

Malita, Assessment Unit 39100301
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	337	1,034	2,330	1,146	686	2,213	5,456	2,527	38	129	340	152	74	206	620	255
Gas Fields	60						2,375	7,842	18,500	8,819	97	336	858	389	559	1,763	5,909	2,281
Total		1.00	337	1,034	2,330	1,146	3,061	10,055	23,956	11,346	135	466	1,198	540				

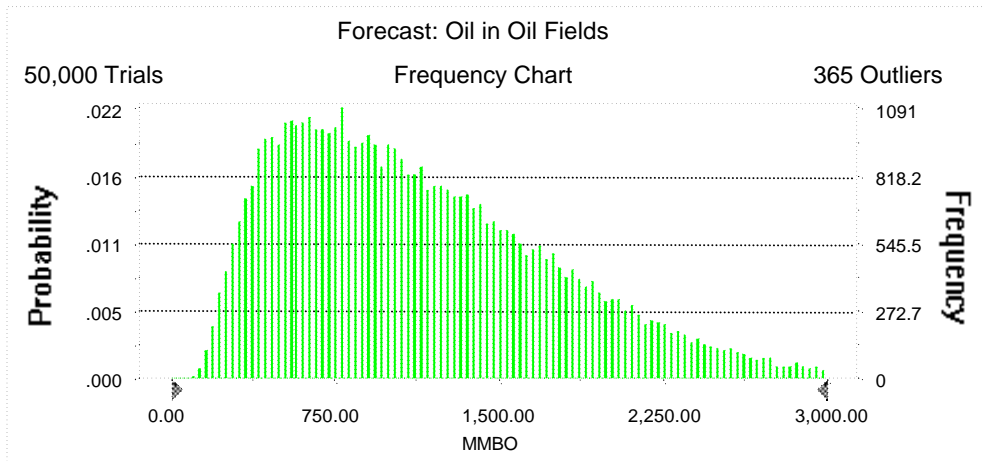
39100301
Malita
Monte Carlo Results

Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 3,000.00 MMBO
Entire range is from 100.60 to 4,575.75 MMBO
After 50,000 trials, the standard error of the mean is 2.80

Statistics:	Value
Trials	50000
Mean	1,146.18
Median	1,034.08
Mode	---
Standard Deviation	627.17
Variance	393,342.94
Skewness	0.82
Kurtosis	3.43
Coefficient of Variability	0.55
Range Minimum	100.60
Range Maximum	4,575.75
Range Width	4,475.14
Mean Standard Error	2.80



39100301
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Monte Carlo Results

Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	100.60
95%	337.46
90%	427.62
85%	505.09
80%	578.34
75%	650.15
70%	724.14
65%	797.76
60%	874.34
55%	952.46
50%	1,034.08
45%	1,121.26
40%	1,214.38
35%	1,313.96
30%	1,416.63
25%	1,534.30
20%	1,671.42
15%	1,826.73
10%	2,026.68
5%	2,330.33
0%	4,575.75

End of Forecast

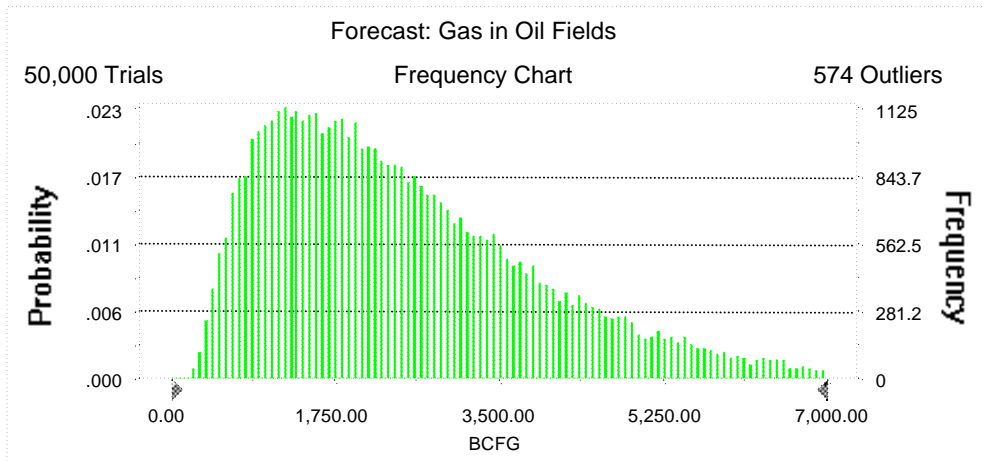
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Monte Carlo Results

Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 7,000.00 BCFG
 Entire range is from 151.27 to 12,231.75 BCFG
 After 50,000 trials, the standard error of the mean is 6.74

Statistics:	<u>Value</u>
Trials	50000
Mean	2,526.76
Median	2,212.61
Mode	---
Standard Deviation	1,506.38
Variance	2,269,182.24
Skewness	1.08
Kurtosis	4.28
Coefficient of Variability	0.60
Range Minimum	151.27
Range Maximum	12,231.75
Range Width	12,080.49
Mean Standard Error	6.74



39100301
Malita
Monte Carlo Results

Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	151.27
95%	685.86
90%	886.86
85%	1,054.91
80%	1,213.31
75%	1,372.44
70%	1,533.93
65%	1,697.64
60%	1,862.66
55%	2,030.60
50%	2,212.61
45%	2,407.25
40%	2,609.81
35%	2,831.17
30%	3,079.18
25%	3,361.79
20%	3,679.99
15%	4,083.43
10%	4,618.11
5%	5,455.94
0%	12,231.75

End of Forecast

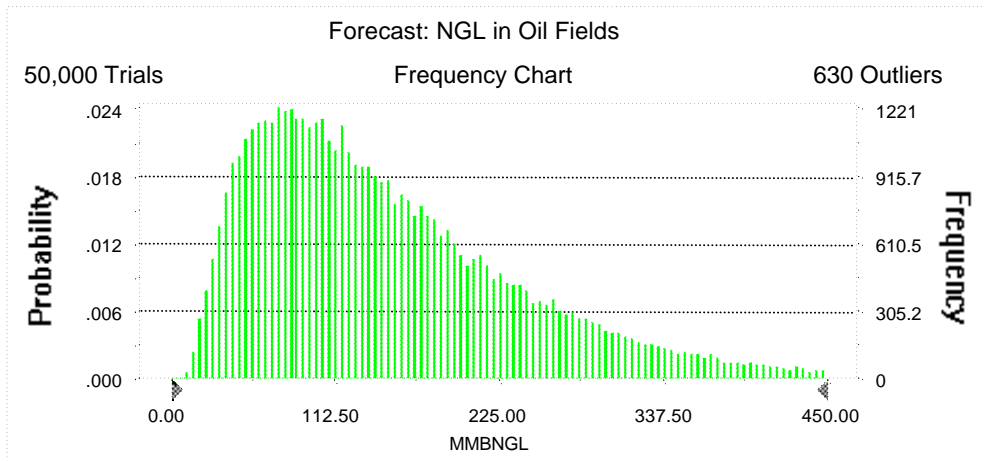
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Monte Carlo Results

Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 450.00 MMBNGL
Entire range is from 7.40 to 885.29 MMBNGL
After 50,000 trials, the standard error of the mean is 0.43

Statistics:	Value
Trials	50000
Mean	151.68
Median	129.48
Mode	---
Standard Deviation	97.11
Variance	9,431.29
Skewness	1.31
Kurtosis	5.34
Coefficient of Variability	0.64
Range Minimum	7.40
Range Maximum	885.29
Range Width	877.89
Mean Standard Error	0.43



