

**Tertiary Lacustrine, Assessment Unit 31270101
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	5	1.00	664	2,055	4,556	2,268	310	1,001	2,420	1,135	17	58	152	68	96	251	597	285
Gas Fields	30						829	3,116	7,497	3,504	34	133	349	155	195	606	1,865	756
Total		1.00	664	2,055	4,556	2,268	1,139	4,117	9,918	4,639	52	192	501	223				

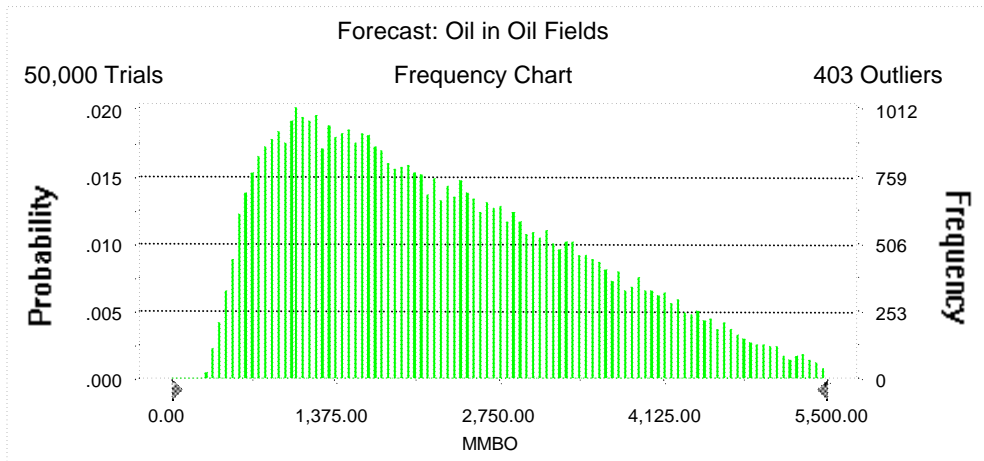
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Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 5,500.00 MMBO
Entire range is from 242.05 to 7,373.20 MMBO
After 50,000 trials, the standard error of the mean is 5.47

Statistics:	Value
Trials	50000
Mean	2,268.01
Median	2,054.92
Mode	---
Standard Deviation	1,223.75
Variance	1,497,552.80
Skewness	0.65
Kurtosis	2.75
Coefficient of Variability	0.54
Range Minimum	242.05
Range Maximum	7,373.20
Range Width	7,131.14
Mean Standard Error	5.47



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	242.05
95%	664.43
90%	829.06
85%	982.55
80%	1,121.69
75%	1,263.17
70%	1,414.79
65%	1,563.36
60%	1,717.60
55%	1,881.06
50%	2,054.92
45%	2,240.61
40%	2,437.22
35%	2,638.32
30%	2,855.45
25%	3,095.12
20%	3,360.51
15%	3,662.44
10%	4,045.65
5%	4,556.11
0%	7,373.20

End of Forecast

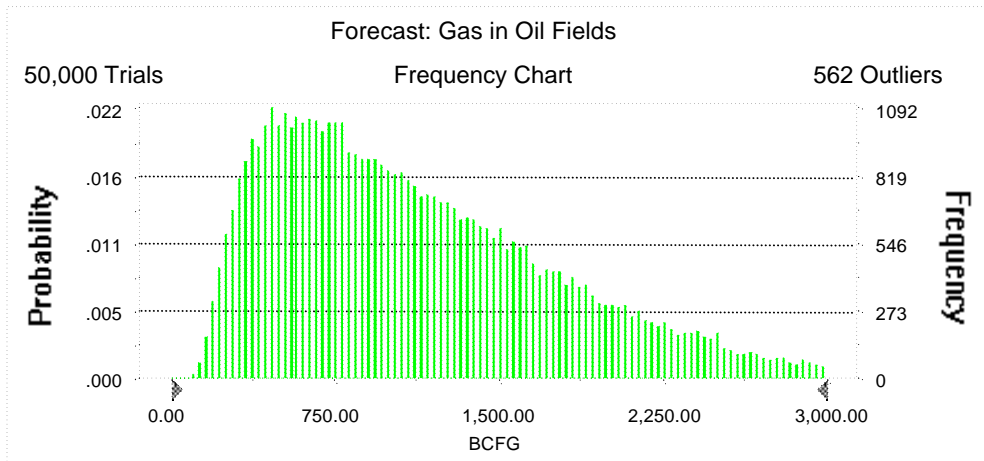
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Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 3,000.00 BCFG
Entire range is from 95.28 to 4,640.23 BCFG
After 50,000 trials, the standard error of the mean is 2.98

