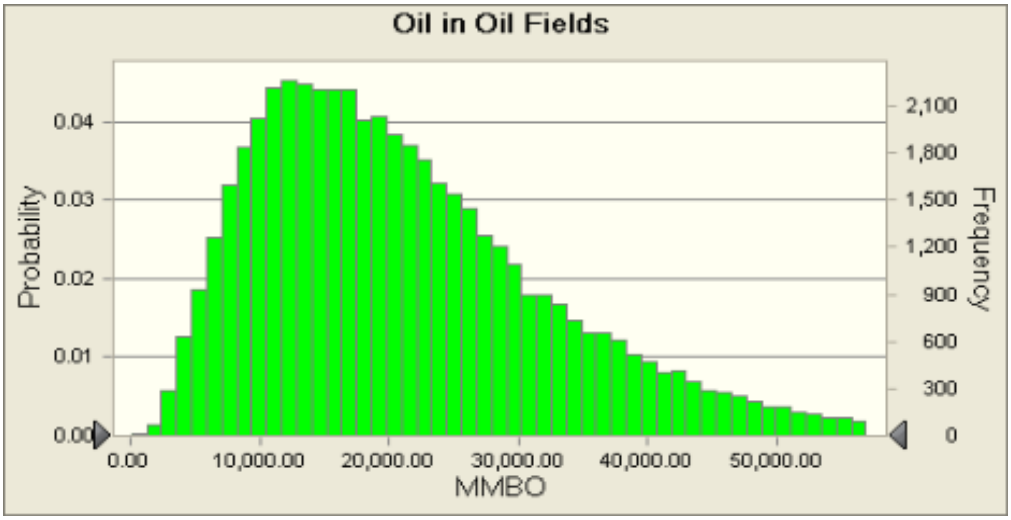
72030401
Kwanza-Namibe
Monte Carlo Results

Forecast: Oil in Oil Fields

Summary:
Entire range is from 38.38 to 113,885.43
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 56.27



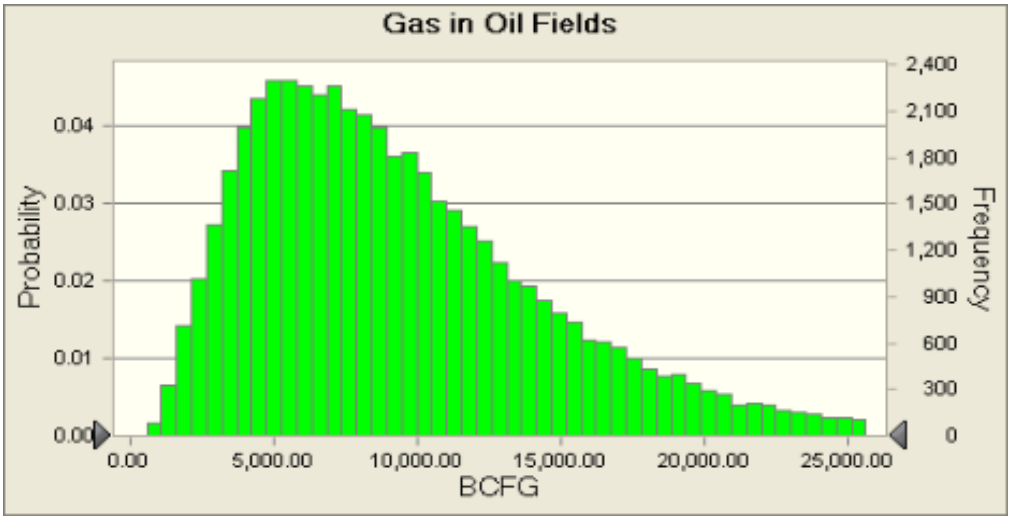
Statistics:	Forecast values
Trials	50,000
Mean	21,714.58
Median	19,200.50
Mode	---
Standard Deviation	12,583.24
Variance	158,337,899.46
Skewness	1.30
Kurtosis	5.58
Coefficient of Variability	0.5795
Minimum	38.38
Maximum	113,885.43
Range Width	113,847.04
Mean Standard Error	56.27

Forecast: Oil in Oil Fields (continued)

Percentiles:	MMBO
100%	38.38
95%	6,416.56
90%	8,332.65
85%	9,847.53
80%	11,227.54
75%	12,503.25
70%	13,796.93
65%	15,106.90
60%	16,418.66
55%	17,757.76
50%	19,200.18
45%	20,661.36
40%	22,246.03
35%	23,982.66
30%	25,839.50
25%	28,014.01
20%	30,649.95
15%	33,951.78
10%	38,442.72
5%	45,677.33
0%	113,885.43

Forecast: Gas in Oil Fields

Summary:
Entire range is from 23.32 to 52,268.55
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 25.55



