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Moray Firth, Assessment Unit 40250102
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	2	1.00	269	857	1,923	947	199	666	1,633	758	11	39	102	45	45	122	304	140
Gas Fields	12						356	963	1,732	994	16	47	93	50	83	163	344	181
Total		1.00	269	857	1,923	947	555	1,629	3,365	1,752	28	85	196	95				

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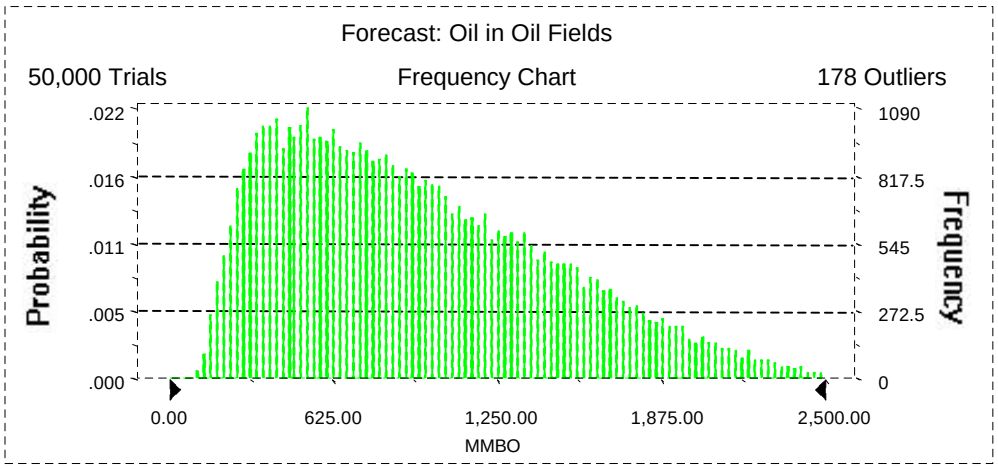
Monte Carlo Results

Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 2,500.00 MMBO
Entire range is from 85.13 to 3,707.51 MMBO
After 50,000 trials, the standard error of the mean is 2.32

Statistics:	Value
Trials	50000
Mean	946.87
Median	857.19
Mode	---
Standard Deviation	519.50
Variance	269,880.25
Skewness	0.68
Kurtosis	2.88
Coefficient of Variability	0.55
Range Minimum	85.13
Range Maximum	3,707.51
Range Width	3,622.38
Mean Standard Error	2.32



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

Percentile	MMBO
100%	85.13
95%	268.70
90%	339.33
85%	400.59
80%	464.00
75%	526.05
70%	586.65
65%	651.47
60%	718.75
55%	786.20
50%	857.19
45%	932.03
40%	1,010.14
35%	1,095.39
30%	1,190.32
25%	1,293.42
20%	1,403.68
15%	1,534.59
10%	1,693.06
5%	1,923.14
0%	3,707.51

End of Forecast

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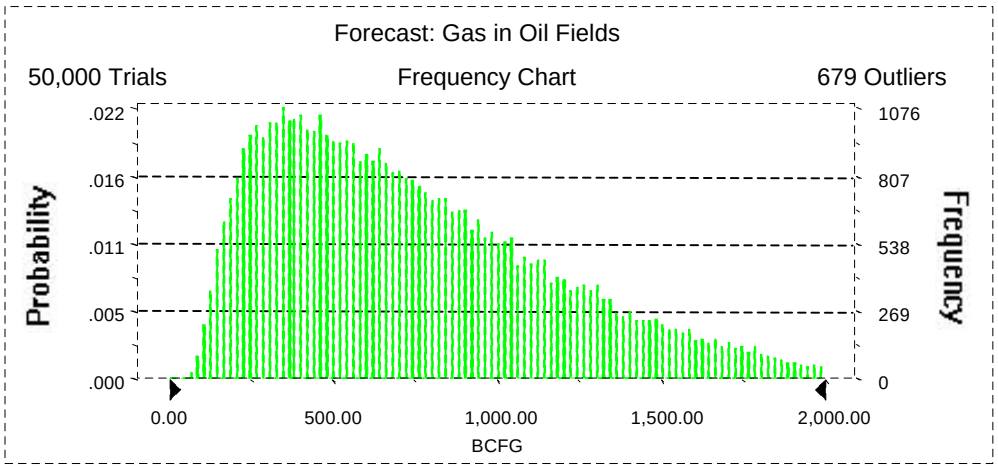
Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 2,000.00 BCFG
Entire range is from 55.87 to 3,378.52 BCFG
After 50,000 trials, the standard error of the mean is 2.03

