

**North and West Margins Subsalt Pinnacle Reefs, Assessment Unit 10160101**  
**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	20	1.00	604	1,464	2,630	1,522	1,106	2,856	5,666	3,052	61	166	362	183	188	366	762	405
Gas Fields	120						8,130	24,744	56,119	27,493	395	1,328	3,478	1,554	2,884	8,173	25,479	10,292
Total		1.00	604	1,464	2,630	1,522	9,236	27,599	61,784	30,544	456	1,494	3,840	1,737				

**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

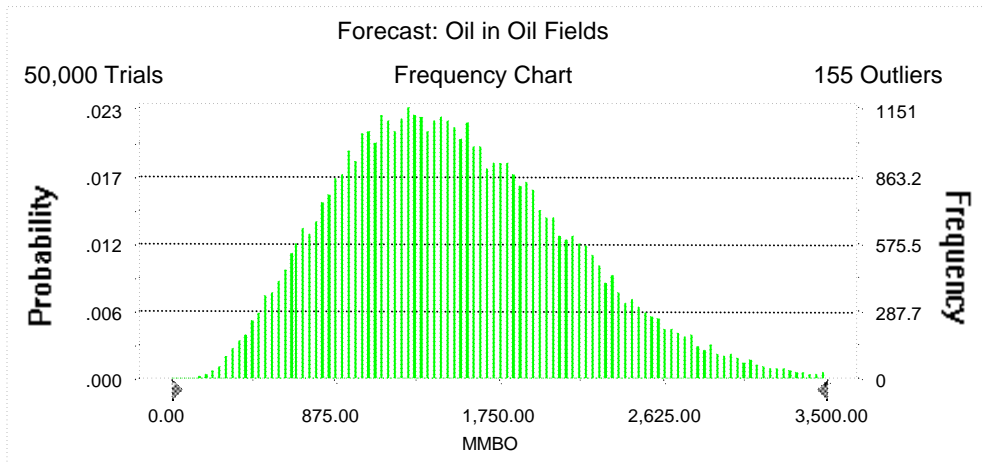
**Forecast: Oil in Oil Fields**

Summary:

Display range is from 0.00 to 3,500.00 MMBO  
 Entire range is from 112.51 to 5,371.46 MMBO  
 After 50,000 trials, the standard error of the mean is 2.78

Statistics:

	<u>Value</u>
Trials	50000
Mean	1,521.86
Median	1,463.98
Mode	---
Standard Deviation	621.14
Variance	385,818.90
Skewness	0.52
Kurtosis	3.16
Coefficient of Variability	0.41
Range Minimum	112.51
Range Maximum	5,371.46
Range Width	5,258.94
Mean Standard Error	2.78



**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	112.51
95%	603.61
90%	757.00
85%	878.07
80%	975.83
75%	1,063.37
70%	1,146.18
65%	1,226.96
60%	1,303.98
55%	1,385.07
50%	1,463.98
45%	1,544.83
40%	1,629.46
35%	1,721.07
30%	1,815.79
25%	1,920.06
20%	2,037.71
15%	2,181.39
10%	2,354.30
5%	2,630.50
0%	5,371.46

End of Forecast

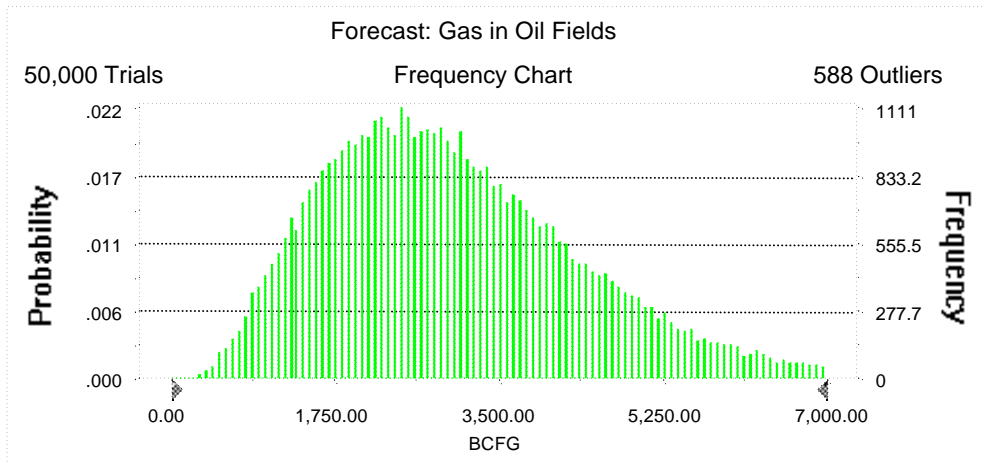
**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