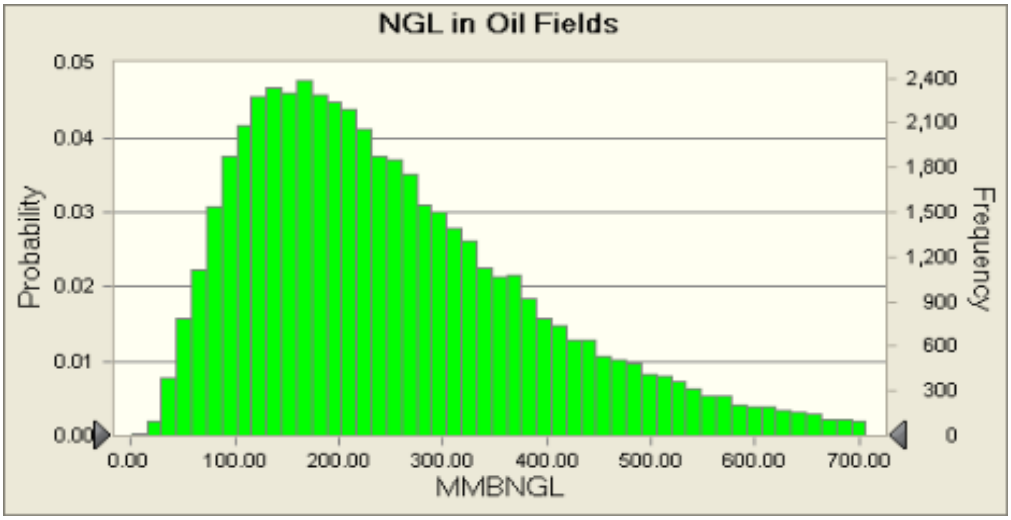
Statistics:	Forecast values
Trials	50,000
Mean	9,613.37
Median	8,405.61
Mode	---
Standard Deviation	5,714.06
Variance	32,650,470.08
Skewness	1.35
Kurtosis	5.78
Coefficient of Variability	0.5944
Minimum	23.32
Maximum	52,268.55
Range Width	52,245.23
Mean Standard Error	25.55

Forecast: Gas in Oil Fields (continued)

Percentiles:	BCFG
100%	23.32
95%	2,788.62
90%	3,624.04
85%	4,283.56
80%	4,876.85
75%	5,438.43
70%	6,005.73
65%	6,591.03
60%	7,170.56
55%	7,779.18
50%	8,405.51
45%	9,081.43
40%	9,794.00
35%	10,562.25
30%	11,441.10
25%	12,417.48
20%	13,645.76
15%	15,132.66
10%	17,196.32
5%	20,537.04
0%	52,268.55

Forecast: NGL in Oil Fields

Summary:
Entire range is from 0.70 to 1,552.27
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 0.71



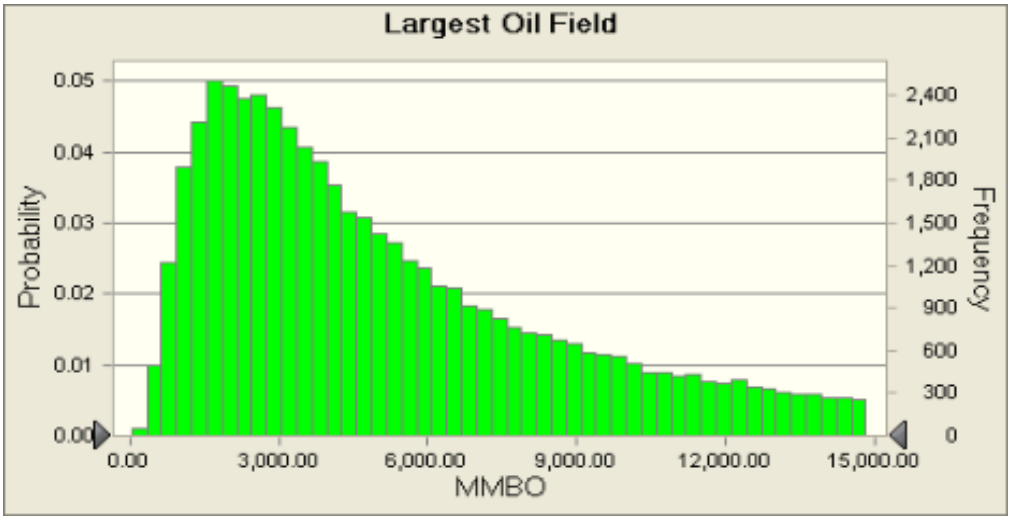
Statistics:	Forecast values
Trials	50,000
Mean	260.06
Median	224.13
Mode	---
Standard Deviation	159.46
Variance	25,427.63
Skewness	1.45
Kurtosis	6.26
Coefficient of Variability	0.6132
Minimum	0.70
Maximum	1,552.27
Range Width	1,551.57
Mean Standard Error	0.71

Forecast: NGL in Oil Fields (continued)

Percentiles:	MMBNGL
100%	0.70
95%	73.76
90%	95.77
85%	113.50
80%	129.24
75%	144.79
70%	160.39
65%	175.55
60%	191.43
55%	207.62
50%	224.12
45%	243.02
40%	262.56
35%	284.42
30%	308.65
25%	336.24
20%	369.57
15%	411.72
10%	470.85
5%	566.32
0%	1,552.27