Statistics:	Value
Trials	50000
Mean	757.93
Median	665.80
Mode	---
Standard Deviation	452.86
Variance	205,086.13
Skewness	0.96
Kurtosis	3.77
Coefficient of Variability	0.60
Range Minimum	55.87
Range Maximum	3,378.52
Range Width	3,322.65
Mean Standard Error	2.03



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

Percentile	BCFG
100%	55.87
95%	198.81
90%	255.16
85%	306.51
80%	354.12
75%	402.65
70%	451.10
65%	501.51
60%	554.59
55%	609.43
50%	665.80
45%	726.37
40%	790.05
35%	859.95
30%	936.93
25%	1,022.84
20%	1,123.16
15%	1,245.04
10%	1,397.58
5%	1,633.20
0%	3,378.52

End of Forecast

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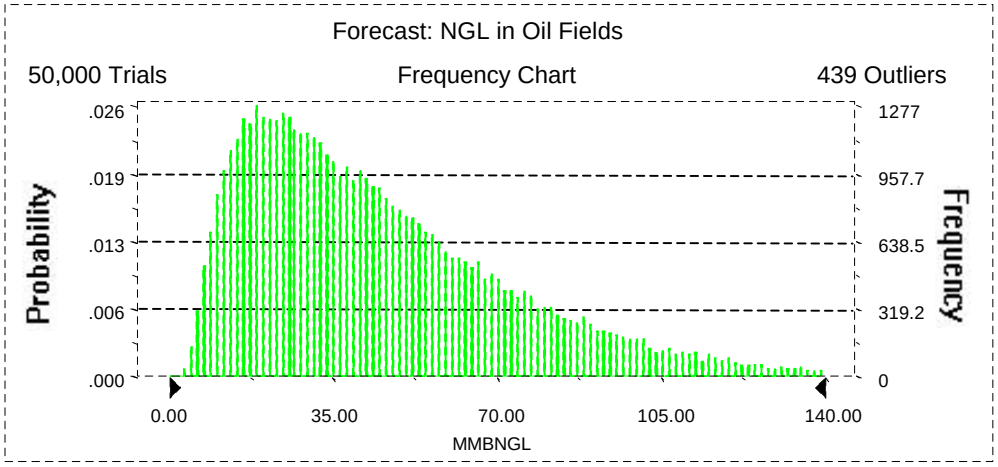
Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 140.00 MMBNGL
Entire range is from 2.59 to 243.11 MMBNGL
After 50,000 trials, the standard error of the mean is 0.13

Statistics:	Value
Trials	50000
Mean	45.46
Median	38.83
Mode	---
Standard Deviation	29.31
Variance	859.37
Skewness	1.21
Kurtosis	4.76
Coefficient of Variability	0.64
Range Minimum	2.59
Range Maximum	243.11
Range Width	240.52
Mean Standard Error	0.13



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

Percentile	MMBNGL
100%	2.59
95%	11.06
90%	14.47
85%	17.46
80%	20.27
75%	23.13
70%	25.93
65%	28.96
60%	31.98
55%	35.27
50%	38.83
45%	42.50
40%	46.33
35%	50.68
30%	55.46
25%	60.98
20%	67.46
15%	75.57
10%	86.08
5%	102.39
0%	243.11

End of Forecast

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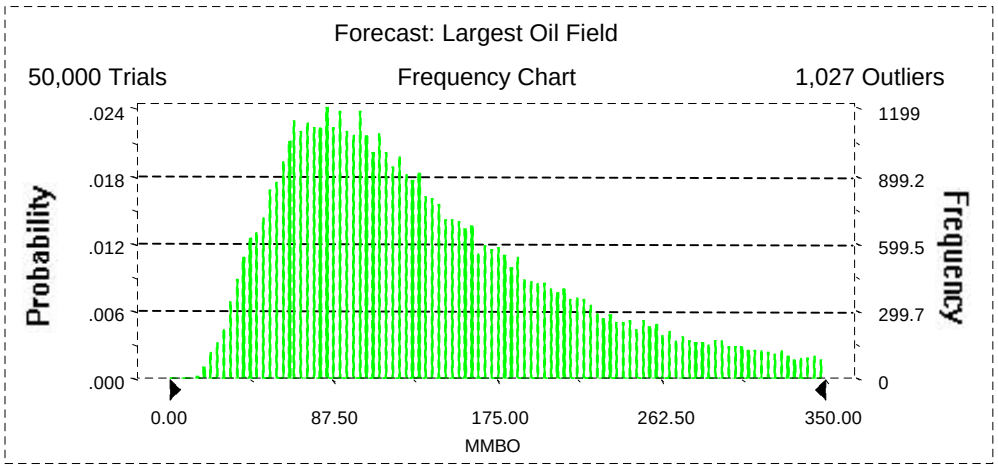
Monte Carlo Results

Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 350.00 MMBO
Entire range is from 11.03 to 399.93 MMBO
After 50,000 trials, the standard error of the mean is 0.35

Statistics:	Value
Trials	50000
Mean	140.31
Median	121.62
Mode	---
Standard Deviation	78.34
Variance	6,136.86
Skewness	1.03
Kurtosis	3.62
Coefficient of Variability	0.56
Range Minimum	11.03
Range Maximum	399.93
Range Width	388.90
Mean Standard Error	0.35



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Forecast: Largest Oil Field (cont'd)

Percentiles:

Percentile	MMBO
100%	11.03
95%	45.33
90%	57.07
85%	66.11
80%	73.89
75%	81.73
70%	89.37
65%	96.91
60%	104.66
55%	113.01
50%	121.62
45%	131.03
40%	141.24
35%	152.88
30%	165.94
25%	181.23
20%	199.99
15%	223.06
10%	255.23
5%	303.84
0%	399.93

End of Forecast

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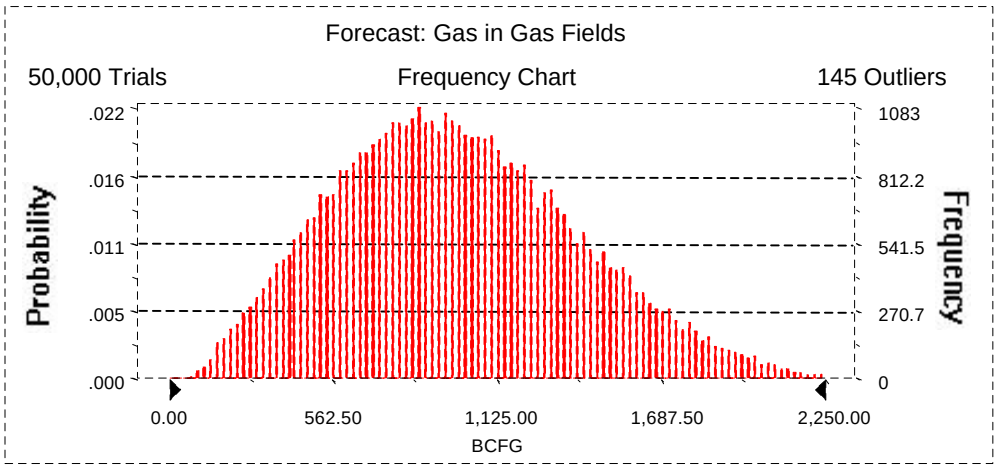
Monte Carlo Results

Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 2,250.00 BCFG
Entire range is from 51.71 to 2,963.55 BCFG
After 50,000 trials, the standard error of the mean is 1.87

Statistics:	Value
Trials	50000
Mean	994.11
Median	963.45
Mode	---
Standard Deviation	418.10
Variance	174,809.66
Skewness	0.38
Kurtosis	2.84
Coefficient of Variability	0.42
Range Minimum	51.71
Range Maximum	2,963.55
Range Width	2,911.84
Mean Standard Error	1.87



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Forecast: Gas in Gas Fields (cont'd)

Percentiles:

Percentile	BCFG
100%	51.71
95%	356.29
90%	466.96
85%	550.46
80%	621.34
75%	685.78
70%	745.51
65%	801.40
60%	855.58
55%	908.86
50%	963.45
45%	1,018.87
40%	1,076.99
35%	1,136.19
30%	1,200.70
25%	1,270.93
20%	1,348.70
15%	1,442.78
10%	1,561.97
5%	1,732.26
0%	2,963.55

