte Carlo Results

Forecast: Oil in Oil Fields (cont'd)

Percentiles:

Percentile	MMBO
100%	17.44
95%	85.81
90%	110.31
85%	129.59
80%	146.53
75%	161.99
70%	176.78
65%	191.30
60%	205.62
55%	220.59
50%	235.40
45%	250.33
40%	266.32
35%	283.98
30%	303.01
25%	323.19
20%	346.65
15%	374.76
10%	410.59
5%	466.41
0%	931.68

End of Forecast

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Carboniferous-Lower Permian Clastics
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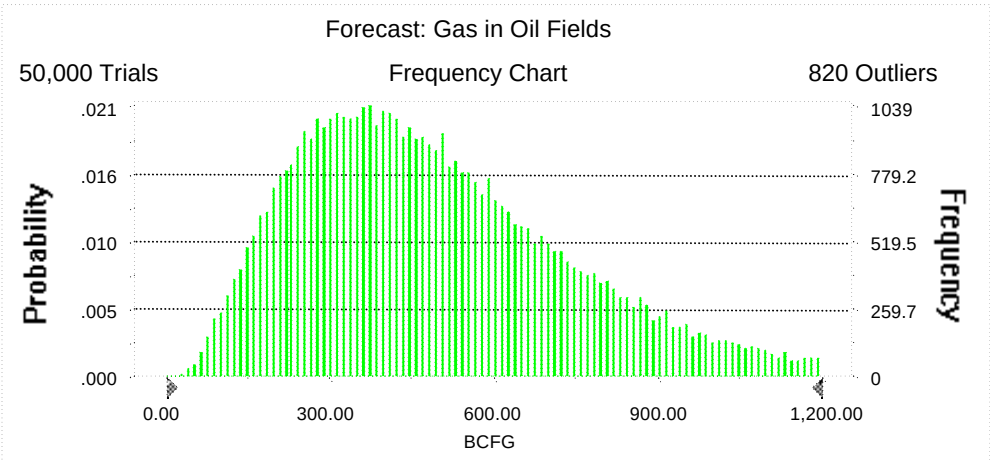
Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 1,200.00 BCFG
Entire range is from 27.31 to 2,165.65 BCFG
After 50,000 trials, the standard error of the mean is 1.18

Statistics:	Value
Trials	50000
Mean	501.67
Median	456.83
Mode	---
Standard Deviation	262.76
Variance	69,043.39
Skewness	0.98
Kurtosis	4.29
Coefficient of Variability	0.52
Range Minimum	27.31
Range Maximum	2,165.65
Range Width	2,138.34
Mean Standard Error	1.18



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Monte Carlo Results

Forecast: Gas in Oil Fields (cont'd)

Percentiles:

Percentile	BCFG
100%	27.31
95%	158.48
90%	205.30
85%	242.92
80%	275.51
75%	306.31
70%	336.18
65%	366.16
60%	395.81
55%	425.57
50%	456.83
45%	490.20
40%	524.02
35%	561.63
30%	602.33
25%	649.48
20%	704.50
15%	771.66
10%	857.84
5%	996.81
0%	2,165.65

End of Forecast

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Carboniferous-Lower Permian Clastics
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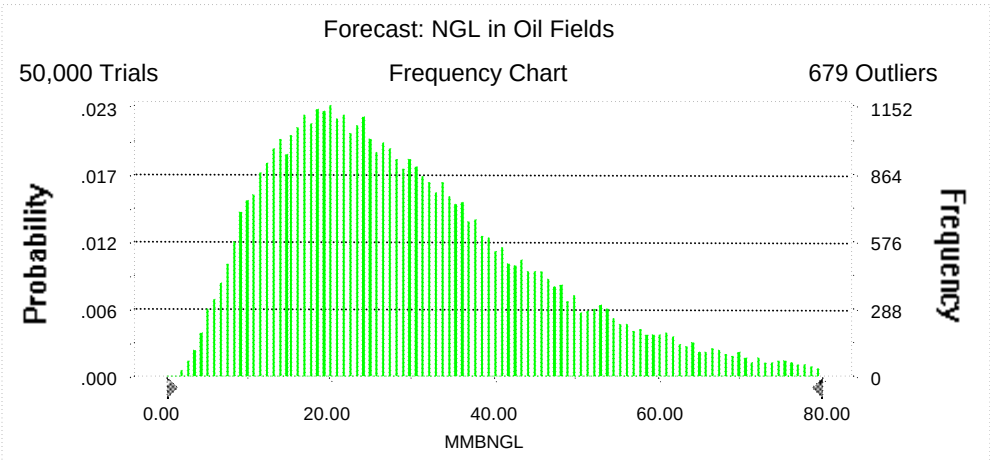
Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 80.00 MMBNGL
Entire range is from 1.24 to 171.56 MMBNGL
After 50,000 trials, the standard error of the mean is 0.08