Forecast: Largest Oil Field

Summary:
Entire range is from 32.02 to 14,999.57
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 15.57



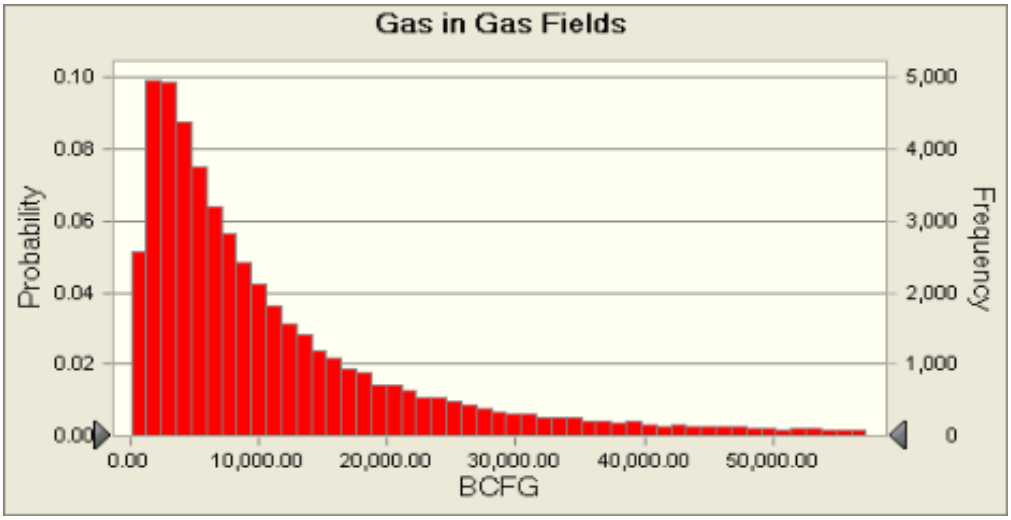
Statistics:	Forecast values
Trials	50,000
Mean	5,092.67
Median	4,121.97
Mode	---
Standard Deviation	3,480.63
Variance	12,114,759.69
Skewness	0.9316
Kurtosis	3.04
Coefficient of Variability	0.6835
Minimum	32.02
Maximum	14,999.57
Range Width	14,967.55
Mean Standard Error	15.57

Forecast: Largest Oil Field (continued)

Percentiles:	MMBO
100%	32.02
95%	1,059.74
90%	1,429.11
85%	1,739.20
80%	2,040.23
75%	2,356.58
70%	2,673.24
65%	2,999.00
60%	3,340.13
55%	3,711.58
50%	4,121.94
45%	4,580.90
40%	5,082.26
35%	5,656.34
30%	6,314.30
25%	7,088.28
20%	8,030.25
15%	9,139.51
10%	10,548.67
5%	12,388.13
0%	14,999.57

Forecast: Gas in Gas Fields

Summary:
Entire range is from 162.58 to 186,700.05
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 70.55



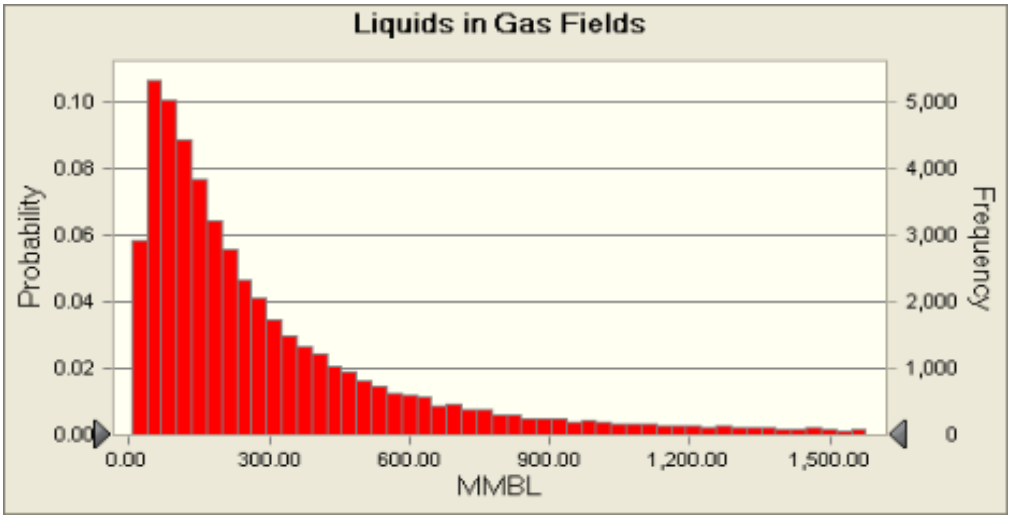
Statistics:	Forecast values
Trials	50,000
Mean	13,035.68
Median	7,639.50
Mode	---
Standard Deviation	15,775.19
Variance	248,856,669.90
Skewness	2.94
Kurtosis	14.72
Coefficient of Variability	1.21
Minimum	162.58
Maximum	186,700.05
Range Width	186,537.46
Mean Standard Error	70.55

Forecast: Gas in Gas Fields (continued)