End of Forecast

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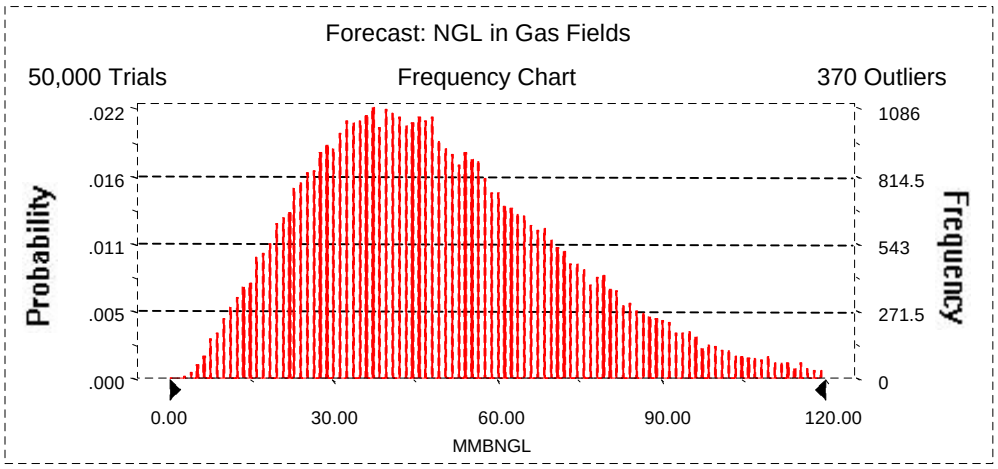
Monte Carlo Results

Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 120.00 MMBNGL
Entire range is from 2.16 to 183.03 MMBNGL
After 50,000 trials, the standard error of the mean is 0.11

Statistics:	Value
Trials	50000
Mean	49.75
Median	46.63
Mode	---
Standard Deviation	23.68
Variance	560.59
Skewness	0.71
Kurtosis	3.44
Coefficient of Variability	0.48
Range Minimum	2.16
Range Maximum	183.03
Range Width	180.87
Mean Standard Error	0.11



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

Percentile	MMBNGL
100%	2.16
95%	16.46
90%	21.68
85%	25.64
80%	29.12
75%	32.28
70%	35.18
65%	38.03
60%	40.86
55%	43.71
50%	46.63
45%	49.51
40%	52.79
35%	56.22
30%	59.88
25%	64.17
20%	68.89
15%	74.65
10%	82.01
5%	93.36
0%	183.03

End of Forecast

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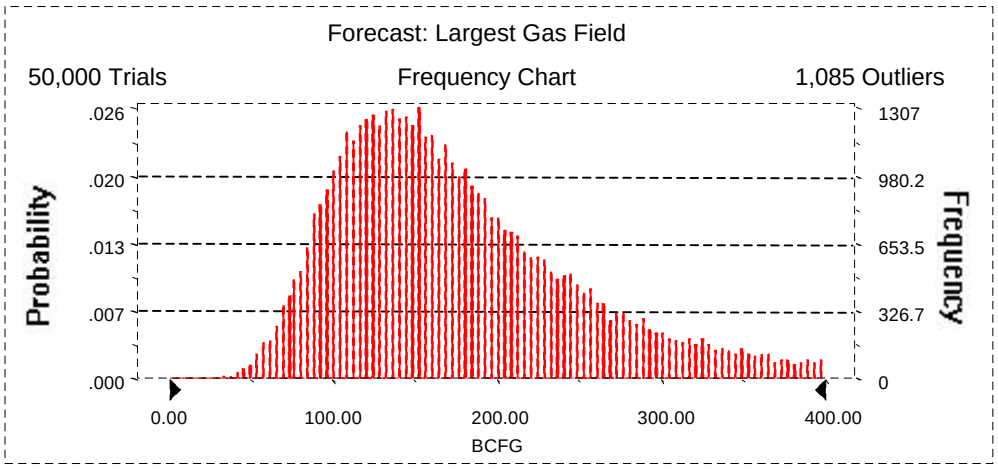
Monte Carlo Results

Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 400.00 BCFG
Entire range is from 29.99 to 499.71 BCFG
After 50,000 trials, the standard error of the mean is 0.36

Statistics:	Value
Trials	50000
Mean	180.75
Median	163.06
Mode	---
Standard Deviation	80.43
Variance	6,468.76
Skewness	1.16
Kurtosis	4.41
Coefficient of Variability	0.44
Range Minimum	29.99
Range Maximum	499.71
Range Width	469.72
Mean Standard Error	0.36



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Forecast: Largest Gas Field (cont'd)

