

**Red Sea Coastal Block Faults, Assessment Unit 20710201**  
**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	1	1.00	730	2,098	3,653	2,136	1,621	4,816	9,114	5,018	96	288	551	301	79	178	351	192
Gas Fields	6		730	2,098	3,653	2,136	12,056	37,973	68,551	38,928	695	2,241	4,267	2,333	1,542	4,257	8,852	4,611
Total		1.00	730	2,098	3,653	2,136	13,677	42,789	77,665	43,946	791	2,529	4,818	2,634				

**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

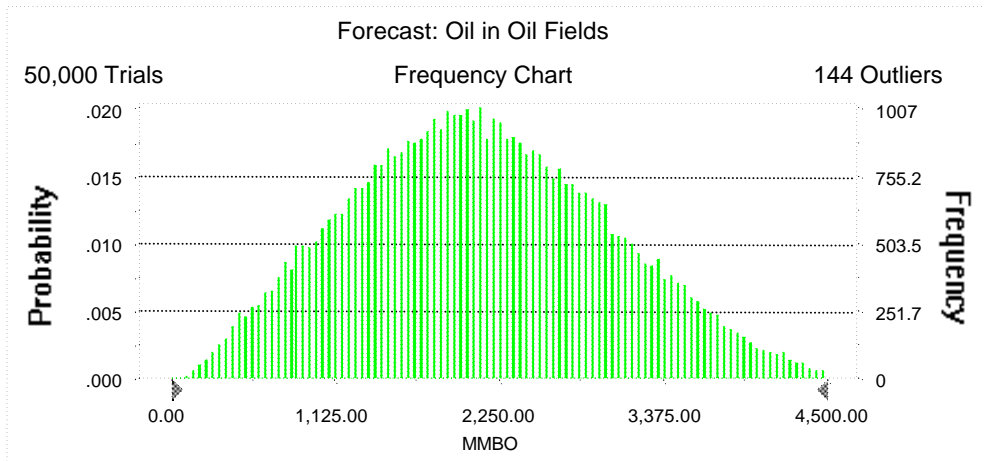
**Forecast: Oil in Oil Fields**

Summary:

Display range is from 0.00 to 4,500.00 MMBO  
Entire range is from 66.55 to 5,627.16 MMBO  
After 50,000 trials, the standard error of the mean is 3.96

Statistics:

	<u>Value</u>
Trials	50000
Mean	2,135.68
Median	2,097.83
Mode	---
Standard Deviation	884.94
Variance	783,122.82
Skewness	0.21
Kurtosis	2.59
Coefficient of Variability	0.41
Range Minimum	66.55
Range Maximum	5,627.16
Range Width	5,560.61
Mean Standard Error	3.96



**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	66.55
95%	729.67
90%	980.42
85%	1,177.04
80%	1,342.49
75%	1,488.33
70%	1,622.20
65%	1,748.78
60%	1,868.88
55%	1,984.59
50%	2,097.83
45%	2,216.63
40%	2,335.86
35%	2,464.42
30%	2,601.45
25%	2,750.28
20%	2,912.76
15%	3,099.23
10%	3,337.15
5%	3,652.81
0%	5,627.16

End of Forecast

**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

**Forecast: Gas in Oil Fields**

Summary:

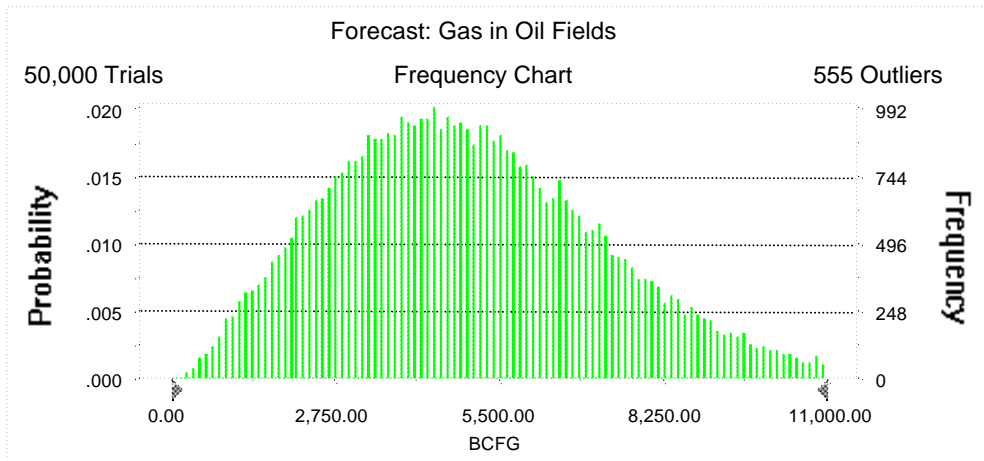
Display range is from 0.00 to 11,000.00 BCFG