Statistics:	Value
Trials	50000
Mean	30.09
Median	26.76
Mode	---
Standard Deviation	17.16
Variance	294.36
Skewness	1.20
Kurtosis	5.20
Coefficient of Variability	0.57
Range Minimum	1.24
Range Maximum	171.56
Range Width	170.31
Mean Standard Error	0.08



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Monte Carlo Results

Forecast: NGL in Oil Fields (cont'd)

Percentiles:

Percentile	MMBNGL
100%	1.24
95%	8.81
90%	11.46
85%	13.61
80%	15.62
75%	17.47
70%	19.30
65%	21.06
60%	22.90
55%	24.74
50%	26.76
45%	28.84
40%	31.04
35%	33.46
30%	36.03
25%	39.01
20%	42.68
15%	47.09
10%	53.23
5%	62.85
0%	171.56

End of Forecast

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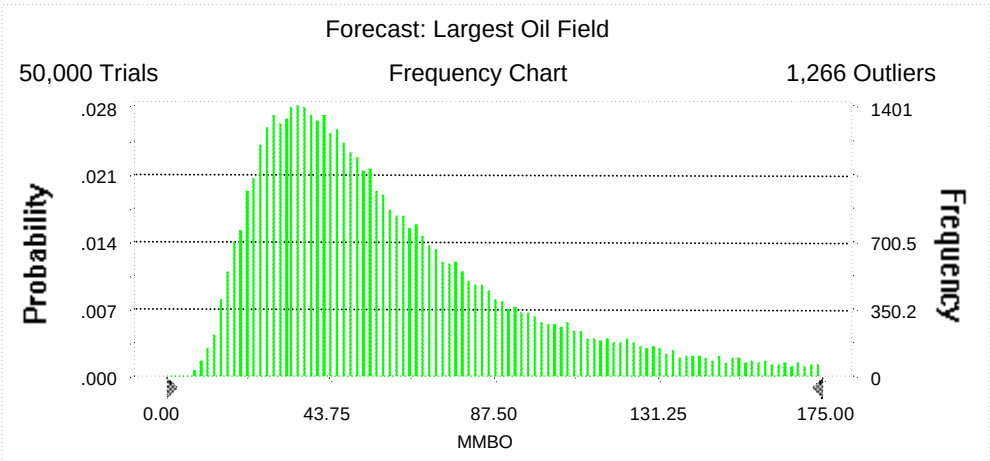
Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 175.00 MMBO
Entire range is from 4.72 to 249.85 MMBO
After 50,000 trials, the standard error of the mean is 0.18

Statistics:	Value
Trials	50000
Mean	62.55
Median	51.41
Mode	---
Standard Deviation	40.20
Variance	1,615.93
Skewness	1.63
Kurtosis	6.07
Coefficient of Variability	0.64
Range Minimum	4.72
Range Maximum	249.85
Range Width	245.14
Mean Standard Error	0.18



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Forecast: Largest Oil Field (cont'd)

Percentiles:

Percentile	MMBO
100%	4.72
95%	20.15
90%	24.63
85%	28.12
80%	31.41
75%	34.64
70%	37.74
65%	40.98
60%	44.25
55%	47.70
50%	51.41
45%	55.41
40%	59.97
35%	65.20
30%	71.02
25%	78.07
20%	86.76
15%	98.76
10%	116.18
5%	147.03
0%	249.85