Statistics:	Value
Trials	50000
Mean	1,135.03
Median	1,000.76
Mode	---
Standard Deviation	665.87
Variance	443,385.22
Skewness	0.92
Kurtosis	3.58
Coefficient of Variability	0.59
Range Minimum	95.28
Range Maximum	4,640.23
Range Width	4,544.95
Mean Standard Error	2.98



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	95.28
95%	309.63
90%	391.60
85%	466.36
80%	537.67
75%	609.42
70%	682.39
65%	755.70
60%	830.26
55%	914.17
50%	1,000.76
45%	1,090.37
40%	1,188.94
35%	1,293.06
30%	1,407.15
25%	1,532.50
20%	1,675.15
15%	1,852.94
10%	2,081.05
5%	2,420.07
0%	4,640.23

End of Forecast

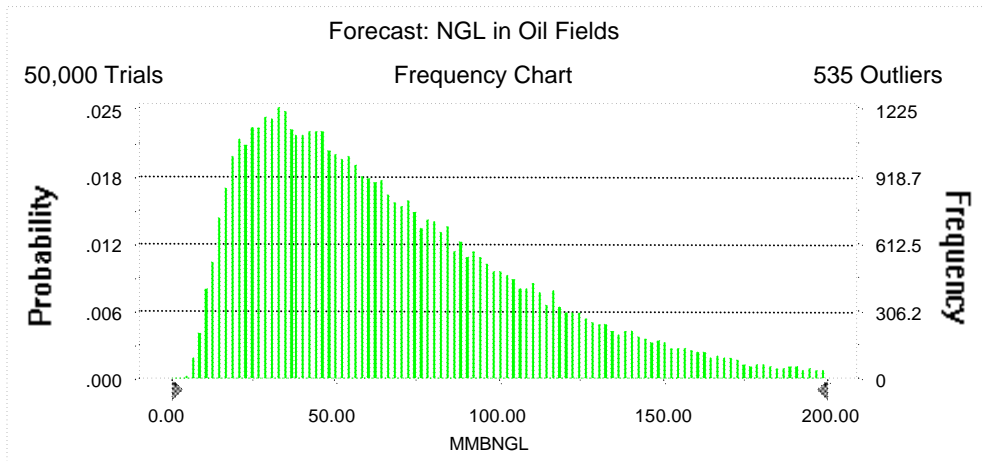
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Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 200.00 MMBNGL
Entire range is from 3.91 to 360.99 MMBNGL
After 50,000 trials, the standard error of the mean is 0.19

Statistics:	Value
Trials	50000
Mean	68.17
Median	58.45
Mode	---
Standard Deviation	43.10
Variance	1,857.45
Skewness	1.17
Kurtosis	4.57
Coefficient of Variability	0.63
Range Minimum	3.91
Range Maximum	360.99
Range Width	357.08
Mean Standard Error	0.19



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	3.91
95%	17.19
90%	22.13
85%	26.66
80%	30.92
75%	35.06
70%	39.45
65%	43.94
60%	48.43
55%	53.37
50%	58.45
45%	63.98
40%	69.88
35%	76.37
30%	83.45
25%	91.59
20%	100.96
15%	112.52
10%	127.78
5%	151.95
0%	360.99