**Forecast: Gas in Oil Fields**

Summary:

Display range is from 0.00 to 7,000.00 BCFG  
 Entire range is from 132.51 to 11,233.30 BCFG  
 After 50,000 trials, the standard error of the mean is 6.32

Statistics:	<u>Value</u>
Trials	50000
Mean	3,051.77
Median	2,855.64
Mode	---
Standard Deviation	1,413.94
Variance	1,999,234.24
Skewness	0.81
Kurtosis	3.81
Coefficient of Variability	0.46
Range Minimum	132.51
Range Maximum	11,233.30
Range Width	11,100.79
Mean Standard Error	6.32



**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	132.51
95%	1,105.82
90%	1,402.70
85%	1,629.90
80%	1,825.62
75%	2,009.10
70%	2,183.81
65%	2,348.51
60%	2,514.49
55%	2,684.44
50%	2,855.64
45%	3,031.84
40%	3,215.30
35%	3,417.29
30%	3,641.25
25%	3,884.67
20%	4,163.39
15%	4,515.55
10%	4,954.27
5%	5,665.75
0%	11,233.30

End of Forecast

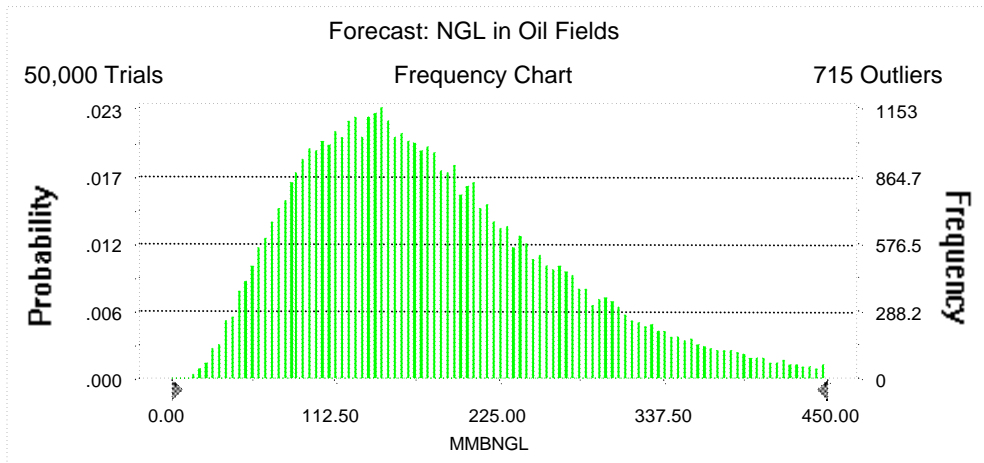
**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

**Forecast: NGL in Oil Fields**

Summary:

Display range is from 0.00 to 450.00 MMBNGL  
Entire range is from 9.30 to 792.94 MMBNGL  
After 50,000 trials, the standard error of the mean is 0.42

Statistics:	<u>Value</u>
Trials	50000
Mean	182.75
Median	166.13
Mode	---
Standard Deviation	94.15
Variance	8,863.52
Skewness	1.06
Kurtosis	4.55
Coefficient of Variability	0.52
Range Minimum	9.30
Range Maximum	792.94
Range Width	783.64
Mean Standard Error	0.42



