Cretaceous Reservoirs, Assessment Unit 20300101
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	10	1.00	23,736	70,699	139,785	74,911	22,022	68,520	149,403	74,916	521	1,691	3,855	1,873	3,408	10,533	25,532	11,984
Gas Fields	60						10,982	27,346	53,403	29,181	442	1,169	2,518	1,283	1,811	4,556	12,180	5,401
Total		1.00	23,736	70,699	139,785	74,911	33,004	95,866	202,807	104,098	963	2,860	6,373	3,157				

Forecast: Oil in Oil Fields

Summary:
    Display range is from 0.00 to 175,000.00 MMBO
    Entire range is from 2,313.68 to 277,224.18 MMBO
    After 50,000 trials, the standard error of the mean is 159.22

Statistics:	Value
Trials	50000
Mean	74,910.69
Median	70,698.94
Mode	---
Standard Deviation	35,601.58
Variance	1,267,472,451.92
Skewness	0.56
Kurtosis	3.04
Coefficient of Variability	0.48
Range Minimum	2,313.68
Range Maximum	277,224.18
Range Width	274,910.50
Mean Standard Error	159.22
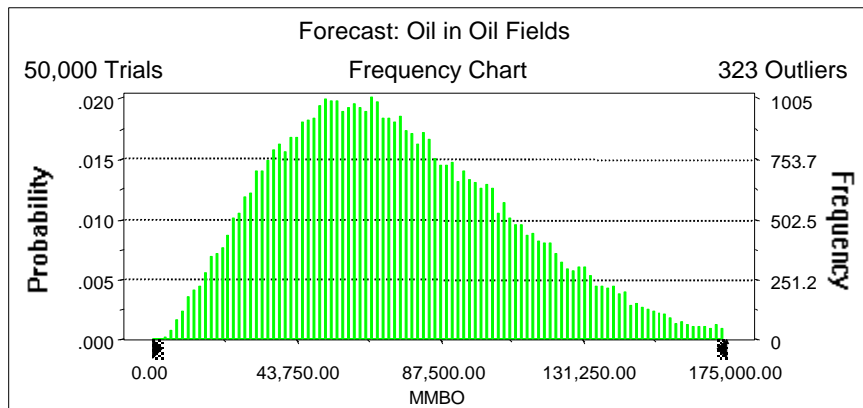
Forecast: Oil in Oil Fields

50,000 Trials   Frequency Chart   323 Outliers

Forecast: Oil in Oil Fields (cont'd)

Percentiles:

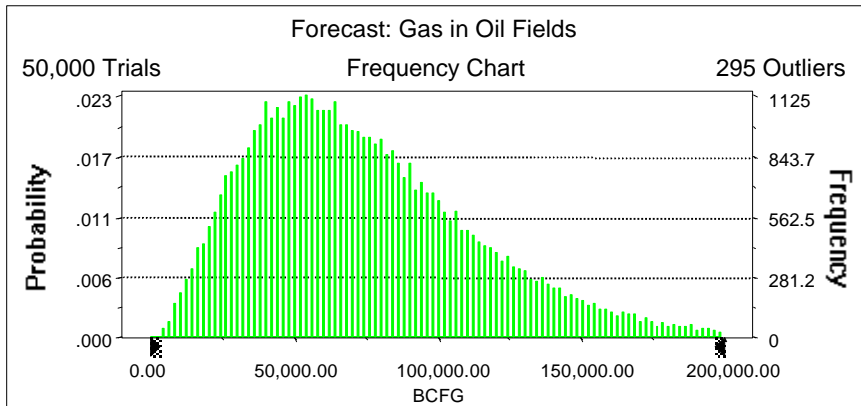| Percentile	MMBO
100%	2,313.68
95%	23,736.08
90%	31,698.12
85%	37,671.59
80%	43,162.63
75%	48,171.87
70%	52,762.50
65%	57,210.00
60%	61,698.99
55%	66,203.71
50%	70,698.94
45%	75,474.20
40%	80,454.30
35%	85,664.84
30%	91,657.27
25%	98,027.94
20%	104,954.38
15%	113,414.04
10%	123,859.13
5%	139,785.26
0%	277,224.18