Percentiles:	BCFG
100%	162.58
95%	1,306.18
90%	1,910.08
85%	2,480.29
80%	3,073.07
75%	3,663.56
70%	4,313.45
65%	5,019.99
60%	5,805.18
55%	6,667.24
50%	7,639.49
45%	8,709.44
40%	10,013.77
35%	11,505.94
30%	13,341.44
25%	15,693.63
20%	18,771.93
15%	23,231.98
10%	30,321.73
5%	44,891.75
0%	186,700.05

Forecast: Liquids in Gas Fields

Summary:
Entire range is from 4.51 to 5,784.97
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 1.96



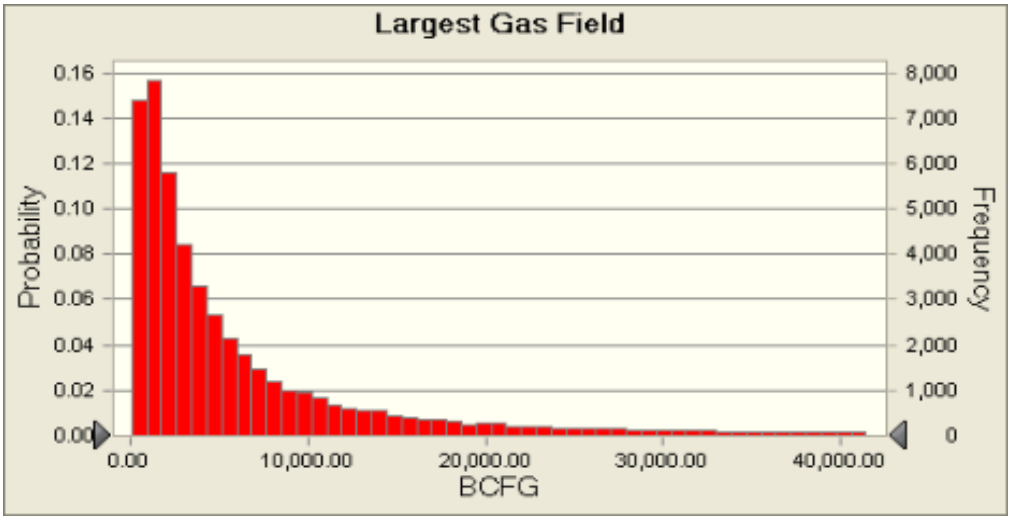
Statistics:	Forecast values
Trials	50,000
Mean	347.05
Median	198.98
Mode	---
Standard Deviation	439.18
Variance	192,881.71
Skewness	3.38
Kurtosis	20.07
Coefficient of Variability	1.27
Minimum	4.51
Maximum	5,784.97
Range Width	5,780.45
Mean Standard Error	1.96

Forecast: Liquids in Gas Fields (continued)

Percentiles:	MMBL
100%	4.51
95%	33.75
90%	49.64
85%	64.12
80%	79.46
75%	95.44
70%	112.63
65%	130.80
60%	150.82
55%	173.23
50%	198.98
45%	227.89
40%	262.21
35%	301.83
30%	352.24
25%	414.14
20%	495.42
15%	611.97
10%	802.20
5%	1,198.09
0%	5,784.97

Forecast: Largest Gas Field

Summary:
Entire range is from 40.05 to 89,941.46
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 53.83



Statistics:	Forecast values
Trials	50,000
Mean	7,729.47
Median	3,373.79
Mode	---
Standard Deviation	12,037.51
Variance	144,901,749.47
Skewness	3.34
Kurtosis	16.32
Coefficient of Variability	1.56
Minimum	40.05
Maximum	89,941.46
Range Width	89,901.41
Mean Standard Error	53.83

Forecast: Largest Gas Field (continued)

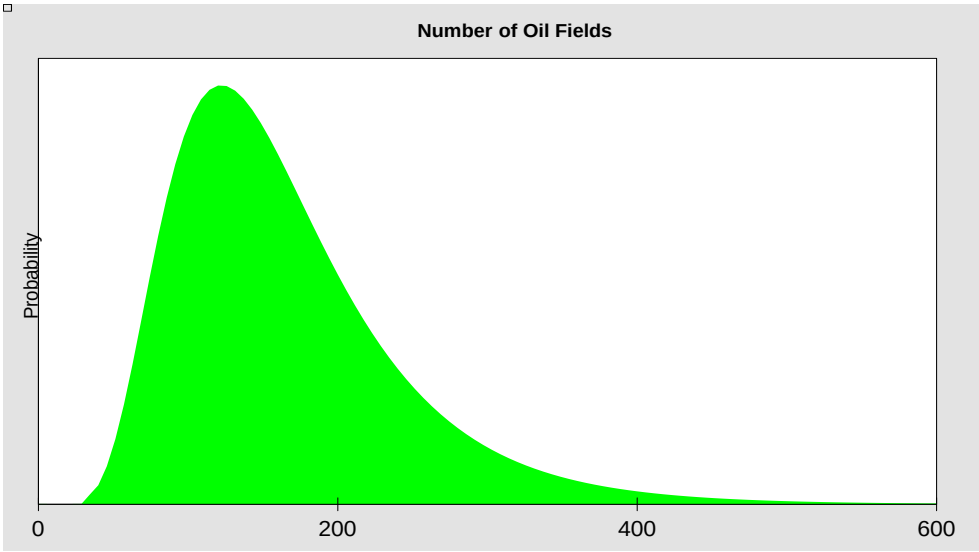
Percentiles:	BCFG
100%	40.05
95%	428.59
90%	665.67
85%	897.59
80%	1,144.42
75%	1,405.04
70%	1,705.72
65%	2,025.32
60%	2,411.28
55%	2,853.23
50%	3,373.74
45%	3,983.65
40%	4,715.49
35%	5,601.71
30%	6,758.53
25%	8,289.76
20%	10,453.08
15%	13,717.34
10%	19,310.07
5%	31,585.46
0%	89,941.46

