

**Trinidad Basins, Assessment Unit 60980201**  
**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	110	378	847	416	207	736	1,778	832	12	43	112	50	26	83	287	109
Gas Fields	24		110	378	847	416	8,076	22,022	41,504	23,128	326	943	1,966	1,017	940	2,305	5,070	2,558
Total		1.00	110	378	847	416	8,283	22,758	43,283	23,960	338	986	2,078	1,067				

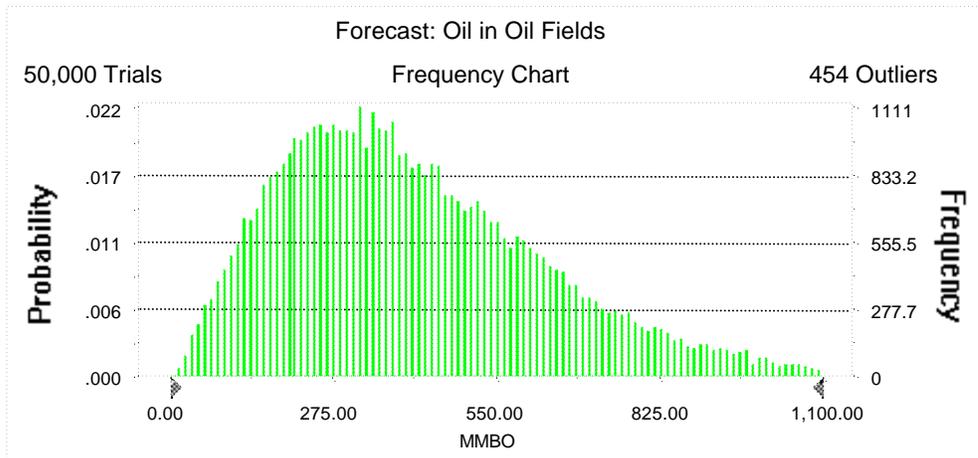
**60980201**  
**Trinidad Basins**  
**Monte Carlo Results**

**Forecast: Oil in Oil Fields**

Summary:

Display range is from 0.00 to 1,100.00 MMBO  
Entire range is from 10.29 to 1,828.73 MMBO  
After 50,000 trials, the standard error of the mean is 1.03

Statistics:	Value
Trials	50000
Mean	416.06
Median	377.82
Mode	---
Standard Deviation	229.23
Variance	52,548.27
Skewness	0.89
Kurtosis	3.94
Coefficient of Variability	0.55
Range Minimum	10.29
Range Maximum	1,828.73
Range Width	1,818.43
Mean Standard Error	1.03



**60980201**  
**Trinidad Basins**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	10.29
95%	110.39
90%	153.77
85%	187.15
80%	216.68
75%	244.51
70%	271.28
65%	298.04
60%	324.84
55%	351.29
50%	377.82
45%	407.00
40%	438.91
35%	471.85
30%	509.82
25%	549.97
20%	597.32
15%	651.81
10%	727.21
5%	846.81
0%	1,828.73

End of Forecast

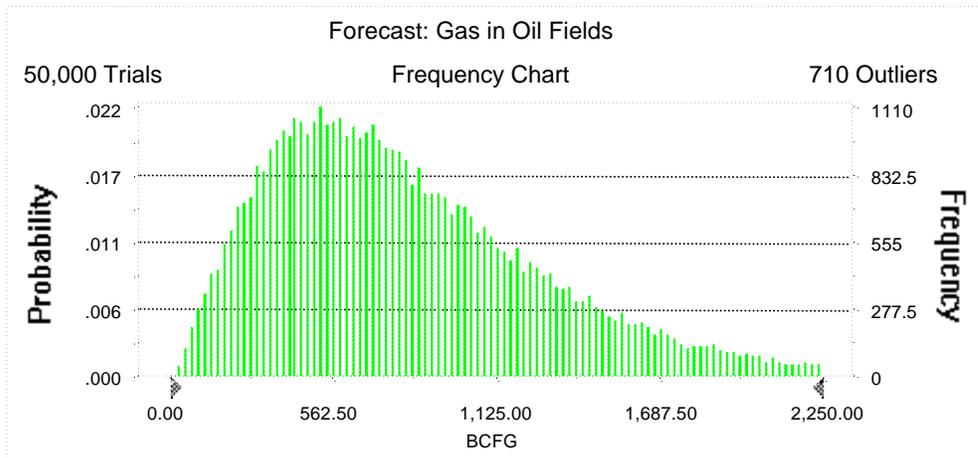
**60980201**  
**Trinidad Basins**  
**Monte Carlo Results**