**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	9.30
95%	60.99
90%	77.85
85%	91.21
80%	102.96
75%	114.05
70%	124.60
65%	135.04
60%	145.10
55%	155.31
50%	166.13
45%	177.44
40%	189.54
35%	202.58
30%	216.89
25%	233.39
20%	253.29
15%	277.00
10%	309.00
5%	361.55
0%	792.94

End of Forecast

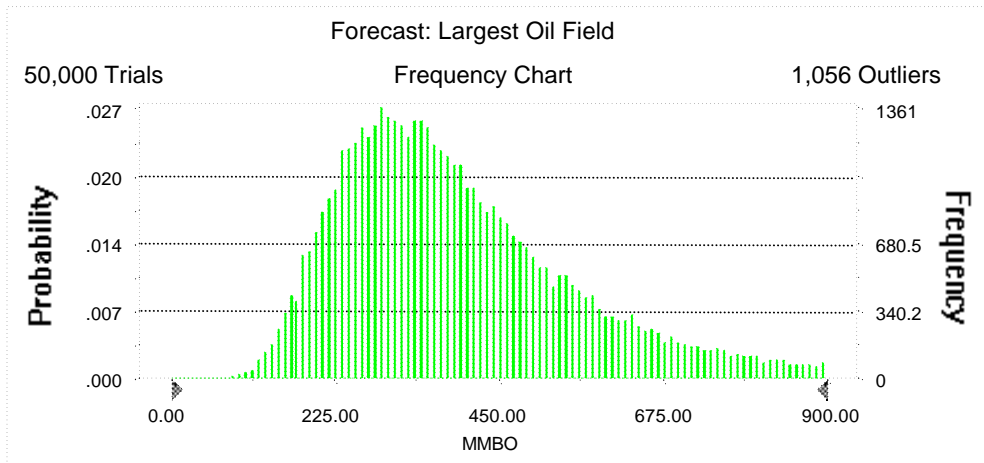
**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

**Forecast: Largest Oil Field**

Summary:

Display range is from 0.00 to 900.00 MMBO  
 Entire range is from 59.51 to 1,199.83 MMBO  
 After 50,000 trials, the standard error of the mean is 0.80

Statistics:	<u>Value</u>
Trials	50000
Mean	404.56
Median	365.89
Mode	---
Standard Deviation	178.91
Variance	32,008.77
Skewness	1.27
Kurtosis	4.98
Coefficient of Variability	0.44
Range Minimum	59.51
Range Maximum	1,199.83
Range Width	1,140.32
Mean Standard Error	0.80





**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	59.51
95%	188.20
90%	218.36
85%	240.61
80%	259.81
75%	278.15
70%	295.29
65%	312.29
60%	330.34
55%	347.74
50%	365.89
45%	385.70
40%	406.56
35%	430.66
30%	457.41
25%	488.17
20%	526.93
15%	574.37
10%	642.89
5%	761.96
0%	1,199.83