Entire range is from 122.80 to 15,250.17 BCFG

After 50,000 trials, the standard error of the mean is 10.21

Statistics:

	<u>Value</u>
Trials	50000
Mean	5,018.02
Median	4,816.30
Mode	---
Standard Deviation	2,284.11
Variance	5,217,163.30
Skewness	0.50
Kurtosis	3.05
Coefficient of Variability	0.46
Range Minimum	122.80
Range Maximum	15,250.17
Range Width	15,127.37
Mean Standard Error	10.21



**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	122.80
95%	1,621.31
90%	2,184.70
85%	2,621.44
80%	2,996.85
75%	3,331.95
70%	3,644.78
65%	3,943.60
60%	4,235.66
55%	4,521.80
50%	4,816.30
45%	5,114.66
40%	5,420.27
35%	5,736.78
30%	6,082.62
25%	6,487.22
20%	6,905.77
15%	7,415.81
10%	8,096.59
5%	9,114.31
0%	15,250.17

End of Forecast

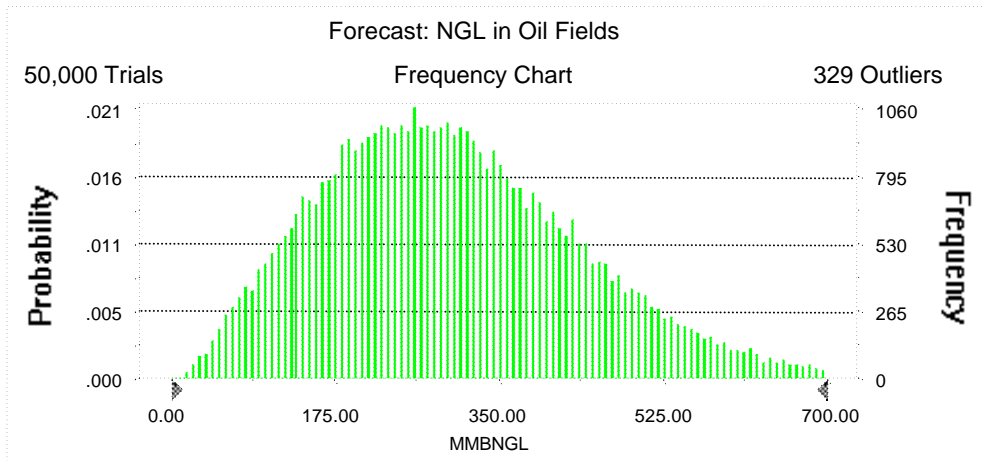
**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

**Forecast: NGL in Oil Fields**

Summary:

Display range is from 0.00 to 700.00 MMBNGL  
Entire range is from 6.74 to 993.07 MMBNGL  
After 50,000 trials, the standard error of the mean is 0.62

Statistics:	Value
Trials	50000
Mean	301.06
Median	288.33
Mode	---
Standard Deviation	138.83
Variance	19,275.13
Skewness	0.54
Kurtosis	3.14
Coefficient of Variability	0.46
Range Minimum	6.74
Range Maximum	993.07
Range Width	986.33
Mean Standard Error	0.62