End of Forecast

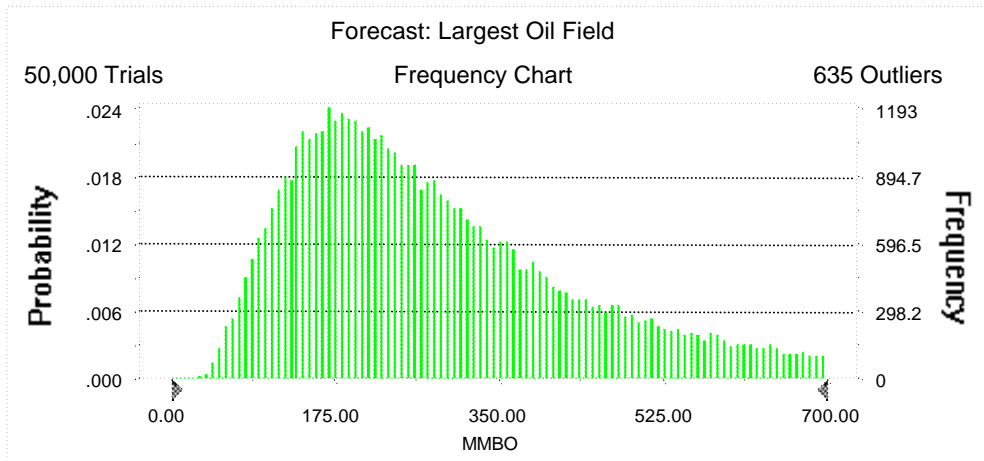
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Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 700.00 MMBO
Entire range is from 25.36 to 749.87 MMBO
After 50,000 trials, the standard error of the mean is 0.68

Statistics:	Value
Trials	50000
Mean	285.01
Median	250.91
Mode	---
Standard Deviation	151.37
Variance	22,912.10
Skewness	0.90
Kurtosis	3.24
Coefficient of Variability	0.53
Range Minimum	25.36
Range Maximum	749.87
Range Width	724.51
Mean Standard Error	0.68



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	25.36
95%	95.95
90%	119.42
85%	138.14
80%	154.68
75%	170.47
70%	185.54
65%	200.72
60%	216.65
55%	233.06
50%	250.91
45%	269.95
40%	290.40
35%	313.24
30%	338.95
25%	368.46
20%	404.16
15%	451.96
10%	511.32
5%	597.34
0%	749.87

End of Forecast

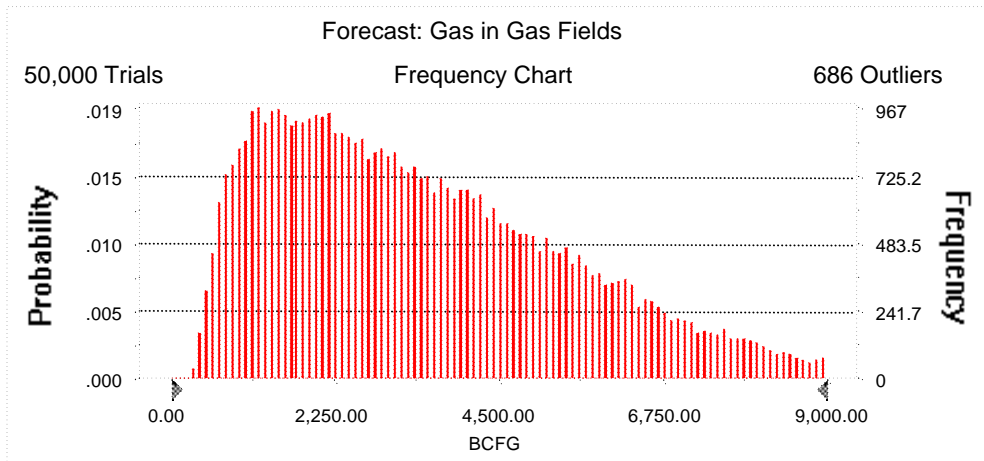
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Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 9,000.00 BCFG
 Entire range is from 217.59 to 15,357.60 BCFG
 After 50,000 trials, the standard error of the mean is 9.40

Statistics:	<u>Value</u>
Trials	50000
Mean	3,503.90
Median	3,116.27
Mode	---
Standard Deviation	2,100.95
Variance	4,413,976.57
Skewness	0.83
Kurtosis	3.35
Coefficient of Variability	0.60
Range Minimum	217.59
Range Maximum	15,357.60
Range Width	15,140.01
Mean Standard Error	9.40



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Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	217.59
95%	828.97
90%	1,102.50
85%	1,339.11
80%	1,575.18
75%	1,820.06
70%	2,061.23
65%	2,305.62
60%	2,563.37
55%	2,840.80
50%	3,116.27
45%	3,412.07
40%	3,732.91
35%	4,064.87
30%	4,418.82
25%	4,824.90
20%	5,281.15
15%	5,802.89
10%	6,466.32
5%	7,497.49
0%	15,357.60