End of Forecast

**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

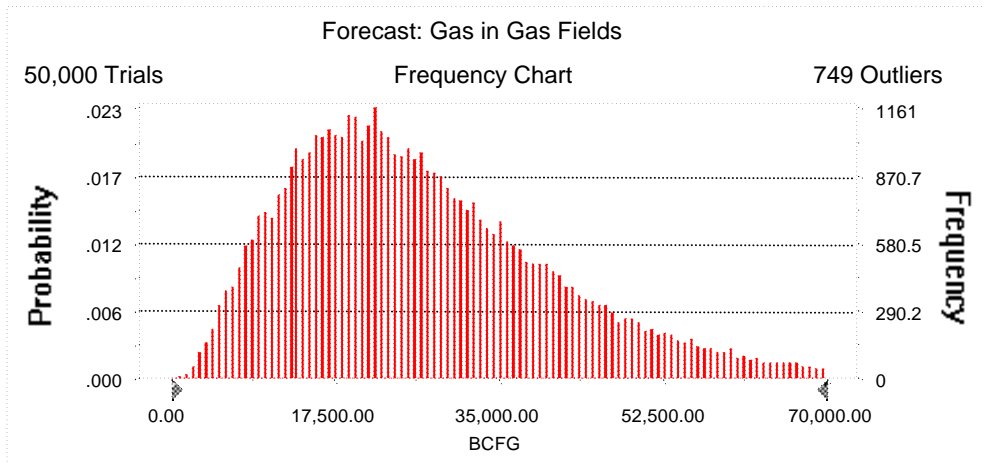
**Forecast: Gas in Gas Fields**

Summary:

Display range is from 0.00 to 70,000.00 BCFG  
 Entire range is from 571.28 to 153,880.29 BCFG  
 After 50,000 trials, the standard error of the mean is 67.37

Statistics:

	<u>Value</u>
Trials	50000
Mean	27,492.58
Median	24,743.77
Mode	---
Standard Deviation	15,063.98
Variance	226,923,400.47
Skewness	1.11
Kurtosis	4.84
Coefficient of Variability	0.55
Range Minimum	571.28
Range Maximum	153,880.29
Range Width	153,309.01
Mean Standard Error	67.37



**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	571.28
95%	8,130.18
90%	10,794.33
85%	12,980.40
80%	14,807.31
75%	16,514.92
70%	18,180.14
65%	19,788.58
60%	21,403.49
55%	22,993.20
50%	24,743.77
45%	26,555.47
40%	28,465.75
35%	30,564.93
30%	32,891.77
25%	35,557.84
20%	38,708.63
15%	42,406.47
10%	47,635.23
5%	56,118.73
0%	153,880.29

End of Forecast

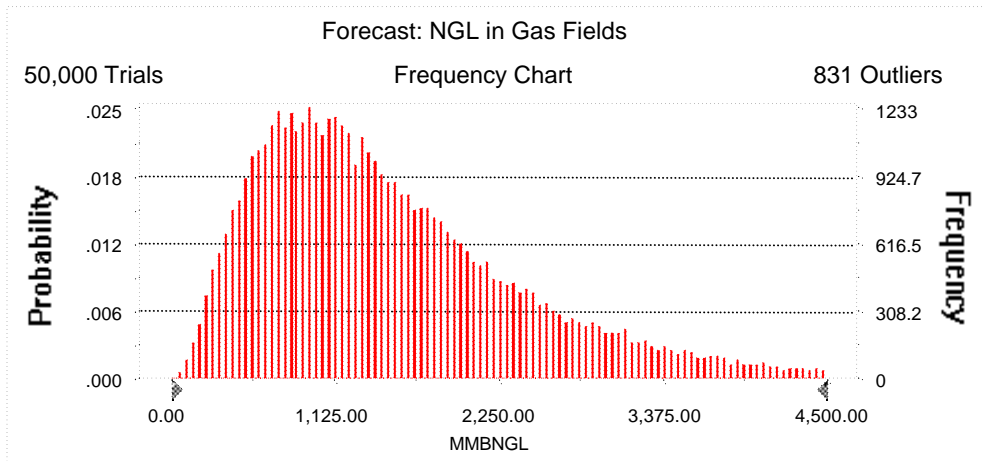
**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

**Forecast: NGL in Gas Fields**

Summary:

Display range is from 0.00 to 4,500.00 MMBNGL  
 Entire range is from 19.16 to 13,435.38 MMBNGL  
 After 50,000 trials, the standard error of the mean is 4.48

Statistics:	<u>Value</u>
Trials	50000
Mean	1,553.89
Median	1,328.14
Mode	---
Standard Deviation	1,000.96
Variance	1,001,925.31
Skewness	1.55
Kurtosis	7.09
Coefficient of Variability	0.64
Range Minimum	19.16
Range Maximum	13,435.38
Range Width	13,416.22
Mean Standard Error	4.48