End of Forecasts

Assumptions

Assumption: Number of Oil Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	164.90	165.9
Standard Deviation	78.17	78.17
Selected range is from -Infinity to 599.00		1.00 to 600.00



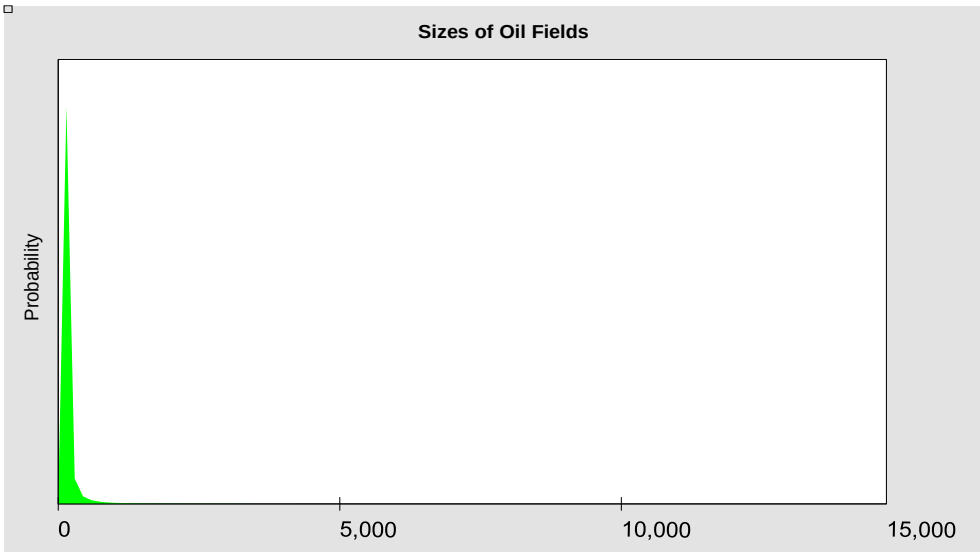
Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	165.28	165.38
Median	149.98	149.92
Mode	---	---
Standard Deviation	76.15	76.42
Variance	5,798.31	5,839.93
Skewness	1.34	1.31
Kurtosis	5.71	5.54
Coefficient of Variability	0.4607	0.4621
Minimum	23.33	1.00
Maximum	597.14	600.00
Range Width	573.80	599.00
Mean Standard Error	0.34	---

Assumption: Number of Oil Fields (continued)

Percentiles:	Simulated values	Theoretical values
100%	23.33	1.00
95%	72.48	72.03
90%	84.92	84.65
85%	94.74	94.41
80%	102.97	102.97
75%	110.90	110.94
70%	118.57	118.62
65%	126.06	126.21
60%	133.84	133.87
55%	141.77	141.73
50%	149.97	149.92
45%	158.57	158.57
40%	168.01	167.89
35%	178.04	178.09
30%	189.62	189.51
25%	202.95	202.66
20%	218.24	218.37
15%	237.58	238.22
10%	264.37	265.72
5%	309.76	312.20
0%	597.14	600.00

Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	164.52	169.52
Standard Deviation	2,701.80	2,701.80
Selected range is from -Infinity to 14,995.00		5.00 to 15,000.00