39100301
Malita
Monte Carlo Results

Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	7.40
95%	38.50
90%	50.04
85%	60.18
80%	69.89
75%	79.19
70%	88.58
65%	98.34
60%	108.01
55%	118.53
50%	129.48
45%	141.18
40%	153.86
35%	167.70
30%	183.03
25%	200.55
20%	222.14
15%	248.27
10%	283.31
5%	340.03
0%	885.29

End of Forecast

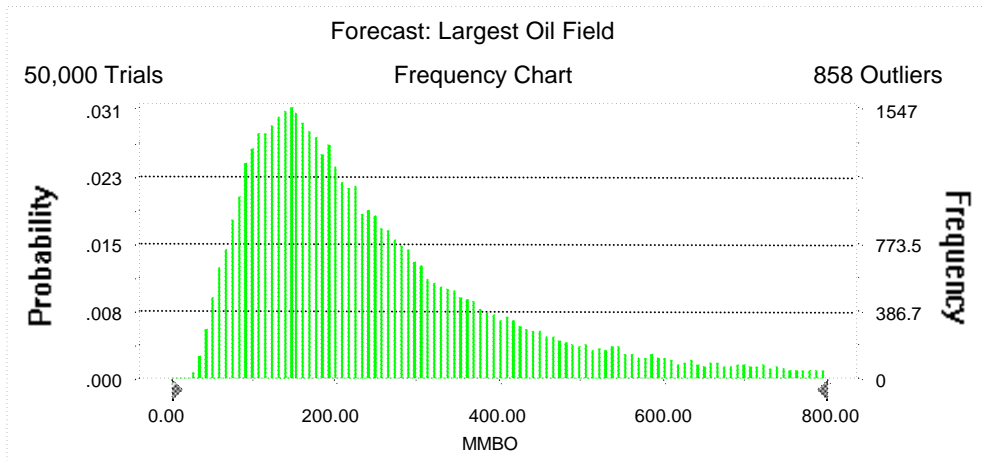
39100301
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Monte Carlo Results

Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 800.00 MMBO
Entire range is from 21.88 to 999.38 MMBO
After 50,000 trials, the standard error of the mean is 0.77

Statistics:	Value
Trials	50000
Mean	255.49
Median	206.33
Mode	---
Standard Deviation	171.83
Variance	29,524.59
Skewness	1.58
Kurtosis	5.69
Coefficient of Variability	0.67
Range Minimum	21.88
Range Maximum	999.38
Range Width	977.50
Mean Standard Error	0.77



39100301
Malita
Monte Carlo Results

Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	21.88
95%	74.24
90%	92.98
85%	107.97
80%	122.27
75%	135.78
70%	148.72
65%	161.93
60%	175.82
55%	190.89
50%	206.33
45%	224.21
40%	243.99
35%	266.17
30%	291.27
25%	322.50
20%	361.84
15%	413.55
10%	487.81
5%	620.34
0%	999.38

End of Forecast

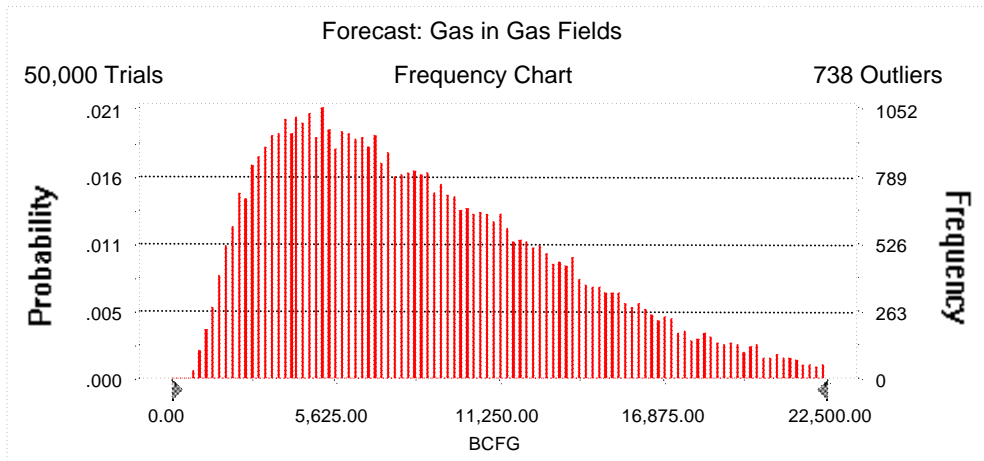
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Monte Carlo Results

Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 22,500.00 BCFG
Entire range is from 548.05 to 39,943.29 BCFG
After 50,000 trials, the standard error of the mean is 22.85

Statistics:	Value
Trials	50000
Mean	8,819.25
Median	7,842.01
Mode	---
Standard Deviation	5,110.08
Variance	26,112,878.31
Skewness	0.94
Kurtosis	3.87
Coefficient of Variability	0.58
Range Minimum	548.05
Range Maximum	39,943.29
Range Width	39,395.24
Mean Standard Error	22.85



39100301
Malita
Monte Carlo Results

Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	548.05
95%	2,374.92
90%	3,087.49
85%	3,690.64
80%	4,267.55
75%	4,821.90
70%	5,387.97
65%	5,983.41
60%	6,579.54
55%	7,182.18
50%	7,842.01
45%	8,551.04
40%	9,277.02
35%	10,063.02
30%	10,925.88
25%	11,868.14
20%	12,944.95
15%	14,223.92
10%	15,909.71
5%	18,500.09
0%	39,943.29

End of Forecast

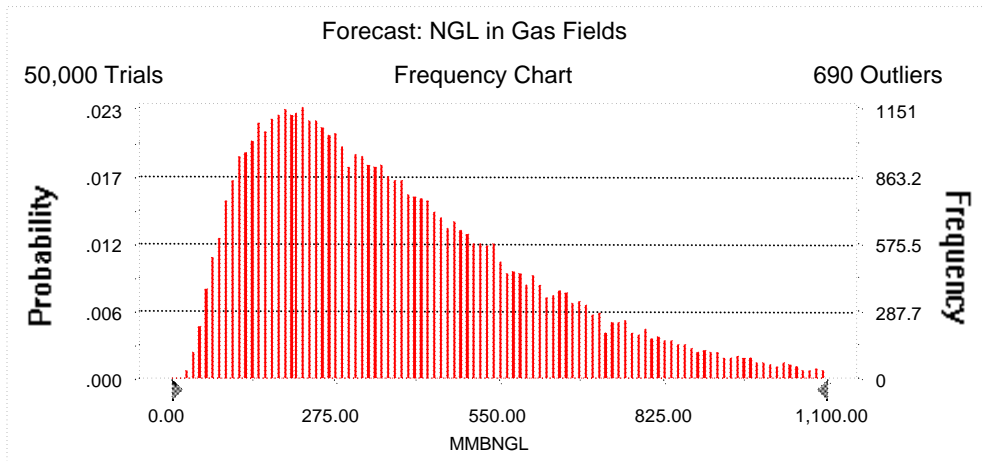
39100301
Malita
Monte Carlo Results

Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 1,100.00 MMBNGL
Entire range is from 24.06 to 1,948.70 MMBNGL
After 50,000 trials, the standard error of the mean is 1.09

Statistics:	Value
Trials	50000
Mean	388.53
Median	336.33
Mode	---
Standard Deviation	243.42
Variance	59,251.02
Skewness	1.18
Kurtosis	4.74
Coefficient of Variability	0.63
Range Minimum	24.06
Range Maximum	1,948.70
Range Width	1,924.64
Mean Standard Error	1.09