**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	6.74
95%	96.10
90%	130.01
85%	155.95
80%	179.13
75%	198.48
70%	217.30
65%	235.01
60%	253.07
55%	270.37
50%	288.33
45%	305.89
40%	324.01
35%	343.88
30%	364.97
25%	389.30
20%	416.15
15%	446.94
10%	488.24
5%	551.20
0%	993.07

End of Forecast

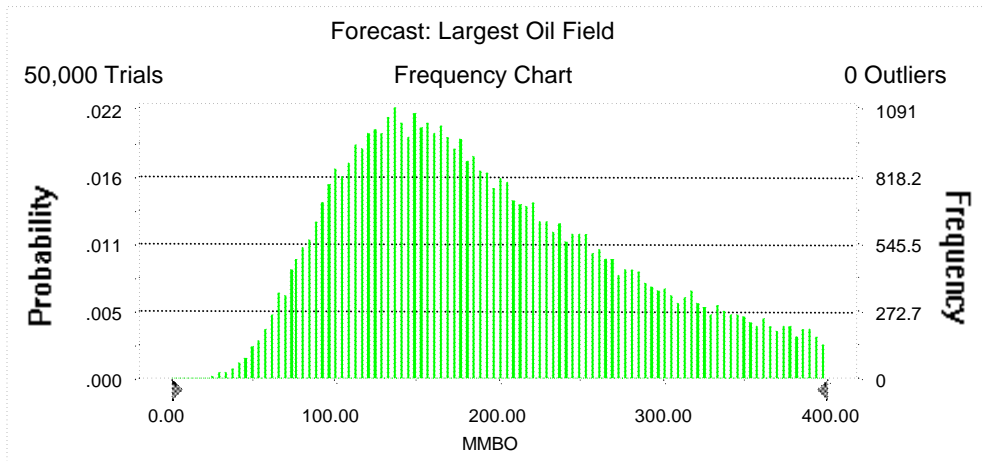
**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

**Forecast: Largest Oil Field**

Summary:

Display range is from 0.00 to 400.00 MMBO  
 Entire range is from 10.46 to 399.97 MMBO  
 After 50,000 trials, the standard error of the mean is 0.37

Statistics:	<u>Value</u>
Trials	50000
Mean	192.05
Median	178.20
Mode	---
Standard Deviation	81.99
Variance	6,721.69
Skewness	0.54
Kurtosis	2.54
Coefficient of Variability	0.43
Range Minimum	10.46
Range Maximum	399.97
Range Width	389.51
Mean Standard Error	0.37





**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	10.46
95%	78.80
90%	95.39
85%	107.75
80%	118.71
75%	128.86
70%	138.45
65%	148.27
60%	157.87
55%	167.76
50%	178.20
45%	189.25
40%	201.74
35%	215.04
30%	229.55
25%	246.59
20%	264.72
15%	287.12
10%	315.61
5%	350.55
0%	399.97

End of Forecast

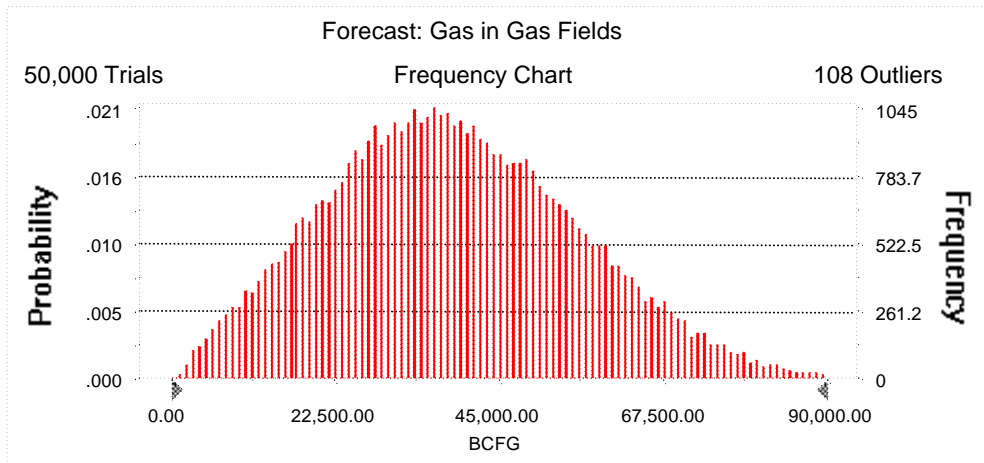
**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