**Forecast: Gas in Oil Fields**

Summary:

Display range is from 0.00 to 2,250.00 BCFG  
Entire range is from 19.52 to 4,216.94 BCFG  
After 50,000 trials, the standard error of the mean is 2.22

Statistics:	Value
Trials	50000
Mean	831.91
Median	736.27
Mode	---
Standard Deviation	496.91
Variance	246,916.50
Skewness	1.12
Kurtosis	4.75
Coefficient of Variability	0.60
Range Minimum	19.52
Range Maximum	4,216.94
Range Width	4,197.42
Mean Standard Error	2.22



**60980201**  
**Trinidad Basins**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	19.52
95%	206.60
90%	287.88
85%	351.93
80%	409.44
75%	462.89
70%	517.97
65%	569.81
60%	624.10
55%	680.59
50%	736.27
45%	795.80
40%	860.92
35%	932.85
30%	1,011.75
25%	1,098.55
20%	1,204.35
15%	1,330.86
10%	1,501.62
5%	1,778.14
0%	4,216.94

End of Forecast

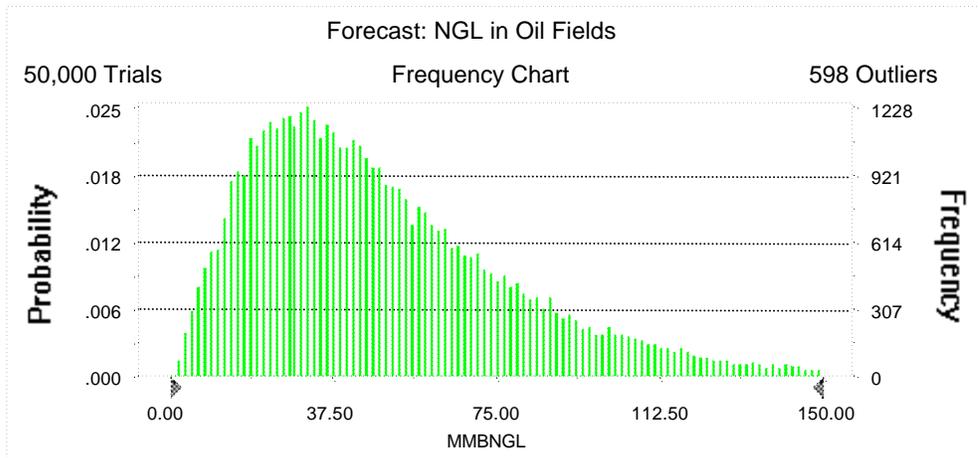
**60980201**  
**Trinidad Basins**  
**Monte Carlo Results**

**Forecast: NGL in Oil Fields**

Summary:

Display range is from 0.00 to 150.00 MMBNGL  
 Entire range is from 0.95 to 334.49 MMBNGL  
 After 50,000 trials, the standard error of the mean is 0.14

Statistics:	<u>Value</u>
Trials	50000
Mean	49.94
Median	43.00
Mode	---
Standard Deviation	32.09
Variance	1,029.67
Skewness	1.35
Kurtosis	5.77
Coefficient of Variability	0.64
Range Minimum	0.95
Range Maximum	334.49
Range Width	333.54
Mean Standard Error	0.14