**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	19.16
95%	395.28
90%	532.89
85%	642.46
80%	741.32
75%	837.21
70%	933.80
65%	1,027.75
60%	1,125.88
55%	1,221.63
50%	1,328.14
45%	1,438.42
40%	1,562.01
35%	1,698.91
30%	1,845.63
25%	2,015.42
20%	2,225.19
15%	2,491.76
10%	2,870.95
5%	3,478.41
0%	13,435.38

End of Forecast

**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

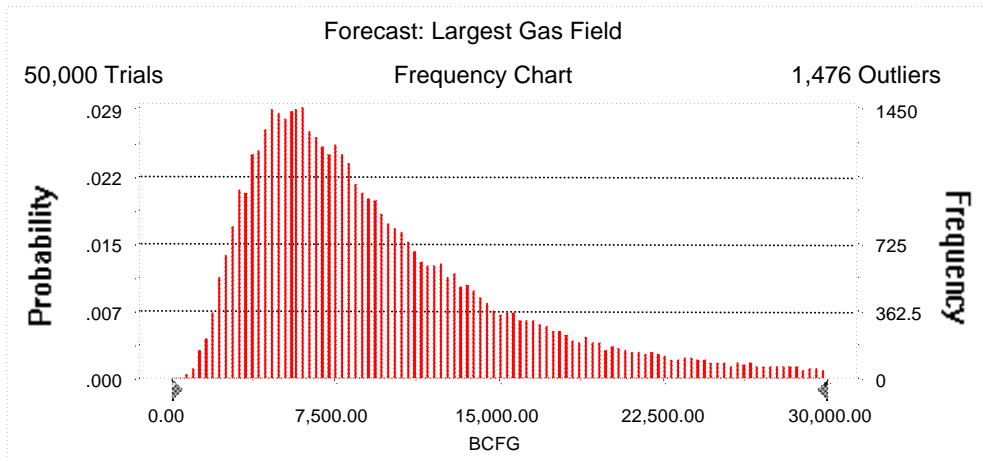
**Forecast: Largest Gas Field**

Summary:

Display range is from 0.00 to 30,000.00 BCFG  
Entire range is from 390.51 to 49,988.53 BCFG  
After 50,000 trials, the standard error of the mean is 33.12

Statistics:

	<u>Value</u>
Trials	50000
Mean	10,292.41
Median	8,173.06
Mode	---
Standard Deviation	7,405.17
Variance	54,836,538.82
Skewness	1.93
Kurtosis	7.70
Coefficient of Variability	0.72
Range Minimum	390.51
Range Maximum	49,988.53
Range Width	49,598.02
Mean Standard Error	33.12



**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	390.51
95%	2,884.33
90%	3,642.62
85%	4,251.23
80%	4,786.77
75%	5,320.63
70%	5,850.82
65%	6,370.41
60%	6,945.45
55%	7,565.72
50%	8,173.06
45%	8,873.28
40%	9,652.66
35%	10,549.60
30%	11,598.97
25%	12,851.69
20%	14,358.87
15%	16,501.22
10%	19,550.64
5%	25,478.93
0%	49,988.53

End of Forecast

**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

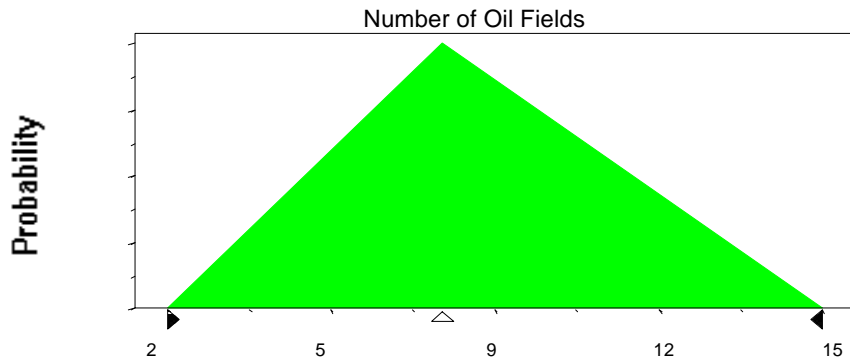
**Assumptions**

**Assumption: Number of Oil Fields**

Triangular distribution with parameters:

Minimum	2
Likeliest	7
Maximum	15

Selected range is from 2 to 15  
Mean value in simulation was 8



**Assumption: Sizes of Oil Fields**

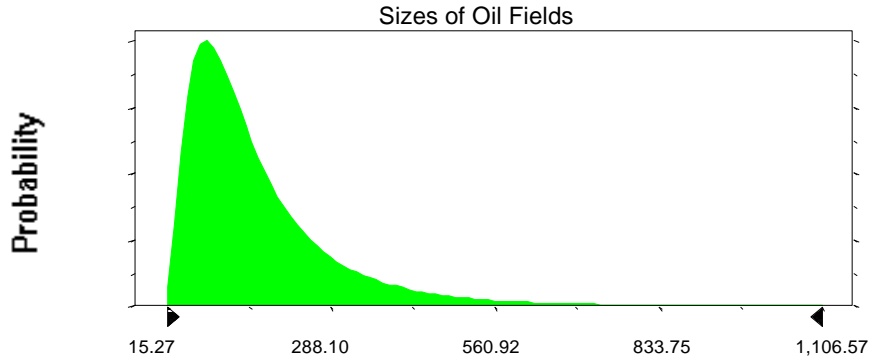
Lognormal distribution with parameters:		Shifted parameters
Mean	167.72	187.72
Standard Deviation	136.73	136.73

Selected range is from 0.00 to 1,180.00                      20.00 to 1,200.00  
Mean value in simulation was 166.29                                      186.29



**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

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



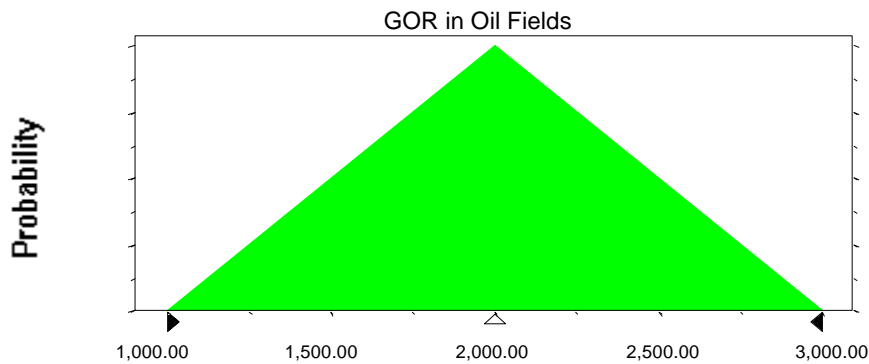
**Assumption: GOR in Oil Fields**

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 2,004.96



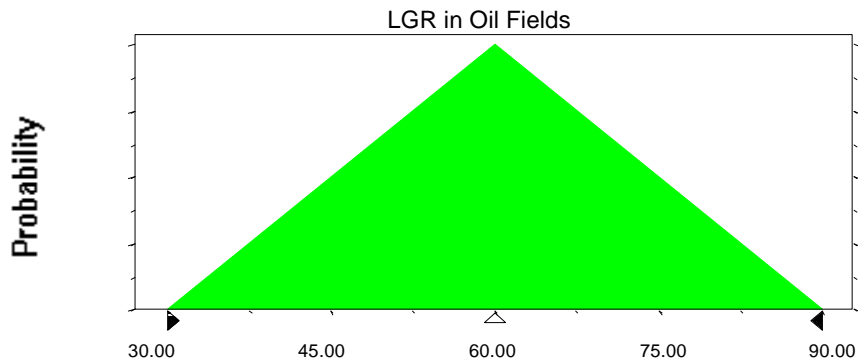
**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

