

**Late Cretaceous-Tertiary Deep-Water Sandstones, Assessment Unit 60290102**  
**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	4	1.00	189	1,243	3,464	1,457	396	2,641	7,949	3,199	22	153	493	192	62	295	1,084	390
Gas Fields	24						927	4,213	11,612	4,968	39	181	532	218	306	1,255	5,408	1,813
Total		1.00	189	1,243	3,464	1,457	1,323	6,854	19,561	8,166	61	334	1,025	411				

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**Forecast: Oil in Oil Fields**

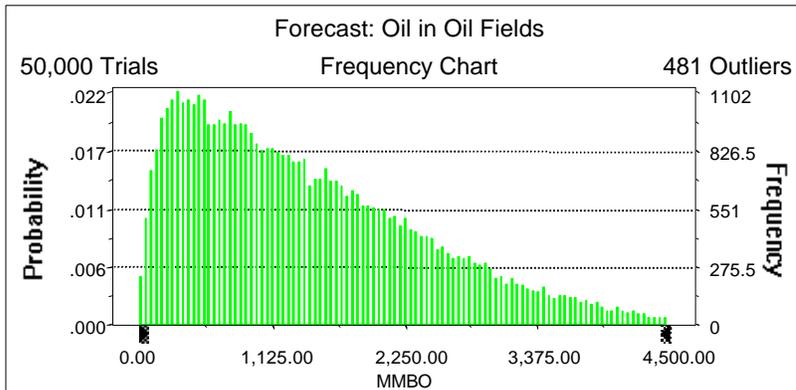
Summary:

Display range is from 0.00 to 4,500.00 MMBO

Entire range is from 4.50 to 7,711.23 MMBO

After 50,000 trials, the standard error of the mean is 4.66

Statistics:	Value
Trials	50000
Mean	1,456.75
Median	1,243.43
Mode	---
Standard Deviation	1,042.18
Variance	1,086,141.49
Skewness	0.96
Kurtosis	3.73
Coefficient of Variability	0.72
Range Minimum	4.50
Range Maximum	7,711.23
Range Width	7,706.73
Mean Standard Error	4.66



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**Forecast: Oil in Oil Fields (cont'd)**

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	4.50
95%	188.60
90%	300.55
85%	404.00
80%	510.84
75%	619.01
70%	738.22
65%	852.62
60%	972.24
55%	1,104.40
50%	1,243.43
45%	1,385.31
40%	1,543.94
35%	1,705.15
30%	1,884.63
25%	2,084.88
20%	2,305.47
15%	2,574.75
10%	2,925.31
5%	3,464.06
0%	7,711.23

End of Forecast

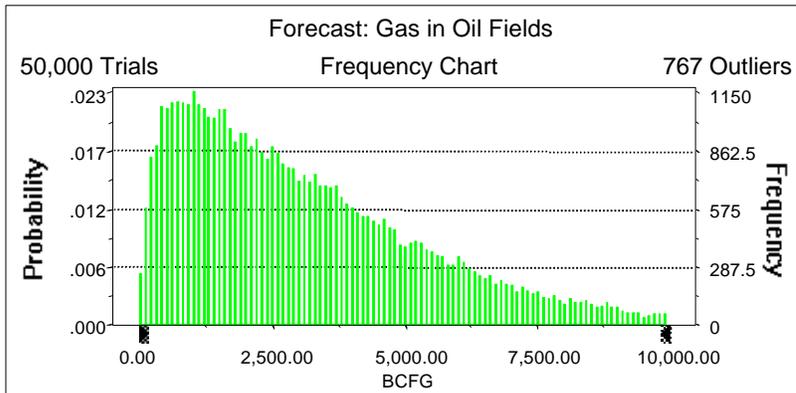
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**Forecast: Gas in Oil Fields**

Summary:

Display range is from 0.00 to 10,000.00 BCFG  
Entire range is from 10.69 to 20,823.11 BCFG  
After 50,000 trials, the standard error of the mean is 10.82

Statistics:	Value
Trials	50000
Mean	3,198.79
Median	2,640.55
Mode	---
Standard Deviation	2,418.48
Variance	5,849,056.61
Skewness	1.18
Kurtosis	4.60
Coefficient of Variability	0.76
Range Minimum	10.69
Range Maximum	20,823.11
Range Width	20,812.43
Mean Standard Error	10.82



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**Forecast: Gas in Oil Fields (cont'd)**