**Forecast: Gas in Gas Fields**

Summary:

Display range is from 0.00 to 90,000.00 BCFG  
 Entire range is from 920.59 to 114,467.49 BCFG  
 After 50,000 trials, the standard error of the mean is 76.50

Statistics:	<u>Value</u>
Trials	50000
Mean	38,927.60
Median	37,972.97
Mode	---
Standard Deviation	17,106.17
Variance	292,620,934.73
Skewness	0.29
Kurtosis	2.75
Coefficient of Variability	0.44
Range Minimum	920.59
Range Maximum	114,467.49
Range Width	113,546.91
Mean Standard Error	76.50



**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	920.59
95%	12,056.15
90%	17,015.98
85%	20,605.41
80%	23,800.55
75%	26,468.83
70%	28,900.76
65%	31,270.62
60%	33,554.03
55%	35,792.15
50%	37,972.97
45%	40,215.62
40%	42,589.80
35%	45,067.88
30%	47,757.67
25%	50,465.48
20%	53,644.73
15%	57,252.71
10%	61,863.90
5%	68,550.92
0%	114,467.49

End of Forecast

**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

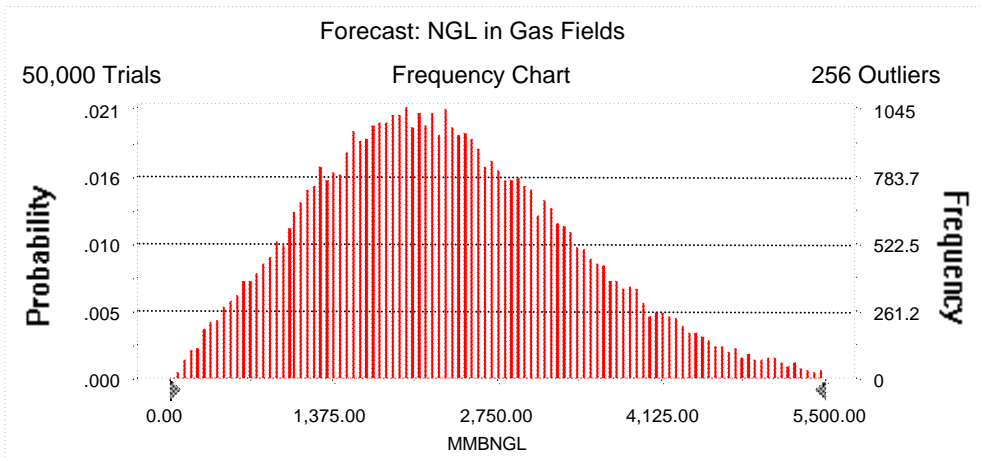
**Forecast: NGL in Gas Fields**

Summary:

Display range is from 0.00 to 5,500.00 MMBNGL  
 Entire range is from 53.34 to 8,118.55 MMBNGL  
 After 50,000 trials, the standard error of the mean is 4.85

Statistics:

	<u>Value</u>
Trials	50000
Mean	2,333.17
Median	2,240.85
Mode	---
Standard Deviation	1,084.54
Variance	1,176,222.59
Skewness	0.48
Kurtosis	3.08
Coefficient of Variability	0.46
Range Minimum	53.34
Range Maximum	8,118.55
Range Width	8,065.21
Mean Standard Error	4.85



**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	53.34
95%	695.02
90%	989.09
85%	1,199.55
80%	1,377.87
75%	1,544.76
70%	1,692.51
65%	1,832.52
60%	1,967.26
55%	2,103.80
50%	2,240.85
45%	2,379.15
40%	2,523.60
35%	2,678.73
30%	2,849.43
25%	3,030.61
20%	3,232.00
15%	3,472.69
10%	3,791.34
5%	4,267.07
0%	8,118.55