39100301
Malita
Monte Carlo Results

Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	24.06
95%	96.96
90%	127.74
85%	154.06
80%	179.47
75%	203.77
70%	228.10
65%	252.84
60%	279.03
55%	307.40
50%	336.33
45%	366.72
40%	400.10
35%	435.41
30%	475.16
25%	519.59
20%	571.19
15%	637.31
10%	720.71
5%	858.03
0%	1,948.70

End of Forecast

39100301
Malita
Monte Carlo Results

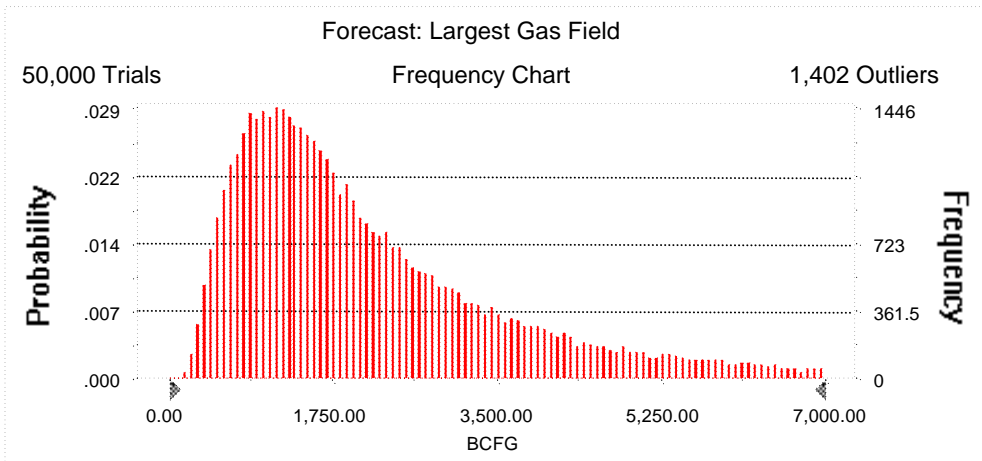
Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 7,000.00 BCFG
 Entire range is from 119.03 to 9,998.80 BCFG
 After 50,000 trials, the standard error of the mean is 7.62

Statistics:

	<u>Value</u>
Trials	50000
Mean	2,280.85
Median	1,762.55
Mode	---
Standard Deviation	1,704.57
Variance	2,905,575.09
Skewness	1.70
Kurtosis	6.18
Coefficient of Variability	0.75
Range Minimum	119.03
Range Maximum	9,998.80
Range Width	9,879.76
Mean Standard Error	7.62



39100301
Malita
Monte Carlo Results

Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	119.03
95%	558.70
90%	718.20
85%	855.42
80%	980.15
75%	1,103.33
70%	1,224.39
65%	1,350.50
60%	1,478.82
55%	1,616.62
50%	1,762.55
45%	1,930.90
40%	2,124.54
35%	2,343.84
30%	2,598.35
25%	2,909.33
20%	3,295.20
15%	3,811.93
10%	4,560.33
5%	5,908.70
0%	9,998.80

End of Forecast

39100301
Malita
Monte Carlo Results

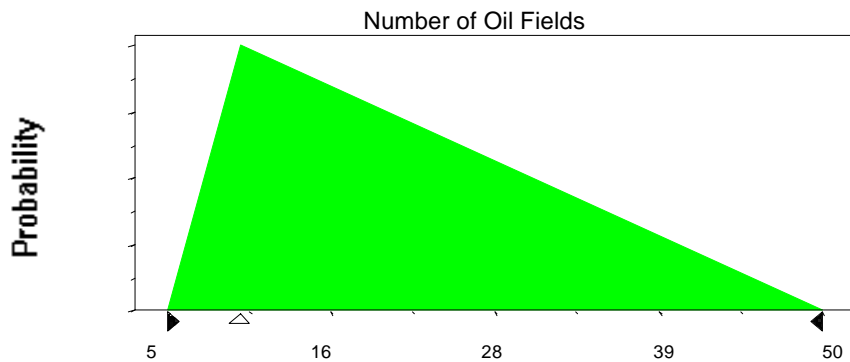
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	5
Likeliest	10
Maximum	50