End of Forecast

Forecast: Gas in Oil Fields

Summary:
Display range is from 0.00 to 200,000.00 BCFG
Entire range is from 1,656.14 to 312,505.17 BCFG
After 50,000 trials, the standard error of the mean is 176.92

Statistics:	Value
Trials	50000
Mean	74,916.45
Median	68,519.93
Mode	---
Standard Deviation	39,561.47
Variance	1,565,110,252.50
Skewness	0.85
Kurtosis	3.78
Coefficient of Variability	0.53
Range Minimum	1,656.14
Range Maximum	312,505.17
Range Width	310,849.03
Mean Standard Error	176.92

Forecast: Gas in Oil Fields

50,000 Trials   Frequency Chart   295 Outliers

Forecast: Gas in Oil Fields (cont'd)

Percentiles:

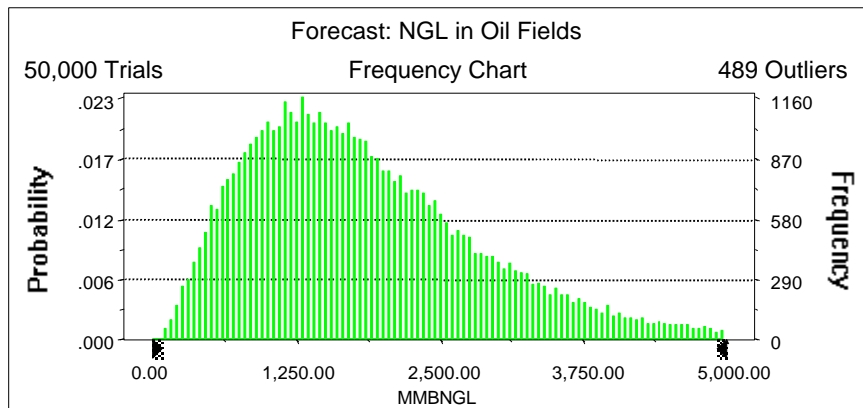| Percentile	BCFG
100%	1,656.14
95%	22,021.78
90%	29,289.12
85%	35,399.06
80%	40,456.91
75%	45,244.22
70%	49,933.32
65%	54,426.16
60%	59,001.73
55%	63,705.07
50%	68,519.93
45%	73,677.12
40%	79,072.70
35%	84,702.08
30%	91,014.25
25%	98,052.63
20%	106,203.58
15%	116,212.46
10%	129,384.16
5%	149,403.36
0%	312,505.17

End of Forecast

Forecast: NGL in Oil Fields

Summary:
Display range is from 0.00 to 5,000.00 MMBNGL
Entire range is from 38.86 to 9,173.73 MMBNGL
After 50,000 trials, the standard error of the mean is 4.66

Statistics:	Value
Trials	50000
Mean	1,873.19
Median	1,690.86
Mode	---
Standard Deviation	1,042.77
Variance	1,087,376.24
Skewness	1.01
Kurtosis	4.32
Coefficient of Variability	0.56
Range Minimum	38.86
Range Maximum	9,173.73
Range Width	9,134.88
Mean Standard Error	4.66

Forecast: NGL in Oil Fields

Forecast: NGL in Oil Fields (cont'd)

Percentiles:

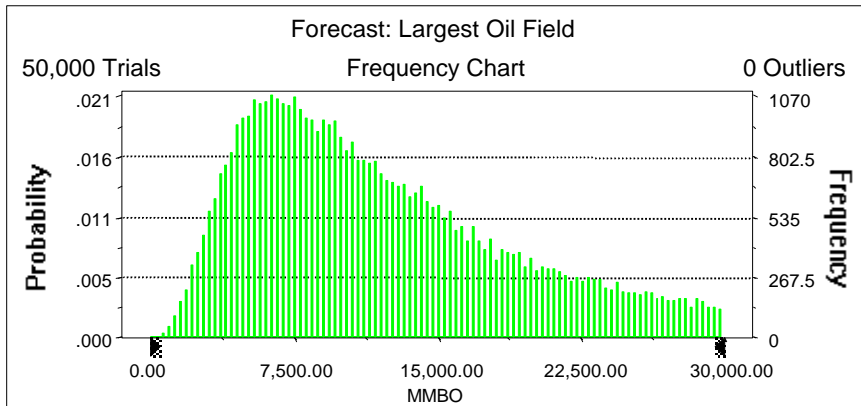| Percentile	MMBNGL
100%	38.86
95%	521.44
90%	700.51
85%	848.23
80%	978.36
75%	1,101.21
70%	1,215.67
65%	1,330.35
60%	1,447.77
55%	1,565.84
50%	1,690.86
45%	1,815.59
40%	1,951.55
35%	2,102.74
30%	2,270.57
25%	2,452.83
20%	2,668.37
15%	2,940.09
10%	3,290.67
5%	3,855.46
0%	9,173.73