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	10.69
95%	395.71
90%	626.61
85%	854.15
80%	1,079.59
75%	1,309.88
70%	1,551.75
65%	1,796.75
60%	2,068.59
55%	2,345.95
50%	2,640.55
45%	2,955.98
40%	3,301.35
35%	3,664.39
30%	4,057.07
25%	4,519.05
20%	5,051.29
15%	5,702.54
10%	6,555.45
5%	7,948.58
0%	20,823.11

End of Forecast

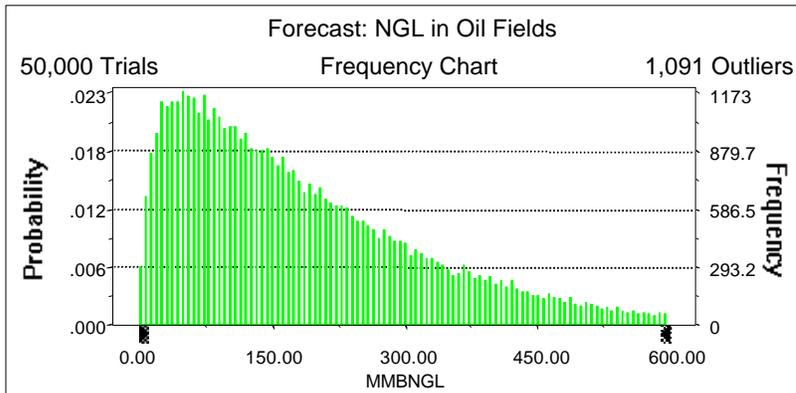
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**Forecast: NGL in Oil Fields**

Summary:

Display range is from 0.00 to 600.00 MMBNGL  
Entire range is from 0.69 to 1,385.40 MMBNGL  
After 50,000 trials, the standard error of the mean is 0.69

Statistics:	Value
Trials	50000
Mean	192.05
Median	153.26
Mode	---
Standard Deviation	153.35
Variance	23,517.18
Skewness	1.41
Kurtosis	5.67
Coefficient of Variability	0.80
Range Minimum	0.69
Range Maximum	1,385.40
Range Width	1,384.71
Mean Standard Error	0.69



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**Forecast: NGL in Oil Fields (cont'd)**

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.69
95%	22.35
90%	36.03
85%	49.26
80%	62.20
75%	75.85
70%	89.61
65%	104.38
60%	119.79
55%	136.27
50%	153.26
45%	171.75
40%	192.42
35%	214.84
30%	239.41
25%	268.38
20%	301.90
15%	344.46
10%	402.17
5%	492.68
0%	1,385.40

End of Forecast

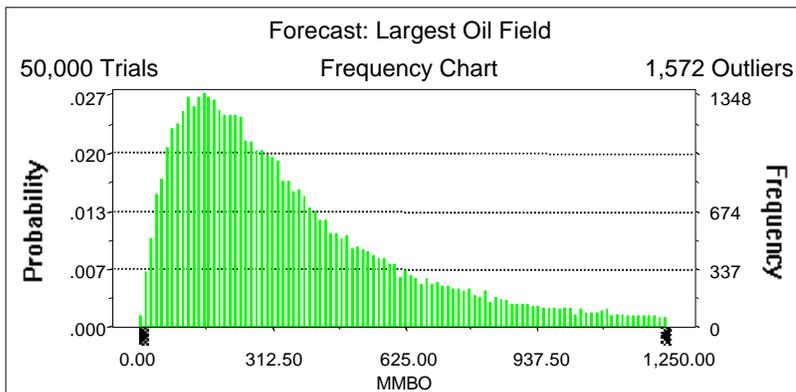
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**Forecast: Largest Oil Field**

Summary:

Display range is from 0.00 to 1,250.00 MMBO  
 Entire range is from 4.50 to 1,796.62 MMBO  
 After 50,000 trials, the standard error of the mean is 1.44

Statistics:	<u>Value</u>
Trials	50000
Mean	389.84
Median	295.04
Mode	---
Standard Deviation	322.55
Variance	104,038.83
Skewness	1.65
Kurtosis	5.90
Coefficient of Variability	0.83
Range Minimum	4.50
Range Maximum	1,796.62
Range Width	1,792.12
Mean Standard Error	1.44



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**Forecast: Largest Oil Field (cont'd)**

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	4.50
95%	62.22
90%	91.14
85%	116.01
80%	139.94
75%	163.49
70%	186.96
65%	211.96
60%	237.55
55%	265.18
50%	295.04
45%	326.98
40%	362.70
35%	403.60
30%	451.32
25%	511.04
20%	583.10
15%	682.71
10%	823.06
5%	1,084.23
0%	1,796.62