**60980201**  
**Trinidad Basins**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.95
95%	11.61
90%	16.20
85%	19.90
80%	23.31
75%	26.57
70%	29.80
65%	32.85
60%	36.15
55%	39.46
50%	43.00
45%	46.71
40%	50.75
35%	55.16
30%	60.22
25%	65.98
20%	72.75
15%	81.20
10%	92.71
5%	111.61
0%	334.49

End of Forecast

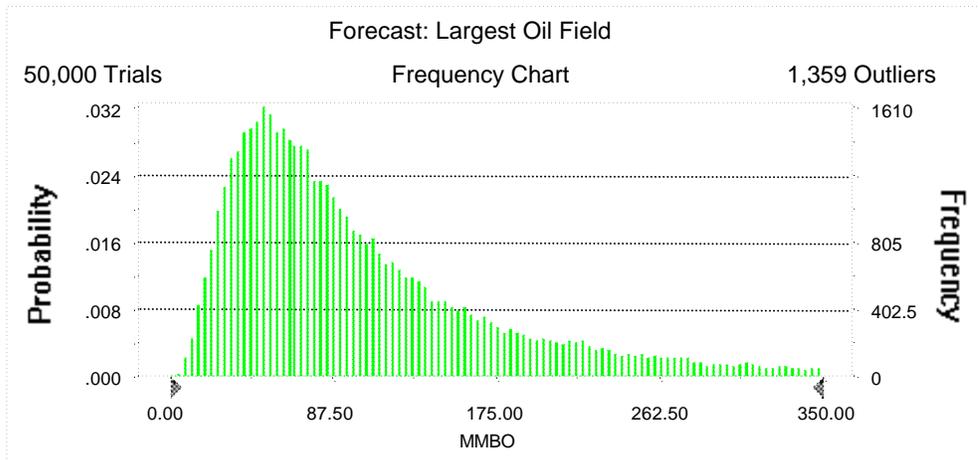
**60980201**  
**Trinidad Basins**  
**Monte Carlo Results**

**Forecast: Largest Oil Field**

Summary:

Display range is from 0.00 to 350.00 MMBO  
Entire range is from 5.92 to 499.85 MMBO  
After 50,000 trials, the standard error of the mean is 0.38

Statistics:	Value
Trials	50000
Mean	108.67
Median	82.83
Mode	---
Standard Deviation	84.29
Variance	7,105.51
Skewness	1.81
Kurtosis	6.66
Coefficient of Variability	0.78
Range Minimum	5.92
Range Maximum	499.85
Range Width	493.94
Mean Standard Error	0.38



**60980201**  
**Trinidad Basins**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	5.92
95%	25.80
90%	33.48
85%	39.90
80%	45.92
75%	51.42
70%	57.00
65%	62.99
60%	69.22
55%	75.56
50%	82.83
45%	90.67
40%	99.60
35%	110.11
30%	122.28
25%	136.92
20%	156.26
15%	181.97
10%	220.52
5%	287.13
0%	499.85