End of Forecast

Forecast: Largest Oil Field

Summary:
Display range is from 0.00 to 30,000.00 MMBO
Entire range is from 340.14 to 29,997.93 MMBO
After 50,000 trials, the standard error of the mean is 30.07

Statistics:	Value
Trials	50000
Mean	11,984.34
Median	10,533.14
Mode	---
Standard Deviation	6,724.12
Variance	45,213,833.58
Skewness	0.72
Kurtosis	2.72
Coefficient of Variability	0.56
Range Minimum	340.14
Range Maximum	29,997.93
Range Width	29,657.79
Mean Standard Error	30.07

Forecast: Largest Oil Field

Forecast: Largest Oil Field (cont'd)

Percentiles:

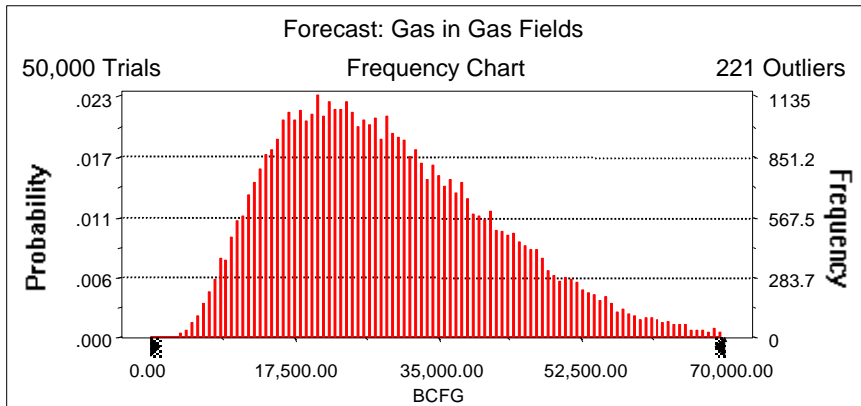| Percentile	MMBO
100%	340.14
95%	3,408.20
90%	4,439.01
85%	5,218.54
80%	5,946.33
75%	6,661.59
70%	7,372.56
65%	8,104.96
60%	8,891.40
55%	9,684.45
50%	10,533.14
45%	11,465.10
40%	12,470.26
35%	13,594.29
30%	14,776.75
25%	16,151.23
20%	17,815.88
15%	19,831.44
10%	22,338.93
5%	25,532.31
0%	29,997.93

End of Forecast

Forecast: Gas in Gas Fields

Summary:
Display range is from 0.00 to 70,000.00 BCFG
Entire range is from 2,488.57 to 110,725.90 BCFG
After 50,000 trials, the standard error of the mean is 58.94

Statistics:	Value
Trials	50000
Mean	29,181.26
Median	27,346.11
Mode	---
Standard Deviation	13,178.57
Variance	173,674,648.84
Skewness	0.68
Kurtosis	3.23
Coefficient of Variability	0.45
Range Minimum	2,488.57
Range Maximum	110,725.90
Range Width	108,237.33
Mean Standard Error	58.94

Forecast: Gas in Gas Fields

Forecast: Gas in Gas Fields (cont'd)

Percentiles:

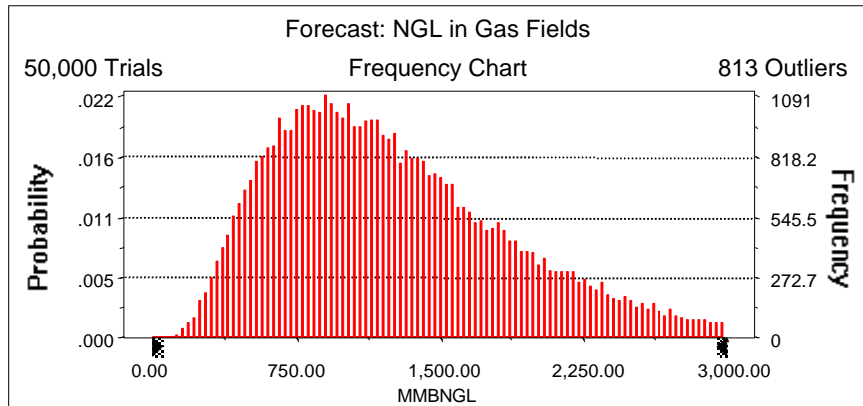| Percentile	BCFG
100%	2,488.57
95%	10,982.35
90%	13,651.41
85%	15,676.65
80%	17,385.36
75%	19,057.35
70%	20,722.41
65%	22,327.82
60%	23,962.60
55%	25,595.58
50%	27,346.11
45%	29,077.44
40%	30,951.14
35%	32,909.09
30%	35,132.97
25%	37,545.09
20%	40,245.24
15%	43,483.78
10%	47,397.93
5%	53,403.39
0%	110,725.90

End of Forecast

Forecast: NGL in Gas Fields

Summary:
Display range is from 0.00 to 3,000.00 MMBNGL
Entire range is from 83.97 to 5,903.60 MMBNGL
After 50,000 trials, the standard error of the mean is 2.90

Statistics:	Value
Trials	50000
Mean	1,283.35
Median	1,168.97
Mode	---
Standard Deviation	648.06
Variance	419,984.82
Skewness	0.96
Kurtosis	4.07
Coefficient of Variability	0.50
Range Minimum	83.97
Range Maximum	5,903.60
Range Width	5,819.63
Mean Standard Error	2.90

Forecast: NGL in Gas Fields

Forecast: NGL in Gas Fields (cont'd)

Percentiles:

| Percentile	MMBNGL
100%	83.97
95%	441.95
90%	554.71
85%	644.22
80%	723.96
75%	798.98
70%	870.98
65%	942.39
60%	1,015.91
55%	1,090.82
50%	1,168.97
45%	1,248.72
40%	1,335.83
35%	1,429.62
30%	1,531.04
25%	1,648.62
20%	1,791.48
15%	1,955.42
10%	2,181.13
5%	2,517.88
0%	5,903.60

End of Forecast

Forecast: Largest Gas Field

Summary:
Display range is from 0.00 to 15,000.00 BCFG
Entire range is from 363.21 to 16,995.60 BCFG
After 50,000 trials, the standard error of the mean is 14.14

Statistics:	Value
Trials	50000
Mean	5,401.40
Median	4,556.29
Mode	---
Standard Deviation	3,162.43
Variance	10,000,956.48
Skewness	1.24
Kurtosis	4.28
Coefficient of Variability	0.59
Range Minimum	363.21
Range Maximum	16,995.60
Range Width	16,632.39
Mean Standard Error	14.14
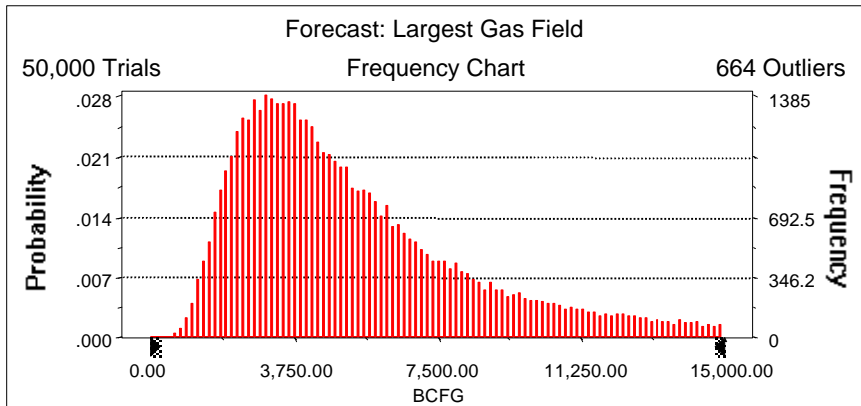
Forecast: Largest Gas Field