End of Forecast

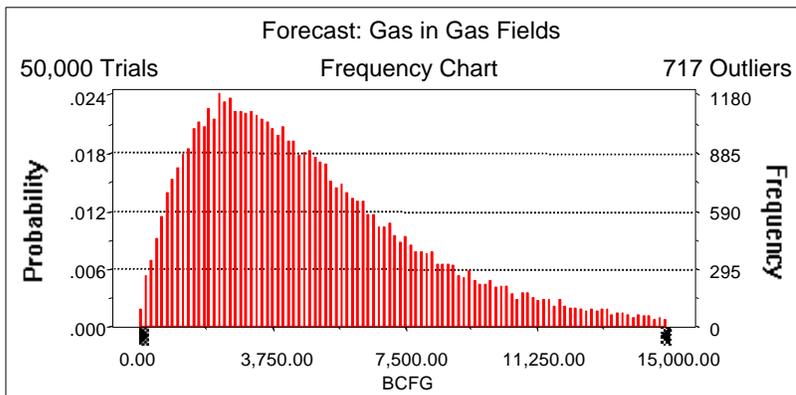
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**Forecast: Gas in Gas Fields**

Summary:

Display range is from 0.00 to 15,000.00 BCFG  
Entire range is from 36.68 to 31,151.09 BCFG  
After 50,000 trials, the standard error of the mean is 15.23

Statistics:	Value
Trials	50000
Mean	4,967.62
Median	4,213.39
Mode	---
Standard Deviation	3,404.91
Variance	11,593,414.09
Skewness	1.31
Kurtosis	5.38
Coefficient of Variability	0.69
Range Minimum	36.68
Range Maximum	31,151.09
Range Width	31,114.41
Mean Standard Error	15.23



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**Forecast: Gas in Gas Fields (cont'd)**

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	36.68
95%	926.99
90%	1,383.59
85%	1,767.47
80%	2,117.78
75%	2,451.32
70%	2,784.10
65%	3,128.45
60%	3,474.00
55%	3,840.58
50%	4,213.39
45%	4,622.52
40%	5,048.66
35%	5,514.51
30%	6,056.25
25%	6,657.94
20%	7,394.30
15%	8,319.60
10%	9,578.63
5%	11,612.28
0%	31,151.09

End of Forecast

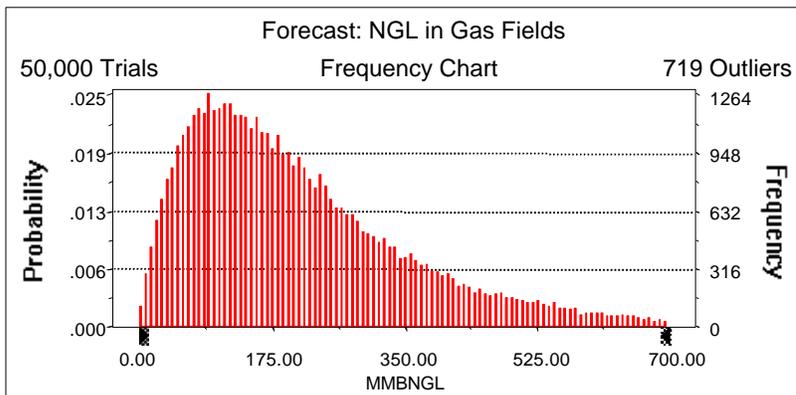
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**Forecast: NGL in Gas Fields**

Summary:

Display range is from 0.00 to 700.00 MMBNGL  
 Entire range is from 1.31 to 1,444.14 MMBNGL  
 After 50,000 trials, the standard error of the mean is 0.71

Statistics:	<u>Value</u>
Trials	50000
Mean	218.47
Median	180.83
Mode	---
Standard Deviation	158.66
Variance	25,171.98
Skewness	1.50
Kurtosis	6.24
Coefficient of Variability	0.73
Range Minimum	1.31
Range Maximum	1,444.14
Range Width	1,442.83
Mean Standard Error	0.71



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**Forecast: NGL in Gas Fields (cont'd)**

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	1.31
95%	38.54
90%	57.72
85%	73.68
80%	88.72
75%	102.98
70%	117.71
65%	132.52
60%	147.83
55%	163.80
50%	180.83
45%	198.74
40%	218.05
35%	239.61
30%	263.49
25%	291.99
20%	326.57
15%	369.54
10%	429.49
5%	531.84
0%	1,444.14