Percentiles:

Percentile	BCFG
100%	29.99
95%	82.69
90%	96.20
85%	106.37
80%	115.00
75%	123.16
70%	131.13
65%	138.87
60%	146.74
55%	154.72
50%	163.06
45%	172.14
40%	181.98
35%	192.71
30%	205.21
25%	219.86
20%	237.63
15%	259.27
10%	290.88
5%	344.38
0%	499.71

End of Forecast

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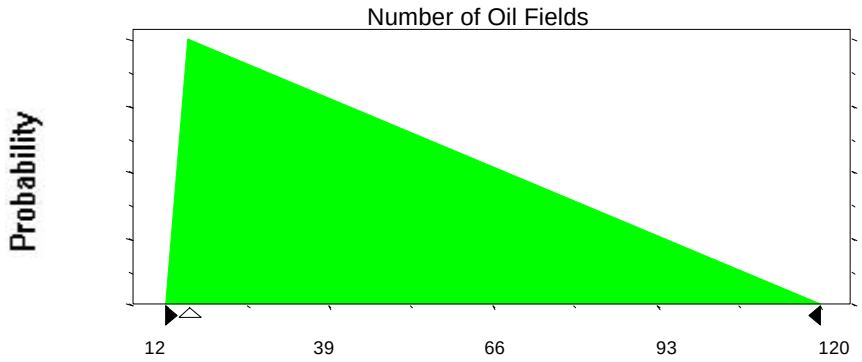
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	12
Likeliest	16
Maximum	120

Selected range is from 12 to 120
Mean value in simulation was 49



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	17.79	19.79
Standard Deviation	35.35	35.35
Selected range is from	0.00 to 398.00	2.00 to 400.00
Mean value in simulation was	17.06	19.06

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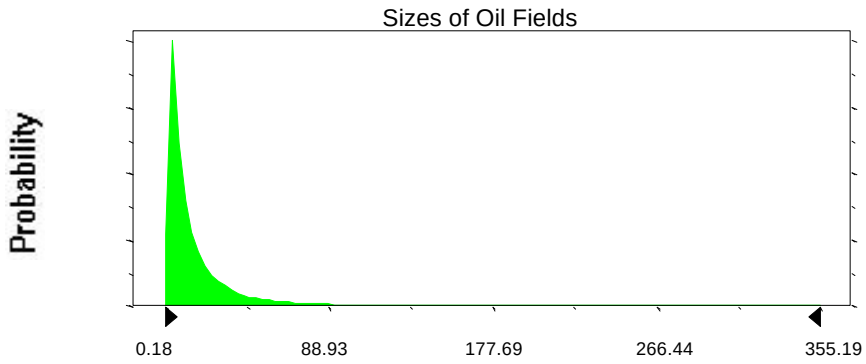
Assumption: Sizes of Oil Fields (cont'd)

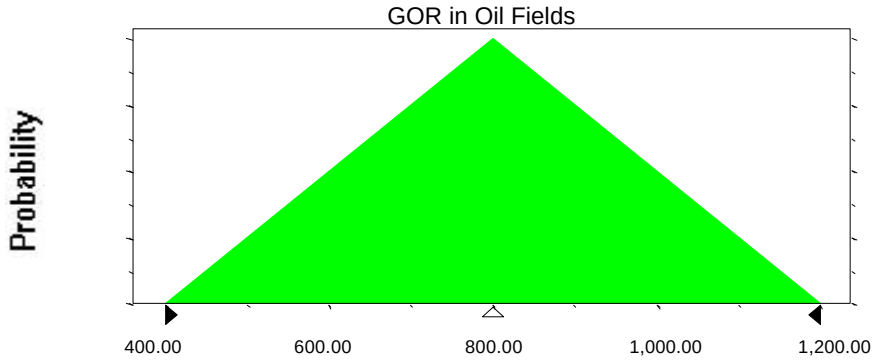


Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	400.00
Likeliest	800.00
Maximum	1,200.00