End of Forecast

**60980201**  
**Trinidad Basins**  
**Monte Carlo Results**

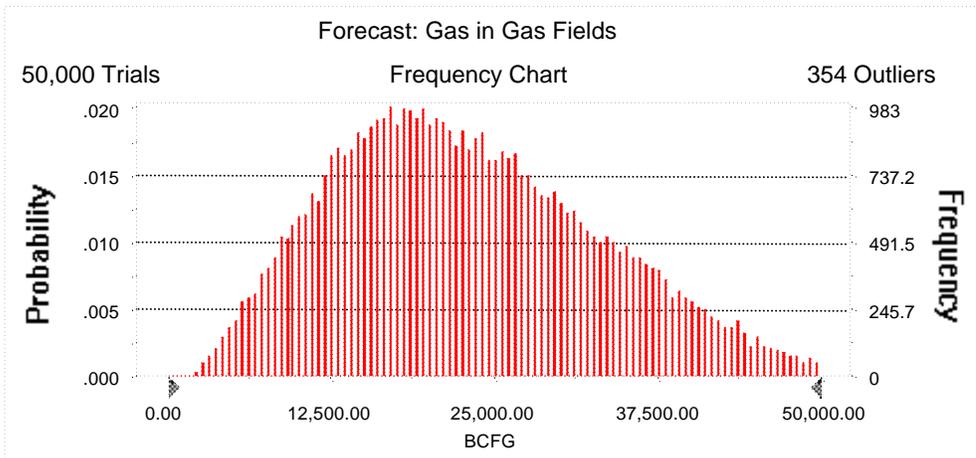
**Forecast: Gas in Gas Fields**

Summary:

Display range is from 0.00 to 50,000.00 BCFG  
 Entire range is from 1,422.22 to 67,358.25 BCFG  
 After 50,000 trials, the standard error of the mean is 45.80

Statistics:

	<u>Value</u>
Trials	50000
Mean	23,128.23
Median	22,021.63
Mode	---
Standard Deviation	10,242.27
Variance	104,904,093.76
Skewness	0.45
Kurtosis	2.73
Coefficient of Variability	0.44
Range Minimum	1,422.22
Range Maximum	67,358.25
Range Width	65,936.03
Mean Standard Error	45.80



**60980201**  
**Trinidad Basins**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	1,422.22
95%	8,076.14
90%	10,473.70
85%	12,405.89
80%	13,925.29
75%	15,365.52
70%	16,735.57
65%	18,045.27
60%	19,330.87
55%	20,650.98
50%	22,021.63
45%	23,468.07
40%	24,920.57
35%	26,488.36
30%	28,116.18
25%	29,993.75
20%	32,082.72
15%	34,541.18
10%	37,420.95
5%	41,504.48
0%	67,358.25

End of Forecast

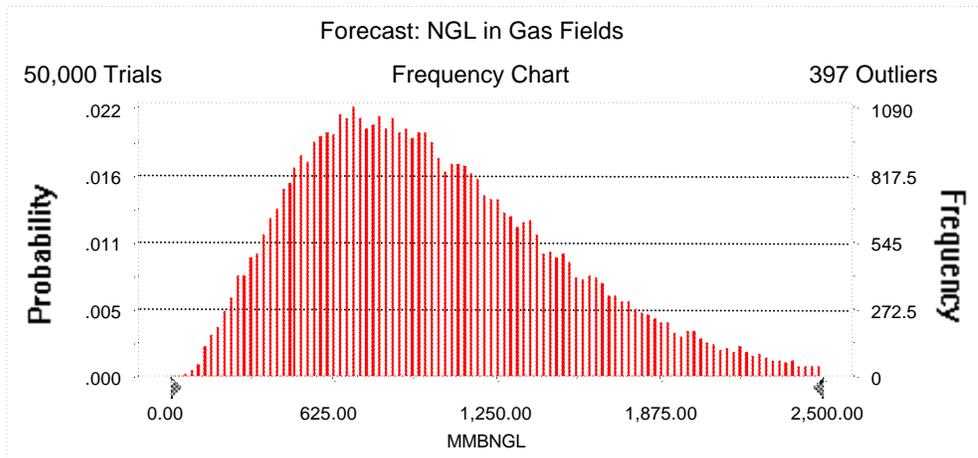
**60980201**  
**Trinidad Basins**  
**Monte Carlo Results**

**Forecast: NGL in Gas Fields**

Summary:

Display range is from 0.00 to 2,500.00 MMBNGL  
Entire range is from 55.10 to 4,177.08 MMBNGL  
After 50,000 trials, the standard error of the mean is 2.25

Statistics:	Value
Trials	50000
Mean	1,017.17
Median	942.70
Mode	---
Standard Deviation	504.18
Variance	254,199.46
Skewness	0.76
Kurtosis	3.48
Coefficient of Variability	0.50
Range Minimum	55.10
Range Maximum	4,177.08
Range Width	4,121.97
Mean Standard Error	2.25