End of Forecast

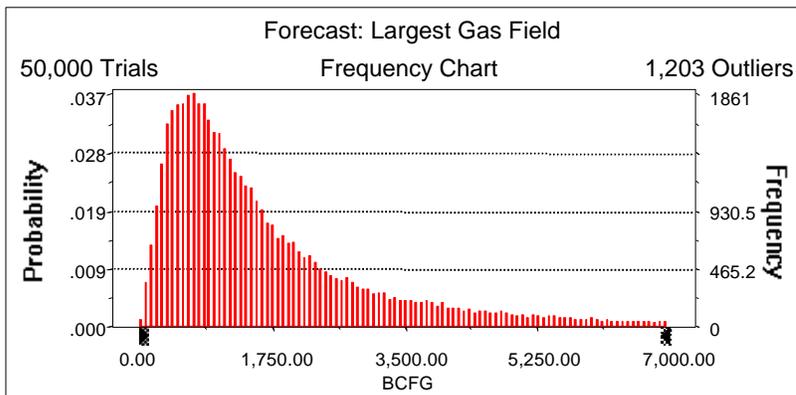
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**Forecast: Largest Gas Field**

Summary:

Display range is from 0.00 to 7,000.00 BCFG  
Entire range is from 29.50 to 10,780.80 BCFG  
After 50,000 trials, the standard error of the mean is 7.60

Statistics:	Value
Trials	50000
Mean	1,813.01
Median	1,254.77
Mode	---
Standard Deviation	1,698.89
Variance	2,886,243.21
Skewness	2.15
Kurtosis	8.41
Coefficient of Variability	0.94
Range Minimum	29.50
Range Maximum	10,780.80
Range Width	10,751.30
Mean Standard Error	7.60



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**Forecast: Largest Gas Field (cont'd)**

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	29.50
95%	306.46
90%	420.51
85%	519.94
80%	619.36
75%	713.99
70%	810.68
65%	906.69
60%	1,014.47
55%	1,127.83
50%	1,254.77
45%	1,398.96
40%	1,556.23
35%	1,748.80
30%	1,980.05
25%	2,259.77
20%	2,639.51
15%	3,159.42
10%	3,964.33
5%	5,407.66
0%	10,780.80

End of Forecast

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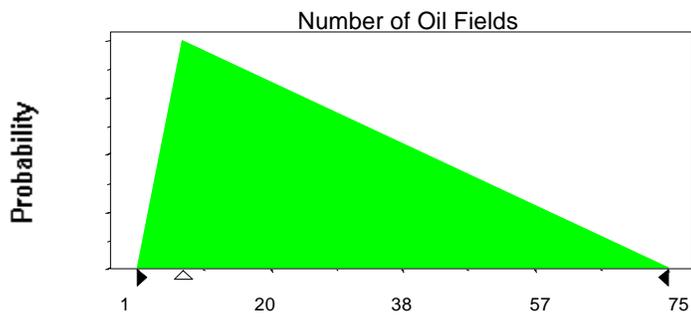
Assumptions

**Assumption: Number of Oil Fields**

Triangular distribution with parameters:

Minimum	1
Likeliest	7
Maximum	75

Selected range is from 1 to 75  
Mean value in simulation was 28



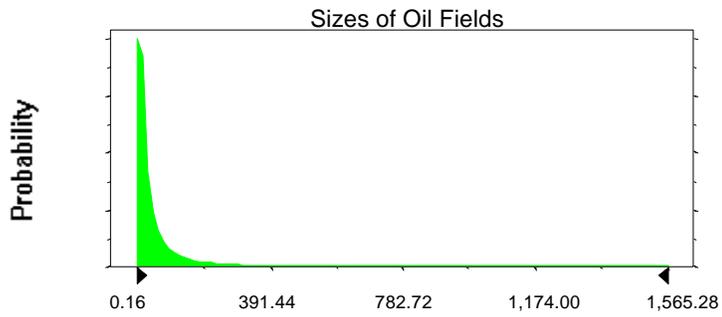
**Assumption: Sizes of Oil Fields**

Lognormal distribution with parameters:	Shifted parameters	
Mean	51.40	55.4
Standard Deviation	156.90	156.9

Selected range is from 0.00 to 1,796.00	4.00 to 1,800.00
Mean value in simulation was 48.36	52.36

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Assumption: Sizes of Oil Fields (cont'd)