End of Forecast

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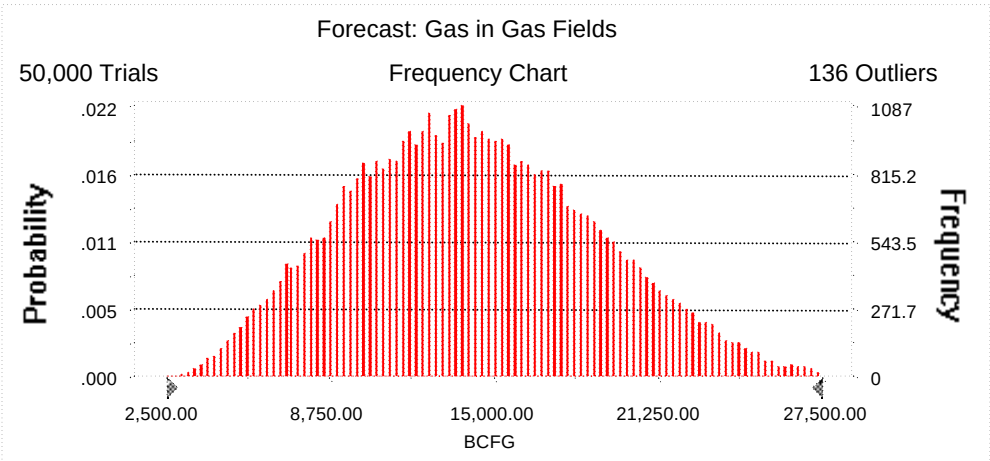
Carboniferous-Lower Permian Clastics
Monte Carlo Results

Forecast: Gas in Gas Fields

Summary:

Display range is from 2,500.00 to 27,500.00 BCFG
Entire range is from 2,657.84 to 34,980.10 BCFG
After 50,000 trials, the standard error of the mean is 21.06

Statistics:	Value
Trials	50000
Mean	14,233.05
Median	13,981.30
Mode	---
Standard Deviation	4,710.07
Variance	22,184,758.63
Skewness	0.25
Kurtosis	2.66
Coefficient of Variability	0.33
Range Minimum	2,657.84
Range Maximum	34,980.10
Range Width	32,322.26
Mean Standard Error	21.06



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Carboniferous-Lower Permian Clastics
Monte Carlo Results

Forecast: Gas in Gas Fields (cont'd)

Percentiles:

Percentile	BCFG
100%	2,657.84
95%	6,827.70
90%	8,169.52
85%	9,210.05
80%	10,025.59
75%	10,767.58
70%	11,490.98
65%	12,146.31
60%	12,765.22
55%	13,407.18
50%	13,981.30
45%	14,612.01
40%	15,264.79
35%	15,946.18
30%	16,682.92
25%	17,447.88
20%	18,331.84
15%	19,340.14
10%	20,597.04
5%	22,374.85
0%	34,980.10

End of Forecast

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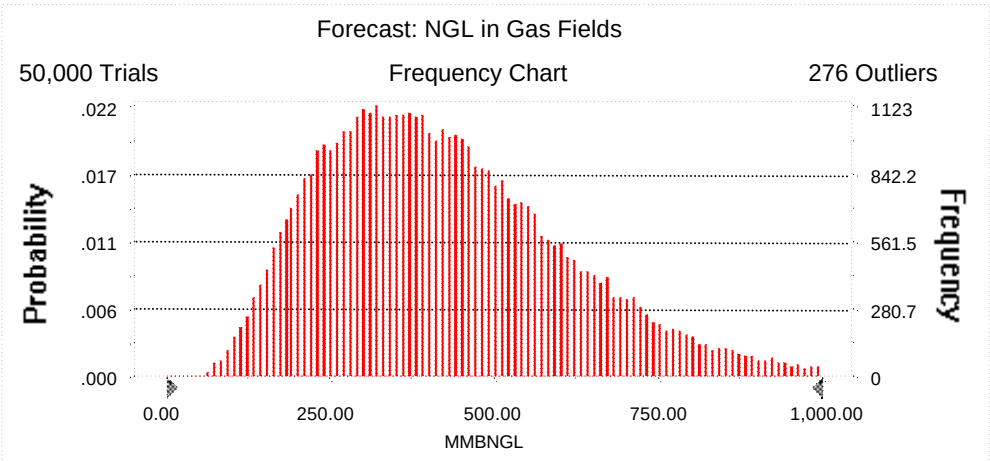
Monte Carlo Results

Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 1,000.00 MMBNGL
Entire range is from 48.45 to 1,431.88 MMBNGL
After 50,000 trials, the standard error of the mean is 0.84

Statistics:	Value
Trials	50000
Mean	426.71
Median	401.54
Mode	---
Standard Deviation	186.81
Variance	34,898.14
Skewness	0.71
Kurtosis	3.40
Coefficient of Variability	0.44
Range Minimum	48.45
Range Maximum	1,431.88
Range Width	1,383.43
Mean Standard Error	0.84



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Monte Carlo Results

Forecast: NGL in Gas Fields (cont'd)

Percentiles:

Percentile	MMBNGL
100%	48.45
95%	167.79
90%	205.75
85%	235.42
80%	261.92
75%	286.34
70%	309.84
65%	332.50
60%	355.53
55%	378.43
50%	401.54
45%	426.35
40%	451.46
35%	477.82
30%	507.41
25%	540.45
20%	576.92
15%	623.86
10%	682.55
5%	773.03
0%	1,431.88

End of Forecast

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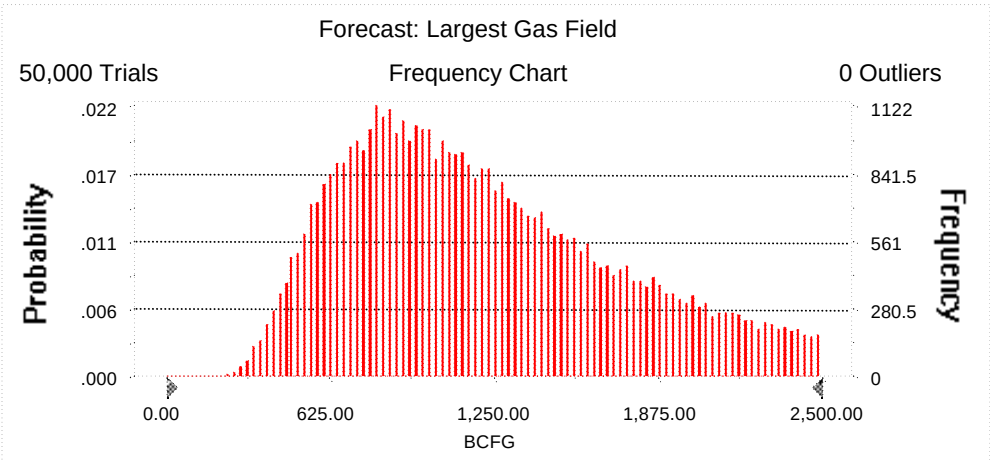
Carboniferous-Lower Permian Clastics
Monte Carlo Results

Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 2,500.00 BCFG
Entire range is from 172.73 to 2,499.98 BCFG
After 50,000 trials, the standard error of the mean is 2.27

Statistics:	Value
Trials	50000
Mean	1,207.02
Median	1,119.42
Mode	---
Standard Deviation	507.98
Variance	258,040.59
Skewness	0.57
Kurtosis	2.54
Coefficient of Variability	0.42
Range Minimum	172.73
Range Maximum	2,499.98
Range Width	2,327.26
Mean Standard Error	2.27



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Forecast: Largest Gas Field (cont'd)

Percentiles:

Percentile	BCFG
100%	172.73
95%	516.60
90%	609.54
85%	683.24
80%	748.96
75%	810.43
70%	867.68
65%	927.59
60%	989.42
55%	1,053.28
50%	1,119.42
45%	1,189.77
40%	1,263.42
35%	1,345.74
30%	1,437.24
25%	1,541.76
20%	1,659.92
15%	1,802.90
10%	1,972.96
5%	2,191.90
0%	2,499.98