**60980201**  
**Trinidad Basins**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	55.10
95%	326.41
90%	429.51
85%	507.29
80%	575.55
75%	639.89
70%	699.11
65%	758.00
60%	818.58
55%	879.81
50%	942.70
45%	1,006.01
40%	1,077.32
35%	1,149.54
30%	1,229.72
25%	1,320.50
20%	1,422.83
15%	1,549.47
10%	1,711.62
5%	1,966.10
0%	4,177.08

End of Forecast

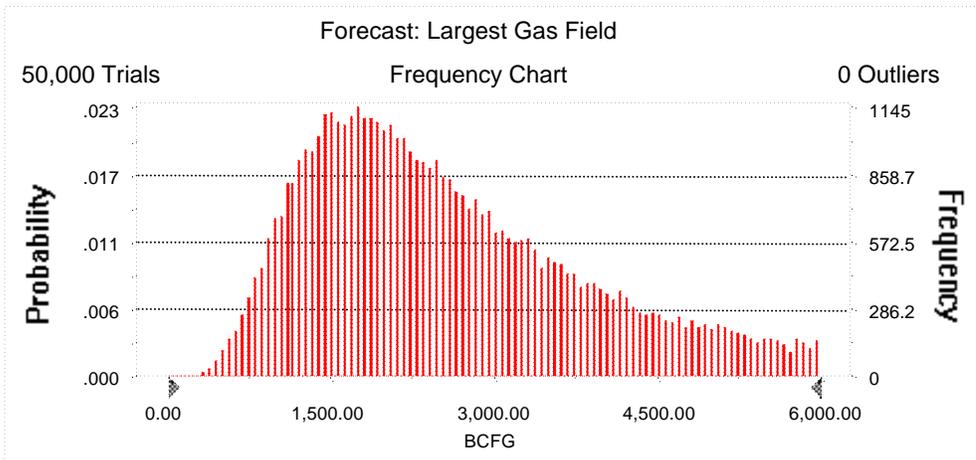
**60980201**  
**Trinidad Basins**  
**Monte Carlo Results**

**Forecast: Largest Gas Field**

Summary:

Display range is from 0.00 to 6,000.00 BCFG  
 Entire range is from 195.65 to 5,999.26 BCFG  
 After 50,000 trials, the standard error of the mean is 5.56

Statistics:	<u>Value</u>
Trials	50000
Mean	2,557.66
Median	2,305.42
Mode	---
Standard Deviation	1,243.40
Variance	1,546,032.32
Skewness	0.73
Kurtosis	2.85
Coefficient of Variability	0.49
Range Minimum	195.65
Range Maximum	5,999.26
Range Width	5,803.61
Mean Standard Error	5.56



**60980201**  
**Trinidad Basins**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	195.65
95%	940.17
90%	1,149.05
85%	1,314.77
80%	1,465.12
75%	1,599.78
70%	1,737.19
65%	1,870.85
60%	2,008.36
55%	2,152.52
50%	2,305.42
45%	2,472.31
40%	2,645.34
35%	2,841.69
30%	3,062.63
25%	3,315.66
20%	3,608.17
15%	3,966.37
10%	4,428.11
5%	5,070.32
0%	5,999.26

End of Forecast

60980201  
Trinidad Basins  
Monte Carlo Results

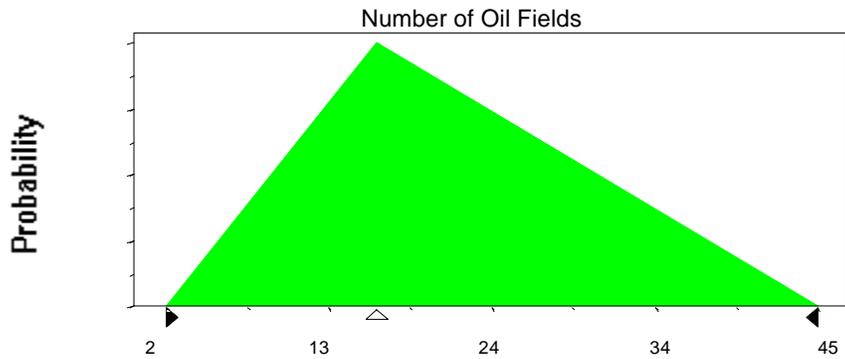
Assumptions

**Assumption: Number of Oil Fields**

Triangular distribution with parameters:

Minimum	2
Likeliest	16
Maximum	45

Selected range is from 2 to 45  
Mean value in simulation was 21



**Assumption: Sizes of Oil Fields**

Lognormal distribution with parameters:

Mean	16.65
Standard Deviation	43.10

Shifted parameters

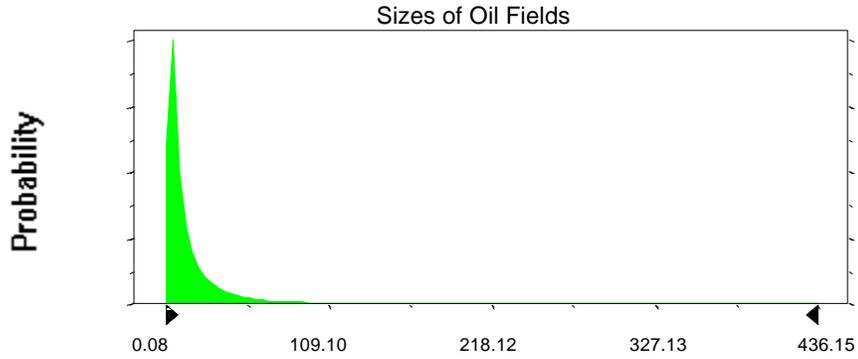
20.65
43.1

Selected range is from 0.00 to 496.00  
Mean value in simulation was 15.84

4.00 to 500.00  
19.84

60980201  
Trinidad Basins  
Monte Carlo Results

Assumption: Sizes of Oil Fields (cont'd)



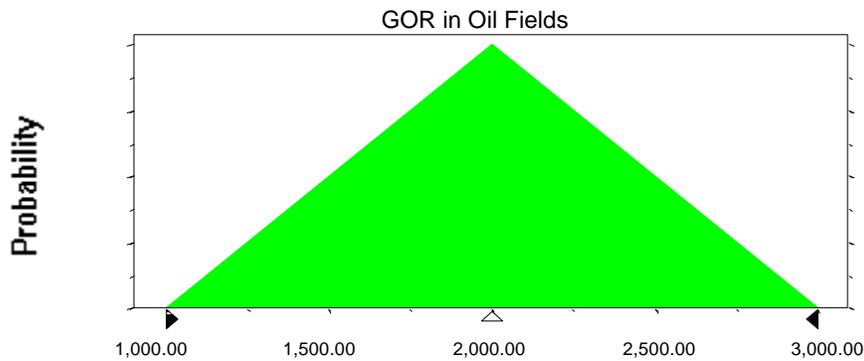
Assumption: GOR in Oil Fields

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 1,999.96



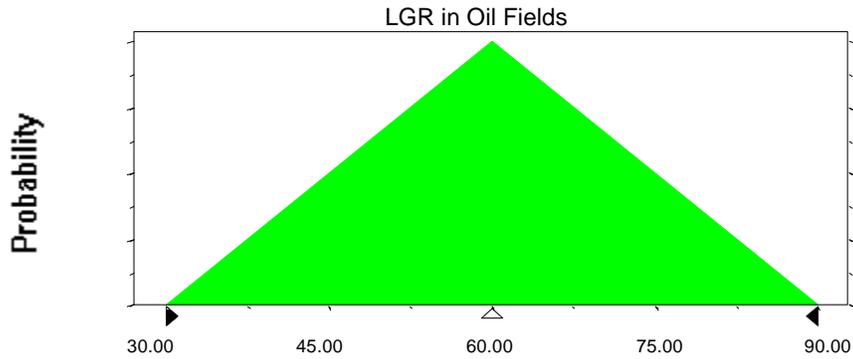
**60980201**  
**Trinidad Basins**  
**Monte Carlo Results**