End of Forecast

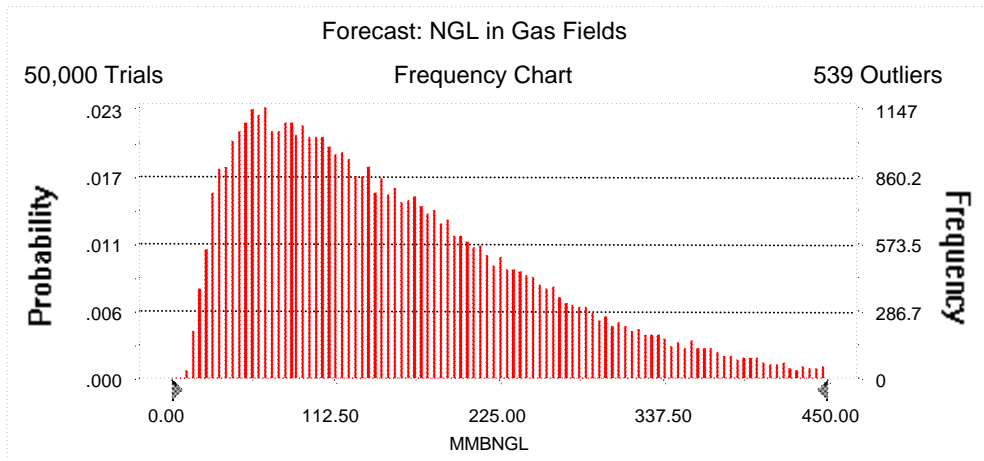
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Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 450.00 MMBNGL
Entire range is from 8.62 to 774.20 MMBNGL
After 50,000 trials, the standard error of the mean is 0.45

Statistics:	Value
Trials	50000
Mean	154.66
Median	133.34
Mode	---
Standard Deviation	99.85
Variance	9,970.20
Skewness	1.08
Kurtosis	4.24
Coefficient of Variability	0.65
Range Minimum	8.62
Range Maximum	774.20
Range Width	765.58
Mean Standard Error	0.45



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	8.62
95%	34.33
90%	46.05
85%	56.31
80%	66.30
75%	76.86
70%	87.29
65%	98.06
60%	109.11
55%	120.77
50%	133.34
45%	146.68
40%	160.76
35%	175.80
30%	192.18
25%	211.09
20%	232.81
15%	259.13
10%	293.69
5%	348.75
0%	774.20

End of Forecast

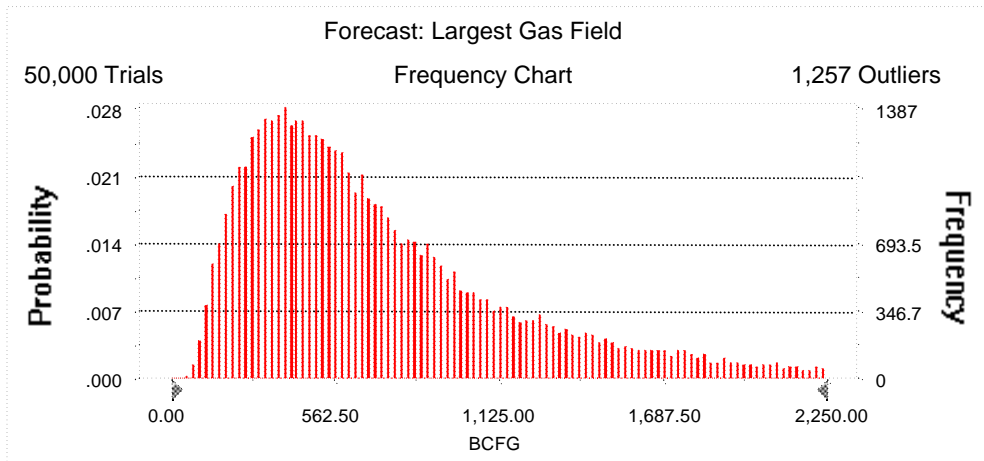
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Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 2,250.00 BCFG
 Entire range is from 51.12 to 2,995.83 BCFG
 After 50,000 trials, the standard error of the mean is 2.36

Statistics:	<u>Value</u>
Trials	50000
Mean	755.80
Median	606.13
Mode	---
Standard Deviation	527.97
Variance	278,748.63
Skewness	1.54
Kurtosis	5.51
Coefficient of Variability	0.70
Range Minimum	51.12
Range Maximum	2,995.83
Range Width	2,944.71
Mean Standard Error	2.36