End of Forecast

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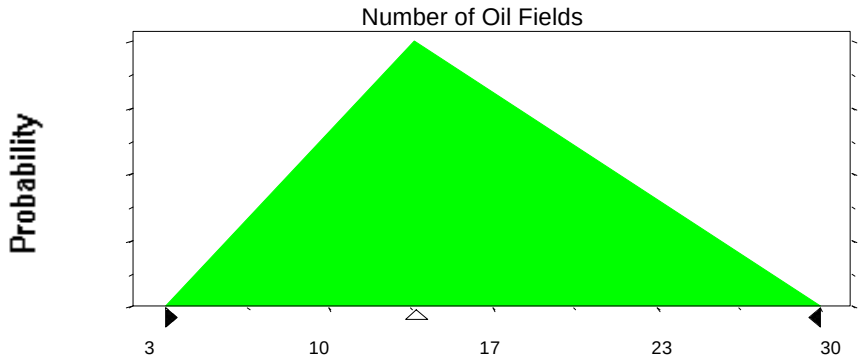
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	3
Likeliest	13
Maximum	30

Selected range is from 3 to 30
Mean value in simulation was 15



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	13.61	16.61
Standard Deviation	22.70	22.7
Selected range is from	0.00 to 247.00	3.00 to 250.00
Mean value in simulation was	13.28	16.28

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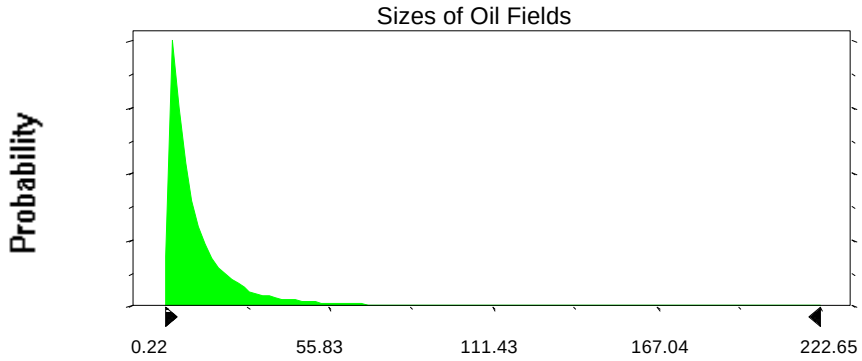
Assumption: Sizes of Oil Fields (cont'd)

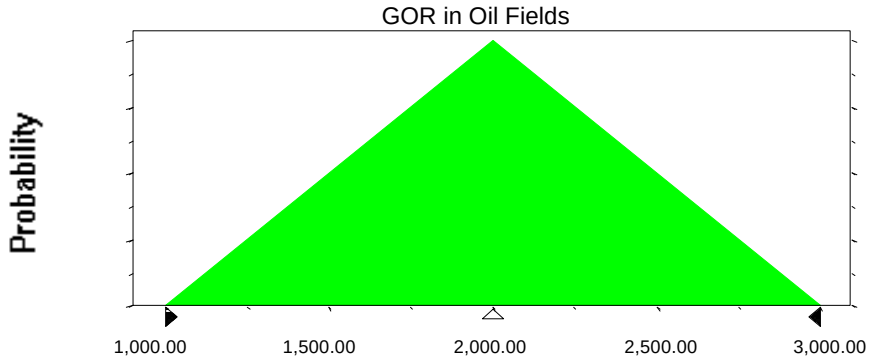


Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	1,000.00
Likeliest	2,000.00
Maximum	3,000.00

Selected range is from 1,000.00 to 3,000.00
Mean value in simulation was 2,000.22



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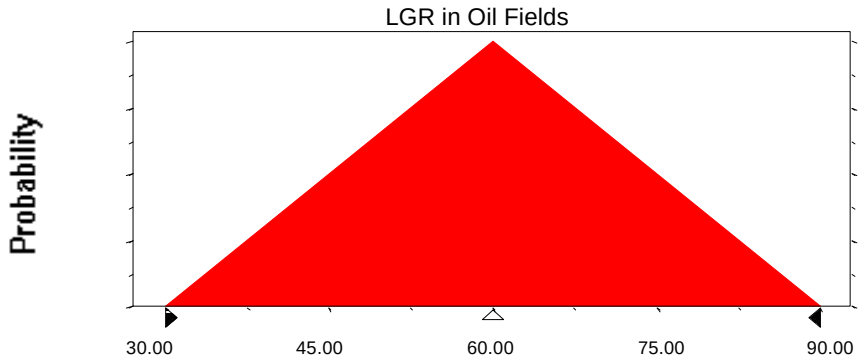
Assumption: LGR in Oil Fields