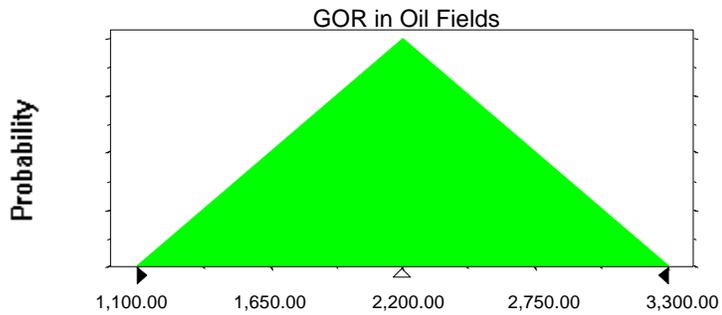


Assumption: GOR in Oil Fields

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 2,198.00



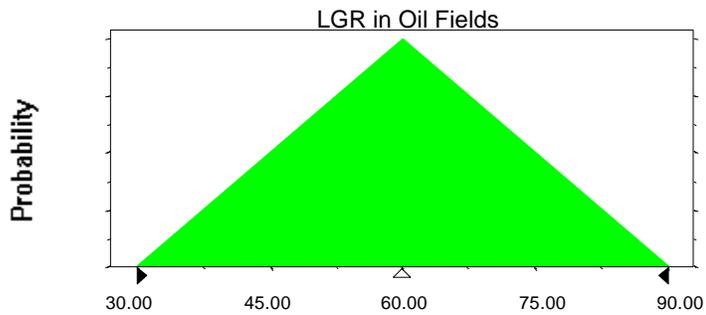
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**Assumption: LGR in Oil Fields**

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 60.02



**Assumption: Number of Gas Fields**

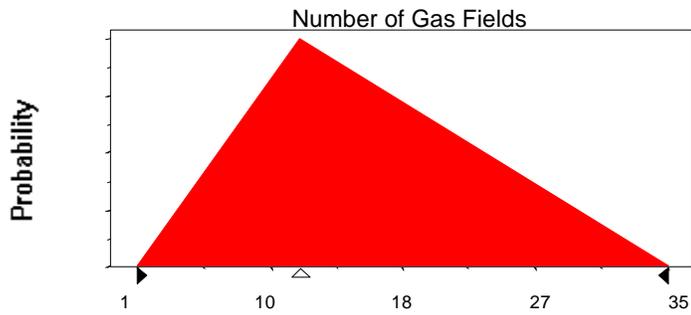
Triangular distribution with parameters:

Minimum	1
Likeliest	11
Maximum	35

Selected range is from 1 to 35  
Mean value in simulation was 16

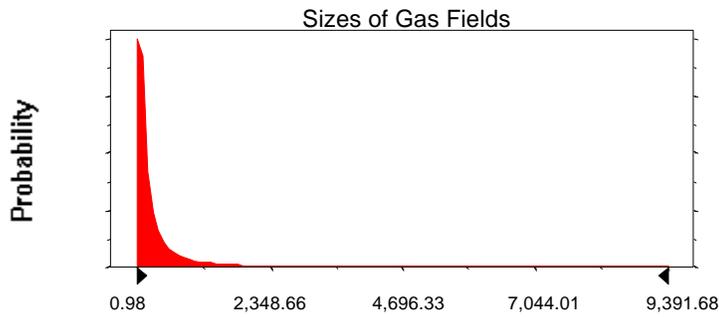
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Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:	Shifted parameters	
Mean	308.38	332.38
Standard Deviation	941.42	941.42
Selected range is from 0.00 to 10,776.00	24.00 to 10,800.00	
Mean value in simulation was 288.88	312.88	



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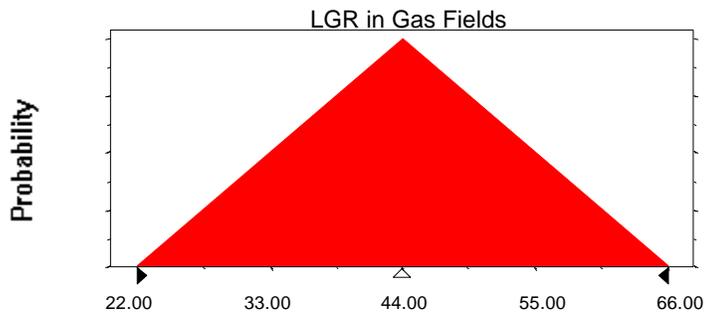
**Assumption: LGR in Gas Fields**

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 44.02



End of Assumptions

Simulation started on 11/26/99 at 14:18:24  
Simulation stopped on 11/26/99 at 14:48:38