**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 59.90



**Assumption: Number of Gas Fields**

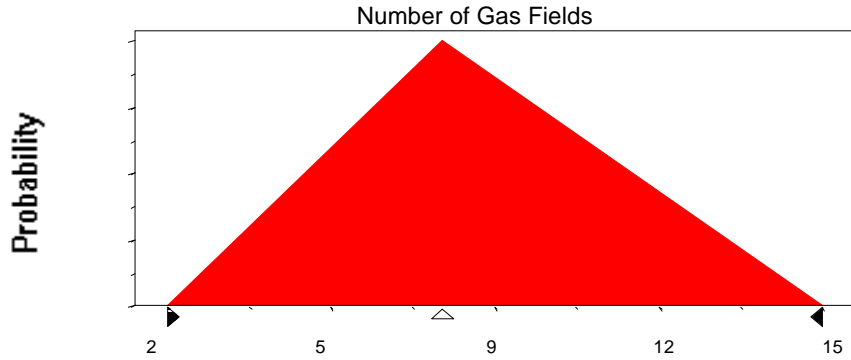
Triangular distribution with parameters:

Minimum	2
Likeliest	7
Maximum	15

Selected range is from 2 to 15  
Mean value in simulation was 8

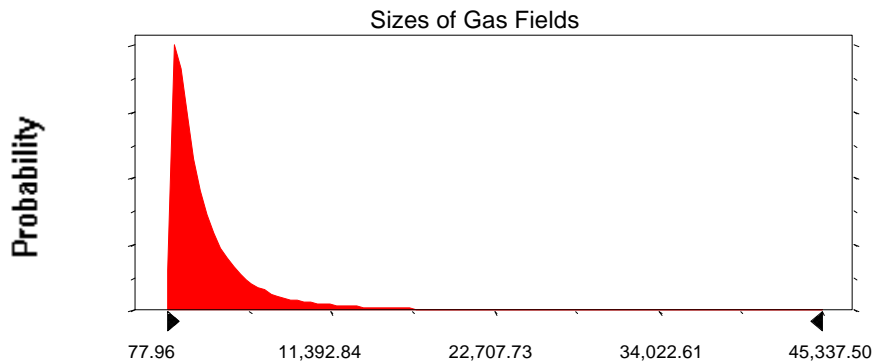
**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

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



**Assumption: Sizes of Gas Fields**

Lognormal distribution with parameters:		Shifted parameters
Mean	3,300.53	3,420.53
Standard Deviation	4,762.54	4,762.54
Selected range is from 0.00 to 49,880.00		120.00 to 50,000.00
Mean value in simulation was 3,249.09		3,369.09



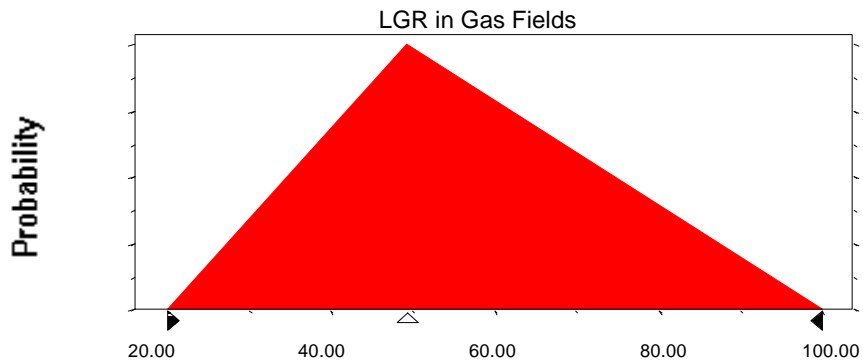
**10160101**  
**North and West Margins Subsalt Pinnacle Reefs**  
**Monte Carlo Results**

**Assumption: LGR in Gas Fields**

Triangular distribution with parameters:

Minimum	20.00
Likeliest	49.38
Maximum	100.00

Selected range is from 20.00 to 100.00  
Mean value in simulation was 56.48



End of Assumptions

Simulation started on 1/20/99 at 9:34:07  
Simulation stopped on 1/20/99 at 9:49:54