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Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	51.12
95%	194.78
90%	250.70
85%	297.98
80%	340.92
75%	382.76
70%	424.38
65%	466.76
60%	512.26
55%	558.38
50%	606.13
45%	661.59
40%	721.39
35%	790.03
30%	872.26
25%	963.52
20%	1,086.11
15%	1,253.59
10%	1,478.94
5%	1,865.00
0%	2,995.83

End of Forecast

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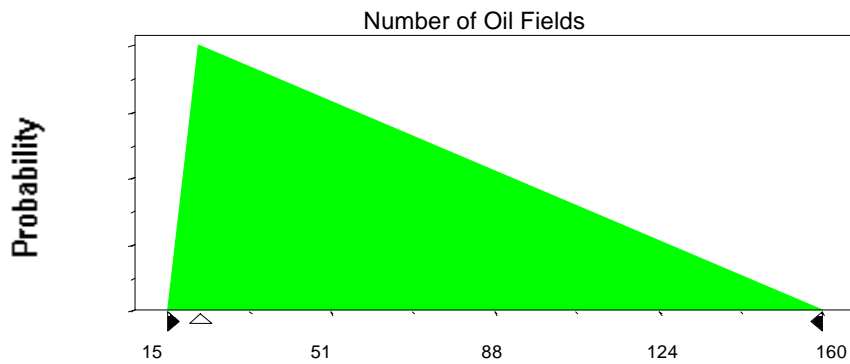
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	15
Likeliest	22
Maximum	160

Selected range is from 15 to 160
Mean value in simulation was 66



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	30.67
Standard Deviation	65.53

Shifted parameters

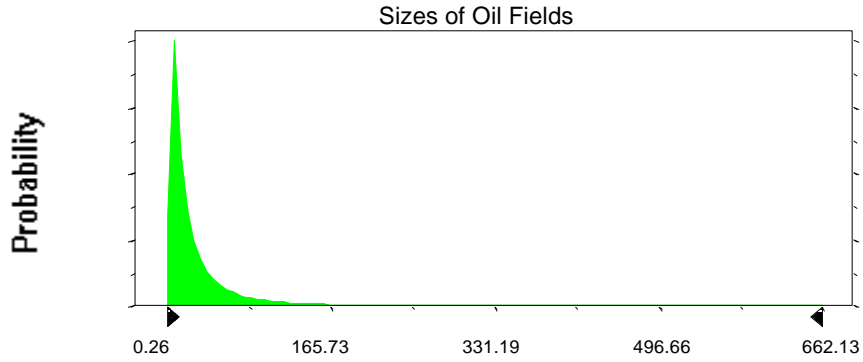
35.67
65.53

Selected range is from 0.00 to 745.00
Mean value in simulation was 29.60

5.00 to 750.00
34.6

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Assumption: Sizes of Oil Fields (cont'd)



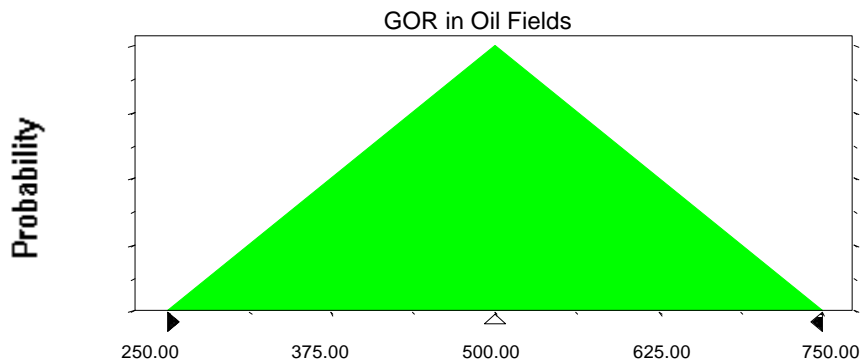
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	250.00
Likeliest	500.00
Maximum	750.00