Selected range is from 5 to 50
Mean value in simulation was 22



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	44.39
Standard Deviation	87.96

Shifted parameters

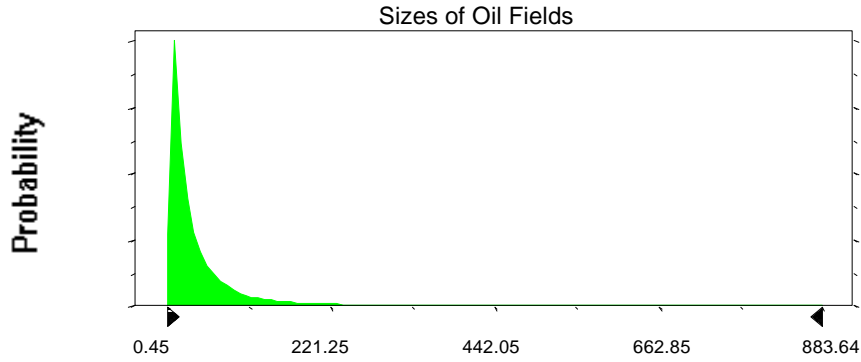
54.39
87.96

Selected range is from 0.00 to 990.00
Mean value in simulation was 42.45

10.00 to 1,000.00
52.45

39100301
Malita
Monte Carlo Results

Assumption: Sizes of Oil Fields (cont'd)



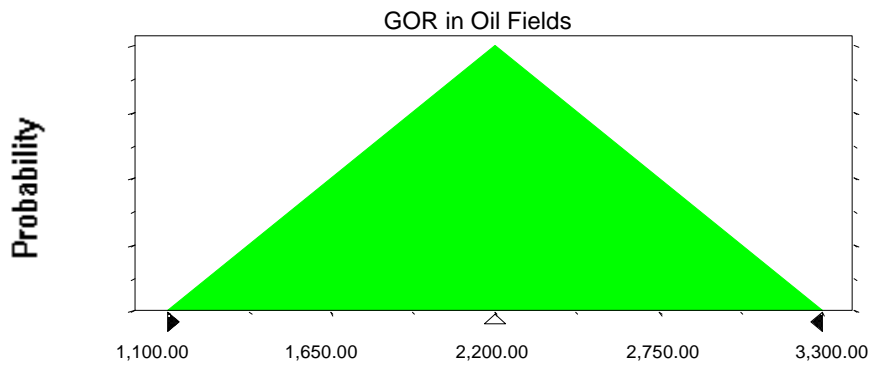
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	1,100.00
Likeliest	2,200.00
Maximum	3,300.00