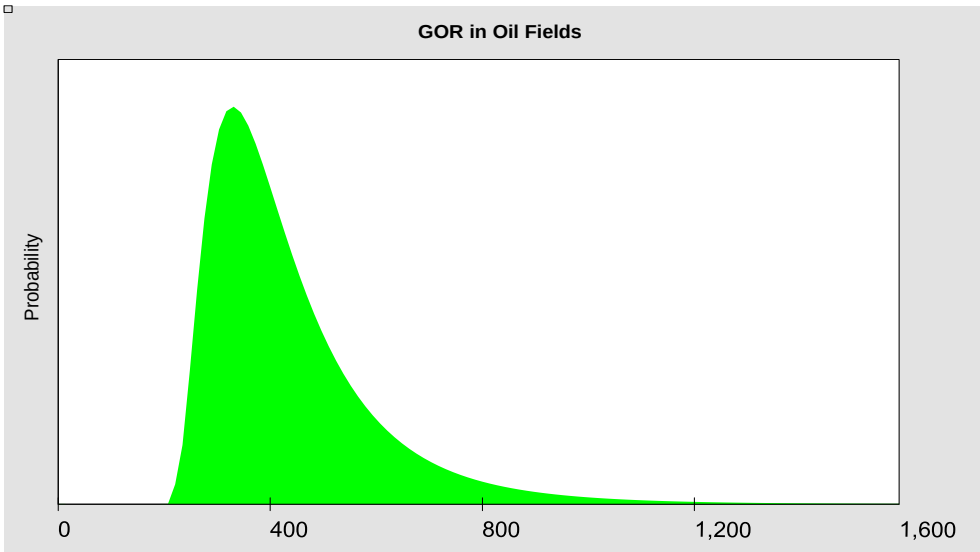
Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	129.94	142.80
Median	15.09	14.97
Mode	---	---
Standard Deviation	584.97	591.02
Variance	342,186.01	349,299.37
Skewness	12.36	12.28
Kurtosis	208.93	201.96
Coefficient of Variability	4.50	4.14
Minimum	5.00	5.00
Maximum	14,909.14	15,000.00
Range Width	14,904.14	14,995.00
Mean Standard Error	2.62	---

Assumption: Sizes of Oil Fields (continued)

Percentiles:	Simulated values	Theoretical values
100%	5.00	5.00
95%	5.20	5.20
90%	5.47	5.48
85%	5.85	5.86
80%	6.35	6.36
75%	7.00	7.02
70%	7.87	7.88
65%	9.01	9.01
60%	10.54	10.48
55%	12.51	12.41
50%	15.09	14.97
45%	18.50	18.42
40%	23.21	23.15
35%	29.73	29.79
30%	39.19	39.43
25%	54.00	54.07
20%	77.43	77.79
15%	118.12	120.22
10%	208.66	210.09
5%	486.04	484.95
0%	14,909.14	15,000.00

Assumption: GOR in Oil Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	243.86	443.86
Standard Deviation	170.13	170.13
Selected range is from -Infinity to 1,400.00		200.00 to 1,600.00



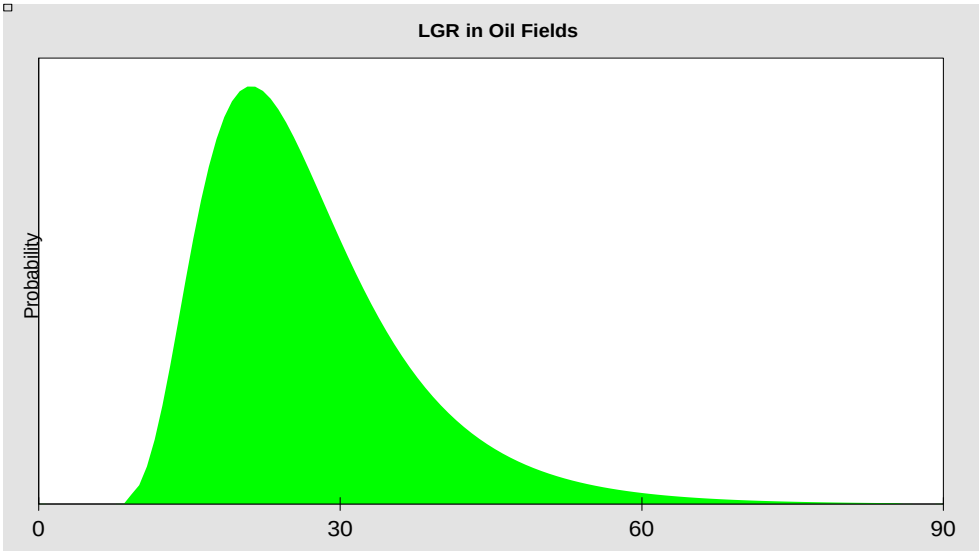
Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	441.67	442.41
Median	399.09	399.84
Mode	---	---
Standard Deviation	162.85	163.61
Variance	26,520.40	26,768.81
Skewness	1.94	1.94
Kurtosis	8.69	8.69
Coefficient of Variability	0.3687	0.3698
Minimum	211.33	200.00
Maximum	1,582.26	1,600.00
Range Width	1,370.93	1,400.00
Mean Standard Error	0.73	---

Assumption: GOR in Oil Fields (continued)

Percentiles:	Simulated values	Theoretical values
100%	211.33	200.00
95%	271.05	270.96
90%	289.05	289.20
85%	304.08	304.09
80%	317.53	317.67
75%	330.11	330.72
70%	342.95	343.67
65%	356.27	356.82
60%	370.05	370.40
55%	384.16	384.65
50%	399.09	399.84
45%	415.21	416.28
40%	433.61	434.37
35%	453.99	454.64
30%	477.73	477.91
25%	505.37	505.39
20%	538.48	539.18
15%	581.29	583.26
10%	645.63	646.82
5%	758.00	760.26
0%	1,582.26	1,600.00

Assumption: LGR in Oil Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	22.12	27.12
Standard Deviation	10.44	10.44
Selected range is from -Infinity to 80.00		5.00 to 85.00