Selected range is from 400.00 to 1,200.00
Mean value in simulation was 799.94



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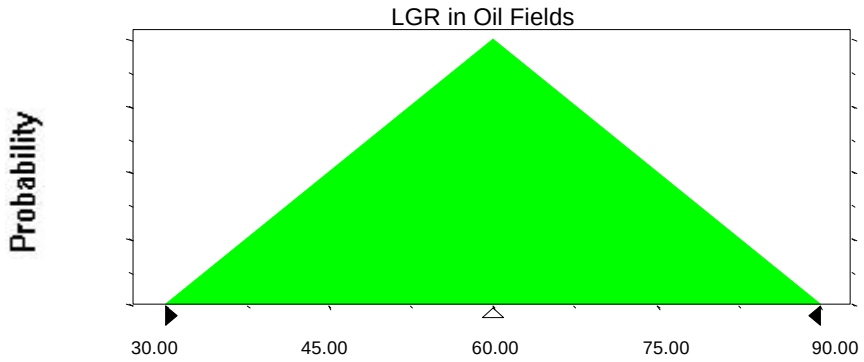
Assumption: LGR in Oil Fields

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 59.92



Assumption: Number of Gas Fields

Triangular distribution with parameters:

Minimum	2
Likeliest	14
Maximum	30

Selected range is from 2 to 30
Mean value in simulation was 15

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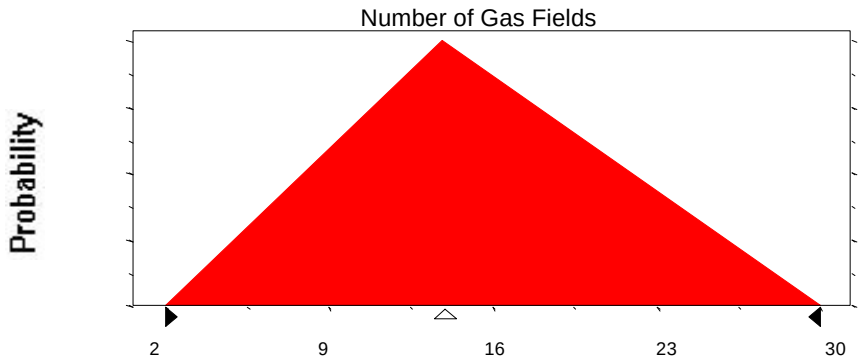
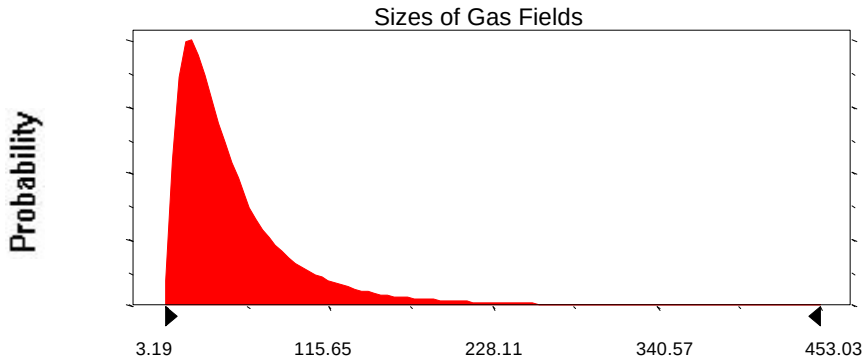
Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	53.45	65.45
Standard Deviation	52.88	52.88
Selected range is from 0.00 to 488.00		12.00 to 500.00
Mean value in simulation was 53.09		65.09



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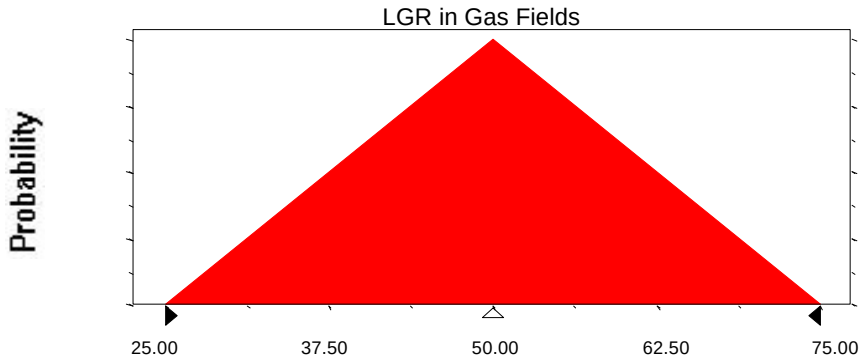
Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	25.00
Likeliest	50.00
Maximum	75.00

Selected range is from 25.00 to 75.00
Mean value in simulation was 50.03



End of Assumptions

Simulation started on 8/6/99 at 12:03:09
Simulation stopped on 8/6/99 at 12:43:42