End of Forecast

**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

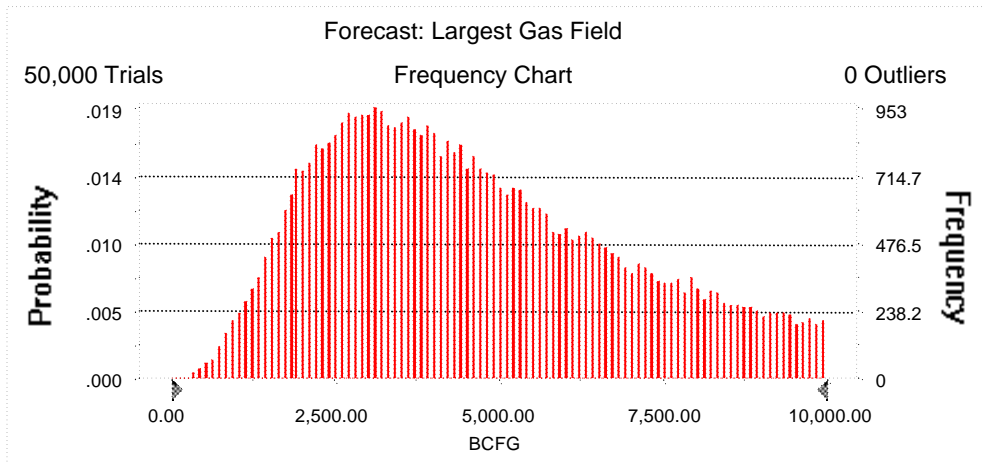
**Forecast: Largest Gas Field**

Summary:

Display range is from 0.00 to 10,000.00 BCFG  
 Entire range is from 165.53 to 9,999.32 BCFG  
 After 50,000 trials, the standard error of the mean is 9.94

Statistics:

	<u>Value</u>
Trials	50000
Mean	4,611.02
Median	4,256.81
Mode	---
Standard Deviation	2,222.78
Variance	4,940,757.87
Skewness	0.49
Kurtosis	2.41
Coefficient of Variability	0.48
Range Minimum	165.53
Range Maximum	9,999.32
Range Width	9,833.79
Mean Standard Error	9.94



**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	165.53
95%	1,542.46
90%	1,957.27
85%	2,286.54
80%	2,586.84
75%	2,860.11
70%	3,127.73
65%	3,396.70
60%	3,671.52
55%	3,954.01
50%	4,256.81
45%	4,570.97
40%	4,902.80
35%	5,268.99
30%	5,671.12
25%	6,133.77
20%	6,640.59
15%	7,249.18
10%	7,965.85
5%	8,851.87
0%	9,999.32

End of Forecast

**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

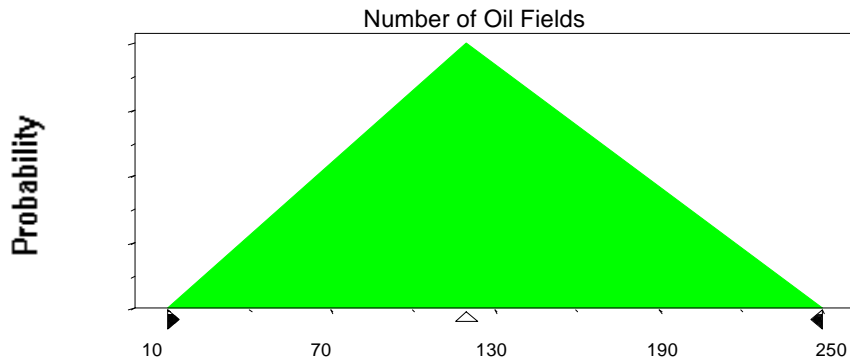
**Assumptions**

**Assumption: Number of Oil Fields**

Triangular distribution with parameters:

Minimum	10
Likeliest	120
Maximum	250

Selected range is from 10 to 250  
Mean value in simulation was 126



**Assumption: Sizes of Oil Fields**

Lognormal distribution with parameters:

Mean	16.48
Standard Deviation	35.11

Shifted parameters

17.48
35.11

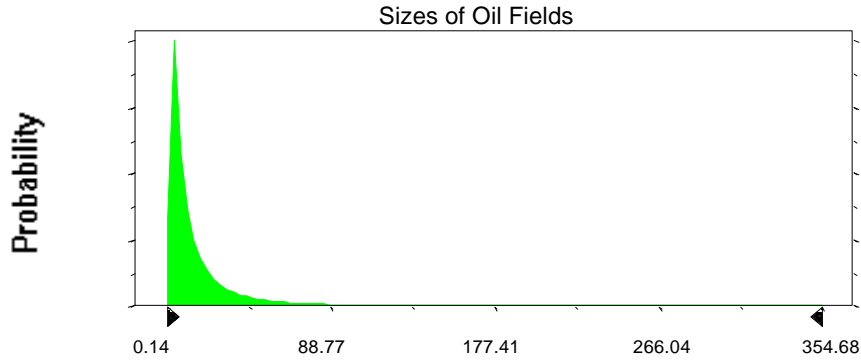
Selected range is from 0.00 to 399.00  
Mean value in simulation was 16.01

1.00 to 400.00  
17.01



**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

**Assumption: Sizes of Oil Fields (cont'd)**



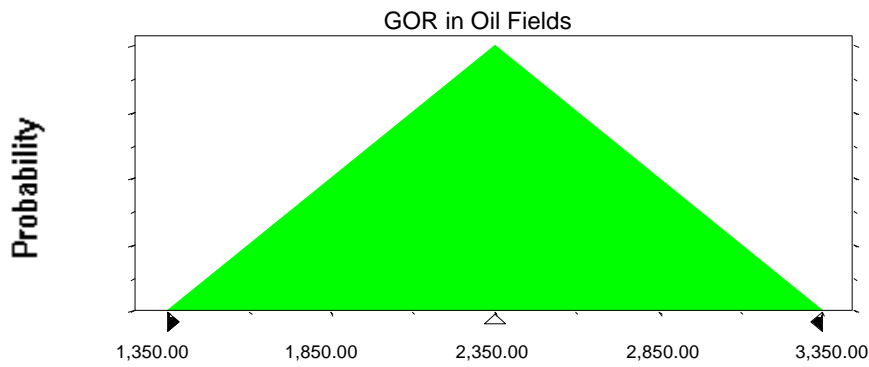
**Assumption: GOR in Oil Fields**

Triangular distribution with parameters:

Minimum	1,350.00
Likeliest	2,350.00
Maximum	3,350.00

Selected range is from 1,350.00 to 3,350.00

Mean value in simulation was 2,349.15



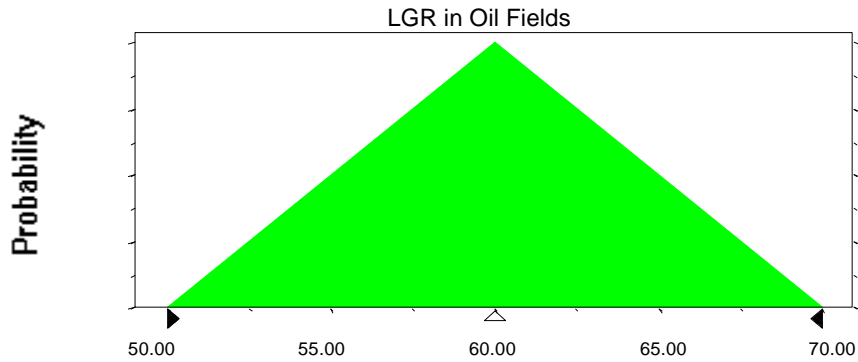
**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

**Assumption: LGR in Oil Fields**

Triangular distribution with parameters:

Minimum	50.00
Likeliest	60.00
Maximum	70.00

Selected range is from 50.00 to 70.00  
Mean value in simulation was 59.99



**Assumption: Number of Gas Fields**

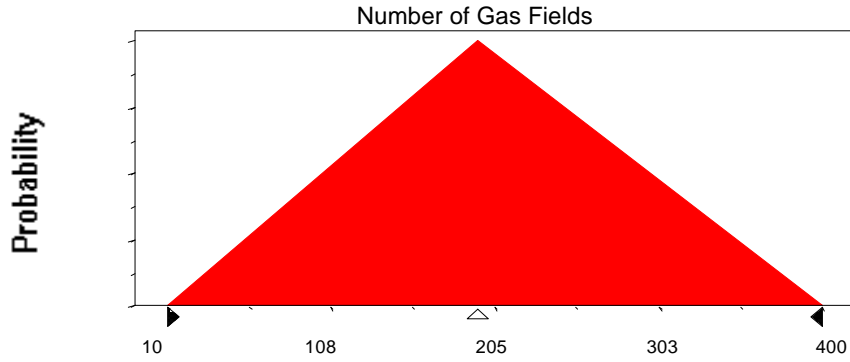
Triangular distribution with parameters:

Minimum	10
Likeliest	195
Maximum	400

Selected range is from 10 to 400  
Mean value in simulation was 201

**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

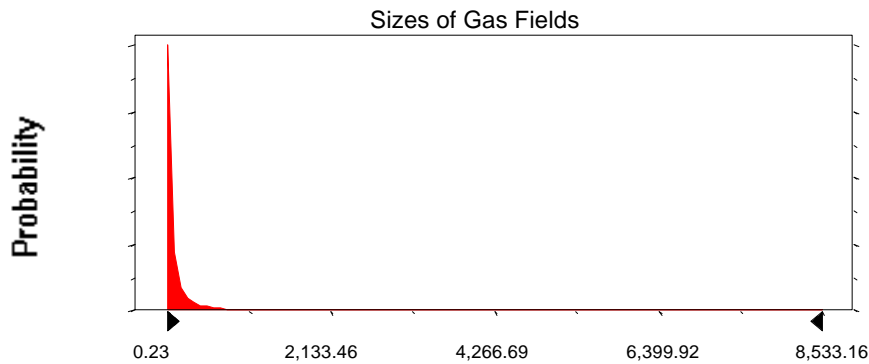
**Assumption: Number of Gas Fields (cont'd)**



**Assumption: Sizes of Gas Fields**

Lognormal distribution with parameters:		Shifted parameters	
Mean	205.55		211.55
Standard Deviation	937.97		937.97

Selected range is from 0.00 to 9,994.00	6.00 to 10,000.00
Mean value in simulation was 187.71	193.71



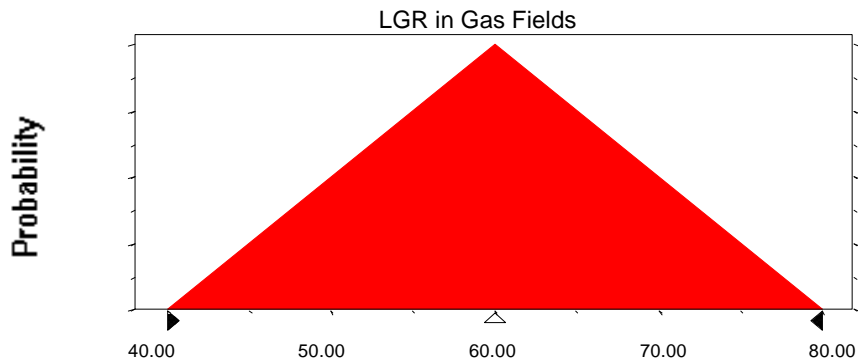
**20710201**  
**Red Sea Coastal Block Faults**  
**Monte Carlo Results**

**Assumption: LGR in Gas Fields**

Triangular distribution with parameters:

Minimum	40.00
Likeliest	60.00
Maximum	80.00

Selected range is from 40.00 to 80.00  
Mean value in simulation was 59.91



End of Assumptions

Simulation started on 12/3/98 at 11:10:59  
Simulation stopped on 12/3/98 at 13:23:47