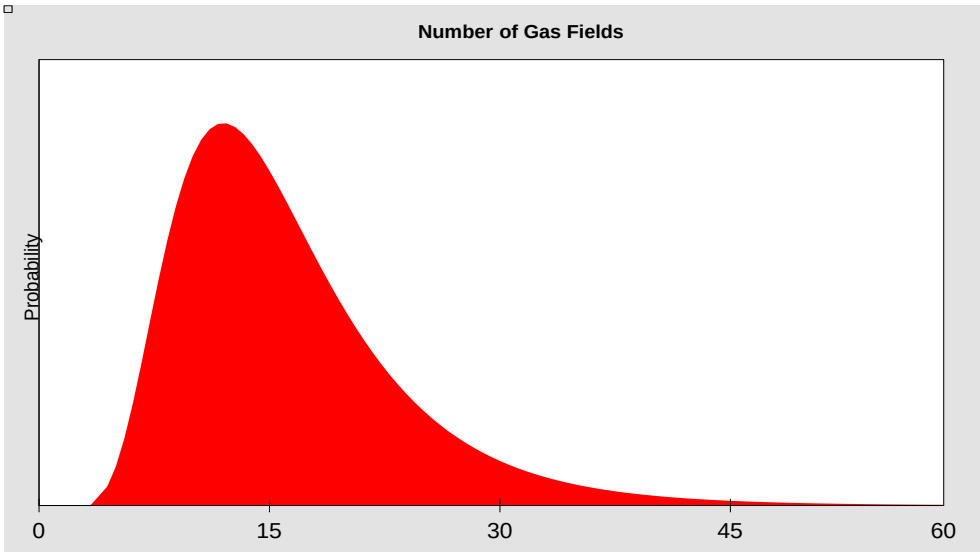
Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	27.09	27.05
Median	24.96	24.99
Mode	---	---
Standard Deviation	10.23	10.21
Variance	104.72	104.25
Skewness	1.31	1.31
Kurtosis	5.49	5.52
Coefficient of Variability	0.3777	0.3775
Minimum	7.68	5.00
Maximum	84.75	85.00
Range Width	77.06	80.00
Mean Standard Error	0.05	---

Assumption: LGR in Oil Fields (continued)

Percentiles:	Simulated values	Theoretical values
100%	7.68	5.00
95%	14.55	14.56
90%	16.30	16.25
85%	17.63	17.56
80%	18.76	18.71
75%	19.84	19.77
70%	20.87	20.80
65%	21.84	21.82
60%	22.87	22.84
55%	23.90	23.89
50%	24.96	24.99
45%	26.13	26.15
40%	27.38	27.39
35%	28.75	28.76
30%	30.31	30.28
25%	32.08	32.04
20%	34.22	34.14
15%	36.87	36.79
10%	40.56	40.46
5%	46.87	46.66
0%	84.75	85.00

Assumption: Number of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	15.60	16.6
Standard Deviation	7.68	7.68
Selected range is from -Infinity to 59.00		1.00 to 60.00



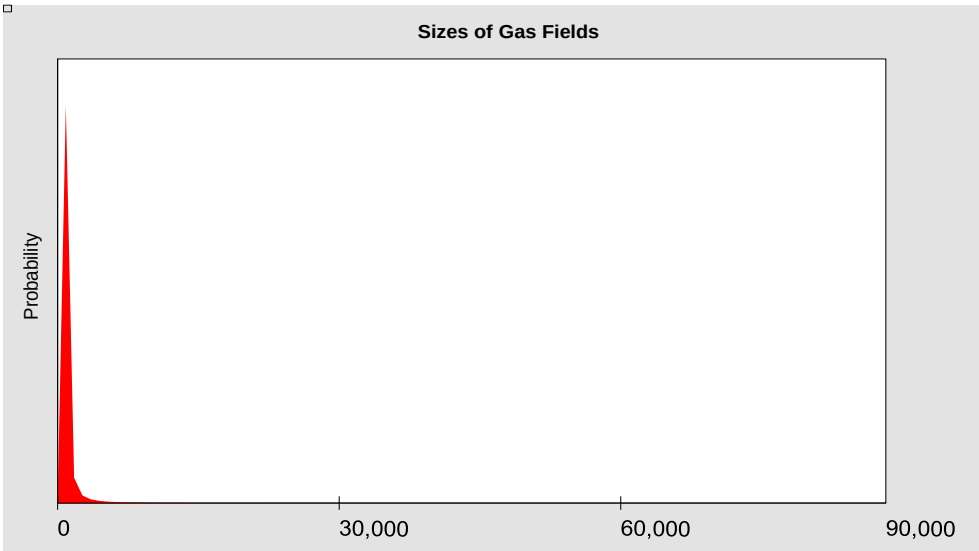
Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	16.50	16.55
Median	14.96	14.99
Mode	---	---
Standard Deviation	7.45	7.49
Variance	55.49	56.17
Skewness	1.35	1.36
Kurtosis	5.67	5.75
Coefficient of Variability	0.4514	0.4528
Minimum	3.13	1.00
Maximum	59.93	60.00
Range Width	56.80	59.00
Mean Standard Error	0.03	---