Forecast: Largest Gas Field (cont'd)

Percentiles:

Percentile	BCFG
100%	363.21
95%	1,811.14
90%	2,208.61
85%	2,525.71
80%	2,817.53
75%	3,093.50
70%	3,370.53
65%	3,647.67
60%	3,928.39
55%	4,232.66
50%	4,556.29
45%	4,924.38
40%	5,315.17
35%	5,762.27
30%	6,260.78
25%	6,850.44
20%	7,615.90
15%	8,566.13
10%	9,975.42
5%	12,179.86
0%	16,995.60

End of Forecast

<u>**Assumptions**</u>

Assumption: Number of Oil Fields

    Triangular distribution with parameters:
       Minimum   20
       Likeliest   124
       Maximum   325

    Selected range is from 20 to 325
    Mean value in simulation was 157

Number of Oil Fields

| 20 | 96 | 173 | 249 | 325 |
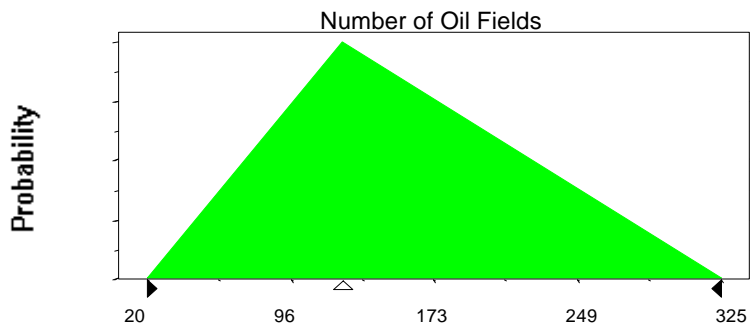
Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:		Shifted parameters	
Mean	526.77		536.77
Standard Deviation	3,037.90		3,037.90

Selected range is from 0.00 to 29,990.00	10.00 to 30,000.00
Mean value in simulation was 468.25	478.25

Assumption: Sizes of Oil Fields (cont'd)

Sizes of Oil Fields

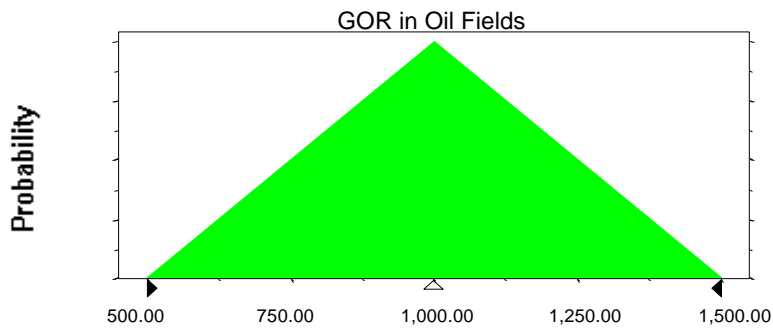|				
0.32	6,330.75	12,661.18	18,991.62	25,322.05
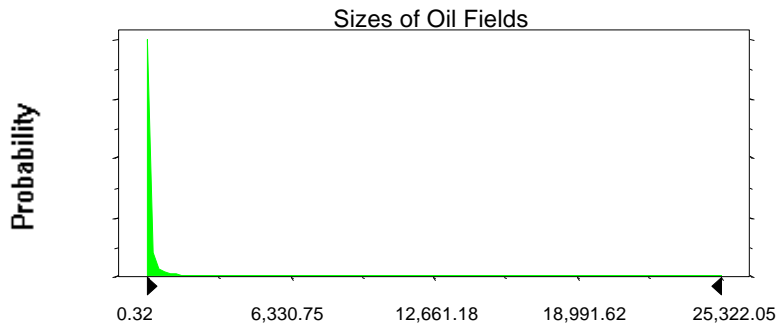
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	500.00
Likeliest	1,000.00
Maximum	1,500.00