Selected range is from 250.00 to 750.00

Mean value in simulation was 500.47



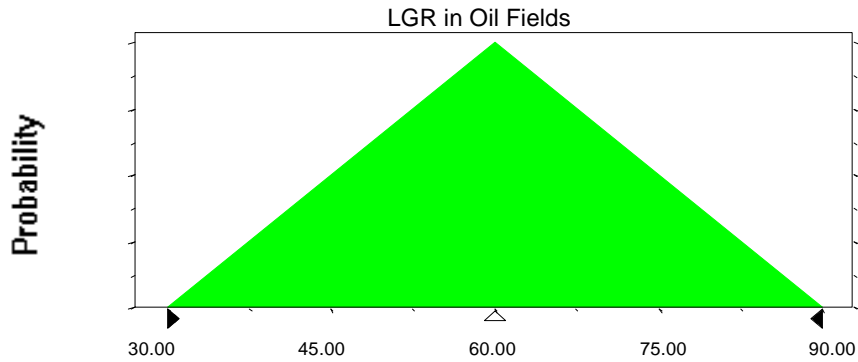
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Assumption: LGR in Oil Fields

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 60.06



Assumption: Number of Gas Fields

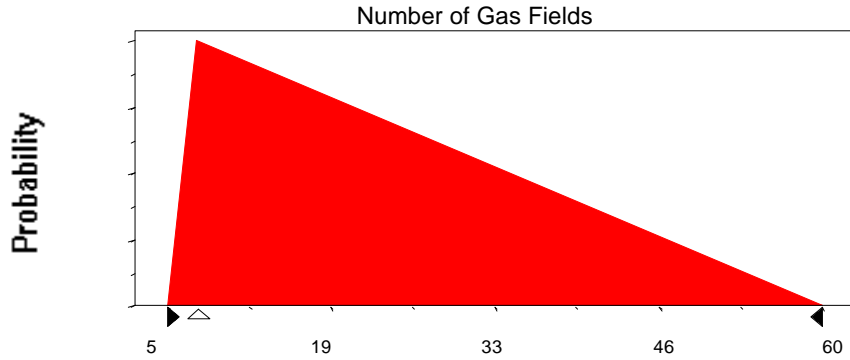
Triangular distribution with parameters:

Minimum	5
Likeliest	7
Maximum	60

Selected range is from 5 to 60
Mean value in simulation was 24

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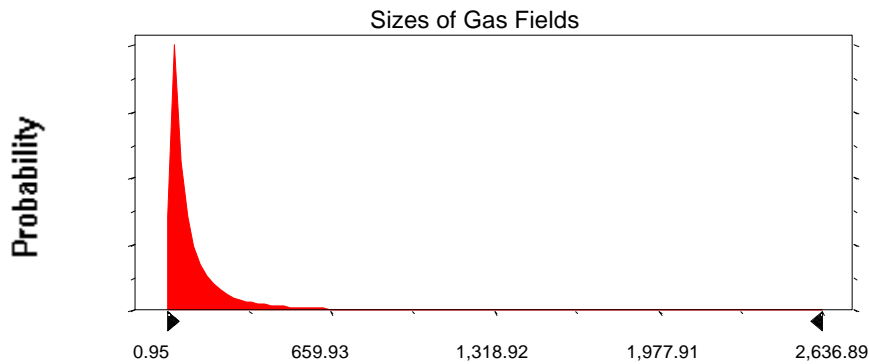
Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:	Shifted parameters
Mean	119.77
Standard Deviation	260.70

Selected range is from 0.00 to 2,970.00 30.00 to 3,000.00
Mean value in simulation was 114.63 144.63



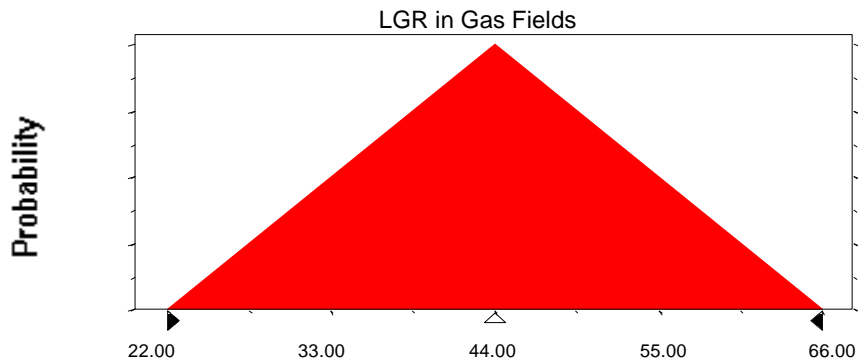
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Assumption: LGR in Gas Fields

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 44.12



End of Assumptions

Simulation started on 5/28/99 at 10:59:30
Simulation stopped on 5/28/99 at 11:53:47