**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 60.06



**Assumption: Number of Gas Fields**

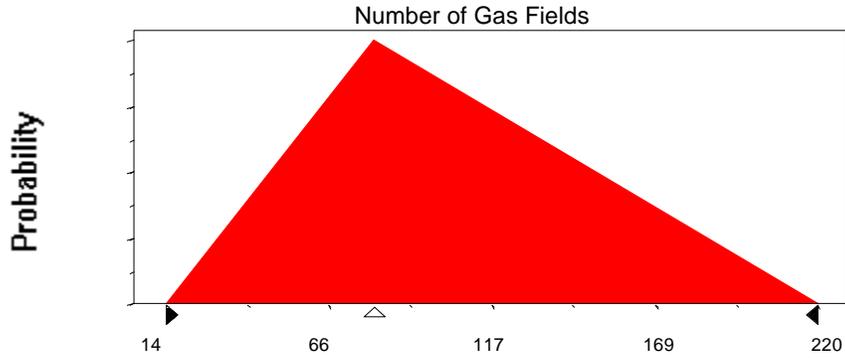
Triangular distribution with parameters:

Minimum	14
Likeliest	80
Maximum	220

Selected range is from 14 to 220  
Mean value in simulation was 105

60980201  
Trinidad Basins  
Monte Carlo Results

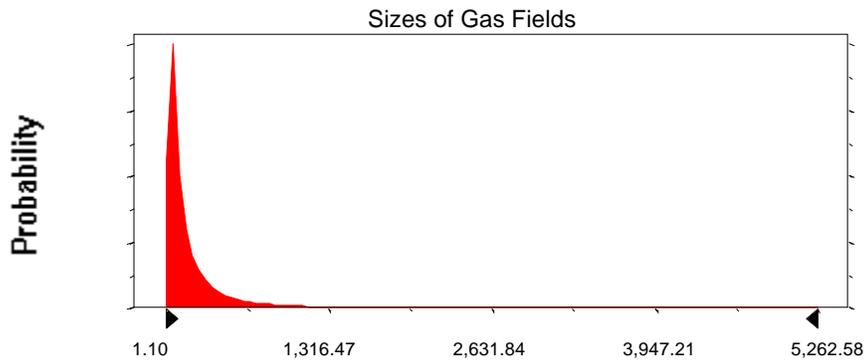
Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:	Shifted parameters	
Mean	206.10	230.1
Standard Deviation	519.54	519.54

Selected range is from 0.00 to 5,976.00                      24.00 to 6,000.00  
Mean value in simulation was 196.98                              220.98



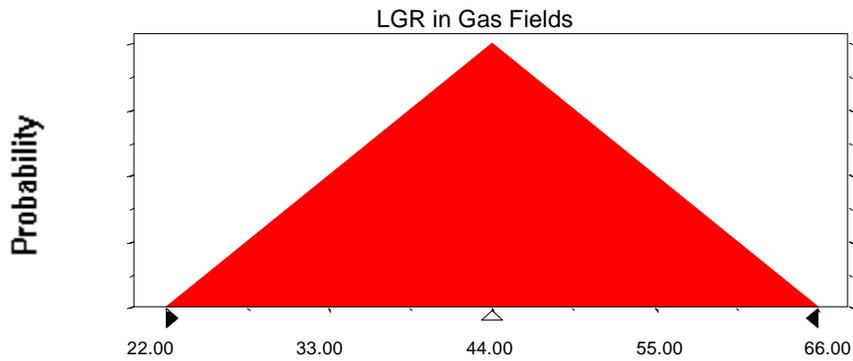
**60980201**  
**Trinidad Basins**  
**Monte Carlo Results**

**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 43.99



End of Assumptions

Simulation started on 7/16/99 at 14:01:09  
Simulation stopped on 7/16/99 at 15:04:46