Selected range is from 500.00 to 1,500.00
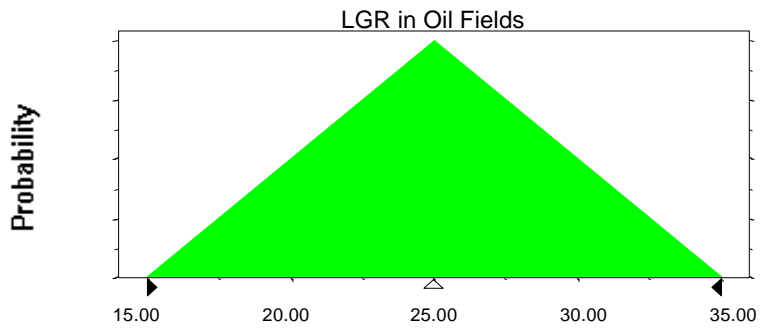Mean value in simulation was 999.61

GOR in Oil Fields

500.00	750.00	1,000.00	1,250.00	1,500.00

Assumption: LGR in Oil Fields

Triangular distribution with parameters:
Minimum	15.00
Likeliest	25.00
Maximum	35.00

Selected range is from 15.00 to 35.00
Mean value in simulation was 25.02

LGR in Oil Fields

Assumption: Number of Gas Fields

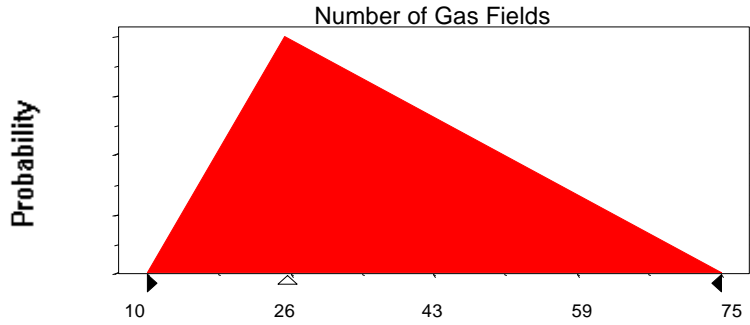Triangular distribution with parameters:
Minimum	10
Likeliest	26
Maximum	75

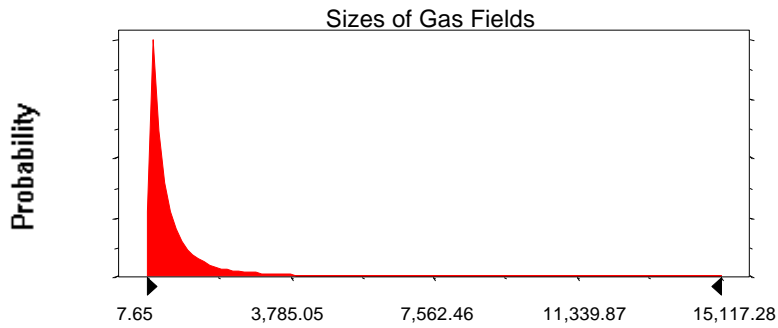Selected range is from 10 to 75
Mean value in simulation was 37

Assumption: Number of Gas Fields (cont'd)

Number of Gas Fields

10	26	43	59	75

Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters	
Mean	756.66		816.66
Standard Deviation	1,504.34		1,504.34

Selected range is from 0.00 to 16,940.00		60.00 to 17,000.00	
Mean value in simulation was 736.24			796.24

Sizes of Gas Fields

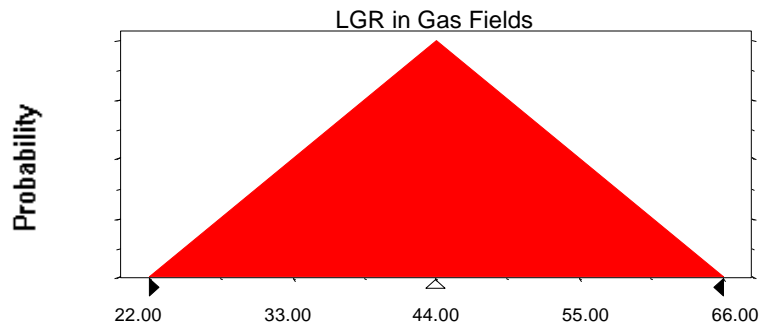|				
7.65	3,785.05	7,562.46	11,339.87	15,117.28

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 43.98

LGR in Gas Fields

End of Assumptions

Simulation started on 11/18/99 at 14:47:32
Simulation stopped on 11/18/99 at 16:15:57