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 60.00



Assumption: Number of Gas Fields

Triangular distribution with parameters:

Minimum	40
Likeliest	135
Maximum	250

Selected range is from 40 to 250
Mean value in simulation was 142

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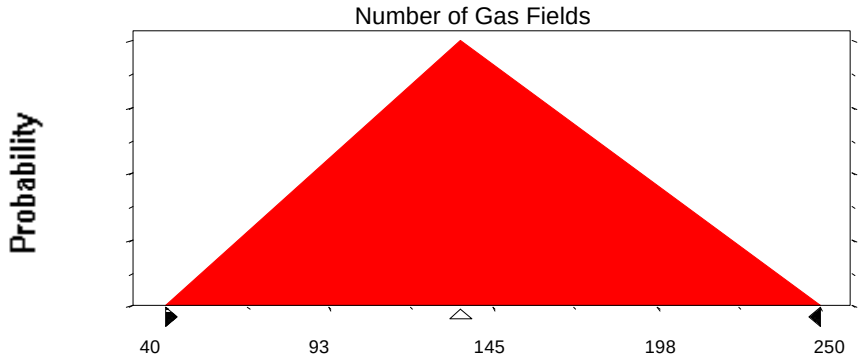
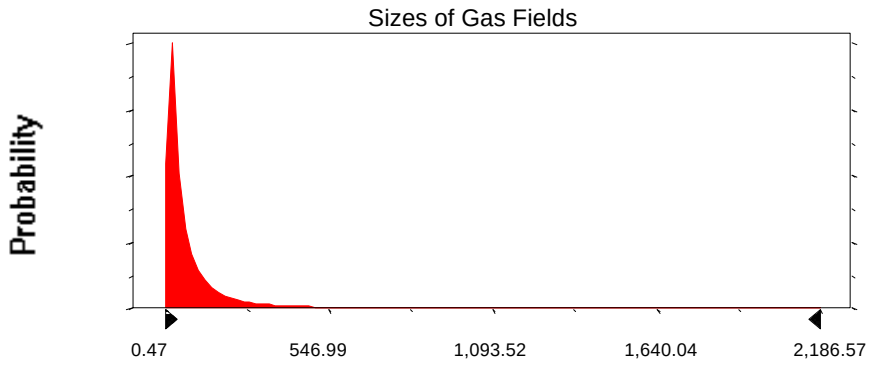
Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	86.24	104.24
Standard Deviation	215.82	215.82
Selected range is from 0.00 to 2,482.00		18.00 to 2,500.00
Mean value in simulation was 82.31		100.31



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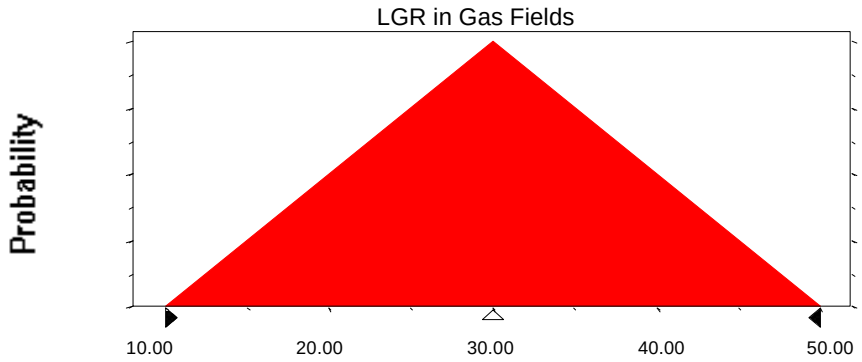
Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	10.00
Likeliest	30.00
Maximum	50.00

Selected range is from 10.00 to 50.00
Mean value in simulation was 29.99



End of Assumptions

Simulation started on 5/26/99 at 16:50:47
Simulation stopped on 5/26/99 at 17:55:46