Selected range is from 1,100.00 to 3,300.00

Mean value in simulation was 2,204.05



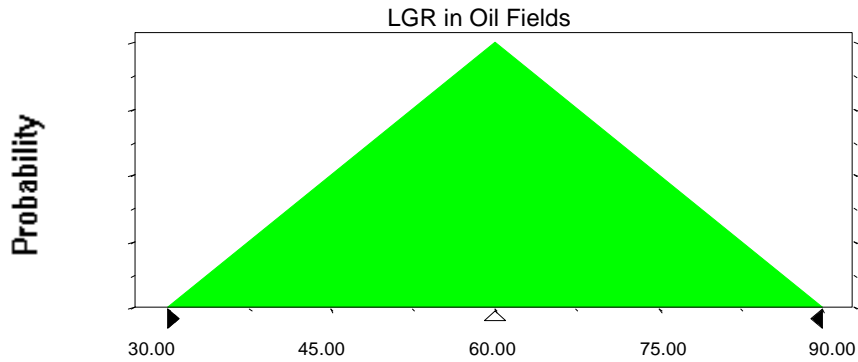
39100301
Malita
Monte Carlo Results

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 60.07



Assumption: Number of Gas Fields

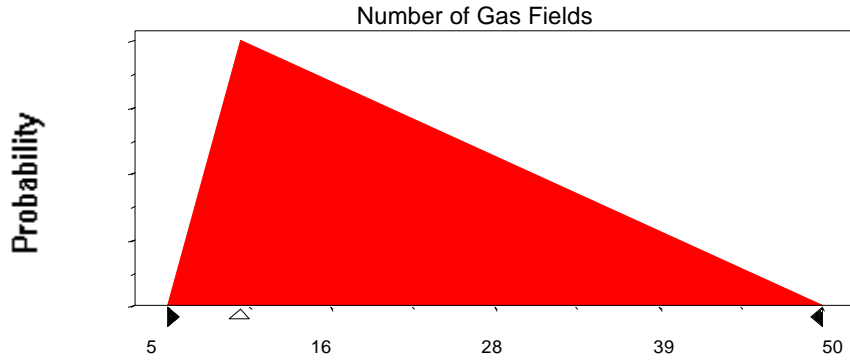
Triangular distribution with parameters:

Minimum	5
Likeliest	10
Maximum	50

Selected range is from 5 to 50
Mean value in simulation was 22

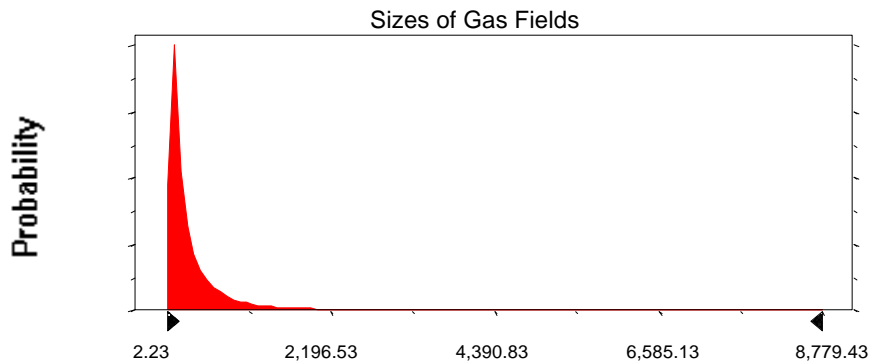
39100301
Malita
Monte Carlo Results

Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:	Shifted parameters	
Mean	362.55	422.55
Standard Deviation	866.05	866.05
Selected range is from 0.00 to 9,940.00	60.00 to 10,000.00	
Mean value in simulation was 347.21	407.21	



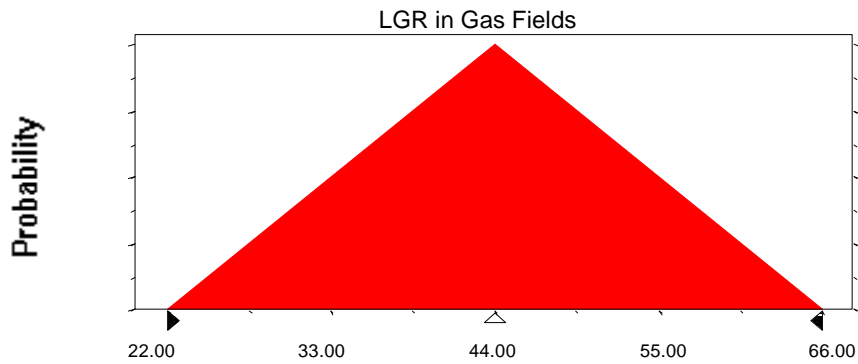
39100301
Malita
Monte Carlo Results

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 44.03



End of Assumptions

Simulation started on 4/26/99 at 16:35:14
Simulation stopped on 4/26/99 at 17:01:38