Assumption: Number of Gas Fields (continued)

Percentiles:	Simulated values	Theoretical values
100%	3.13	1.00
95%	7.48	7.51
90%	8.68	8.71
85%	9.60	9.64
80%	10.43	10.46
75%	11.22	11.22
70%	11.95	11.96
65%	12.67	12.70
60%	13.39	13.44
55%	14.18	14.20
50%	14.96	14.99
45%	15.79	15.83
40%	16.68	16.74
35%	17.71	17.74
30%	18.78	18.85
25%	20.10	20.14
20%	21.60	21.69
15%	23.54	23.64
10%	26.27	26.36
5%	30.89	30.98
0%	59.93	60.00

Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	987.14	1,017.14
Standard Deviation	16,210.78	16,210.78
Selected range is from -Infinity to 89,970.00		30.00 to 90,000.00



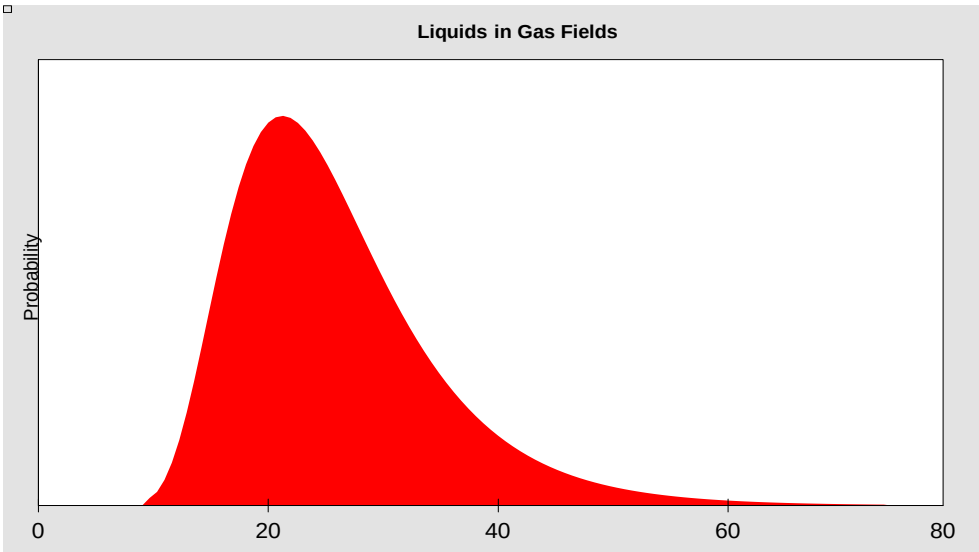
Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	769.76	856.81
Median	89.41	89.82
Mode	---	---
Standard Deviation	3,359.58	3,546.09
Variance	11,286,805.01	12,574,777.21
Skewness	11.86	12.28
Kurtosis	194.35	201.96
Coefficient of Variability	4.36	4.14
Minimum	30.00	30.00
Maximum	88,486.68	90,000.00
Range Width	88,456.68	89,970.00
Mean Standard Error	15.02	---

Assumption: Sizes of Gas Fields (continued)

Percentiles:	Simulated values	Theoretical values
100%	30.00	30.00
95%	31.20	31.22
90%	32.86	32.89
85%	35.17	35.15
80%	38.25	38.17
75%	42.38	42.14
70%	47.73	47.31
65%	54.36	54.05
60%	62.89	62.86
55%	74.38	74.45
50%	89.40	89.82
45%	110.60	110.52
40%	138.74	138.88
35%	178.31	178.73
30%	236.16	236.57
25%	324.58	324.43
20%	468.38	466.76
15%	733.16	721.30
10%	1,264.99	1,260.53
5%	2,916.69	2,909.73
0%	88,486.68	90,000.00

Assumption: Liquids in Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	21.71	26.71
Standard Deviation	9.18	9.18
Selected range is from -Infinity to 70.00		5.00 to 75.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	26.61	26.66
Median	24.97	24.99
Mode	---	---
Standard Deviation	8.95	9.00
Variance	80.17	80.97
Skewness	1.17	1.17
Kurtosis	5.06	4.99
Coefficient of Variability	0.3365	0.3376
Minimum	8.64	5.00
Maximum	74.94	75.00
Range Width	66.30	70.00
Mean Standard Error	0.04	---

Assumption: Liquids in Gas Fields (continued)

Percentiles:	Simulated values	Theoretical values
100%	8.64	5.00
95%	15.27	15.26
90%	16.87	16.89
85%	18.10	18.13
80%	19.17	19.21
75%	20.19	20.21
70%	21.15	21.16
65%	22.08	22.10
60%	23.04	23.04
55%	23.98	24.00
50%	24.97	24.99
45%	26.02	26.03
40%	27.12	27.15
35%	28.36	28.36
30%	29.70	29.72
25%	31.25	31.26
20%	33.05	33.10
15%	35.27	35.40
10%	38.40	38.56
5%	43.60	43.82
0%	74.94	75.00

End of Assumptions

Simulation started on 8/7/2009 at 3:45:38
Simulation stopped on 8/7/2009 at 9:08:02