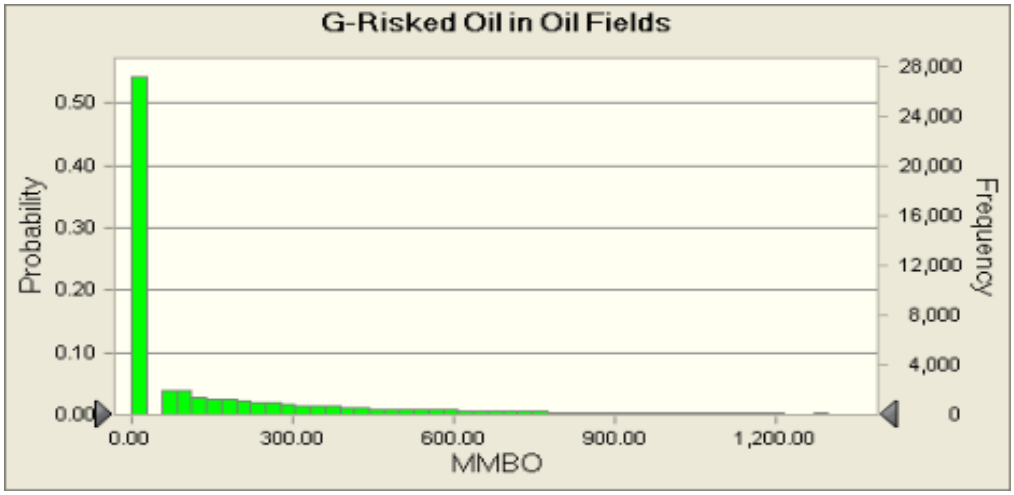
40170201
Western Barents Margin
Monte Carlo Results

Forecast: G-Risked Oil in Oil Fields

Summary:
Entire range is from 0.00 to 5,949.23
After 50,000 trials, the standard error of the mean is 1.83



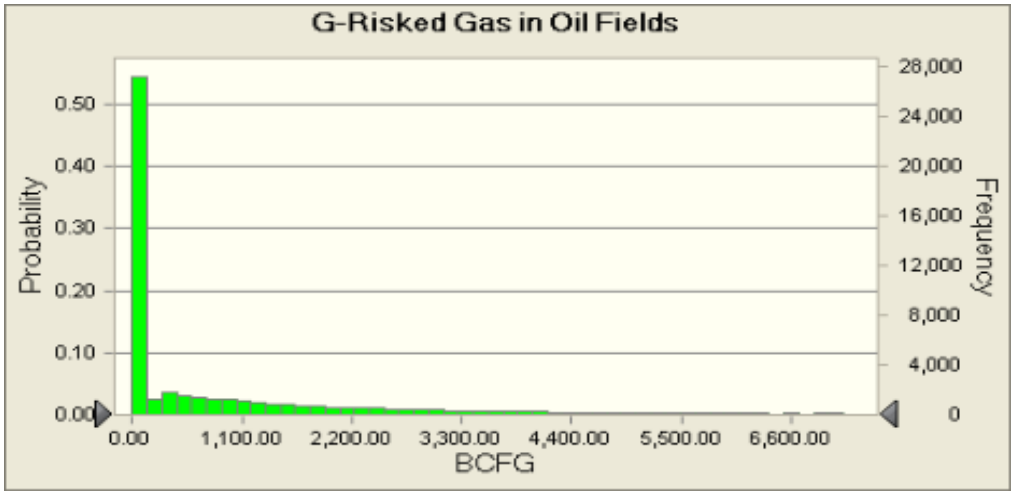
Statistics:	Forecast values
Trials	50,000
Mean	209.79
Median	0.00
Mode	0.00
Standard Deviation	408.25
Variance	166,666.82
Skewness	3.83
Kurtosis	25.28
Coefficient of Variability	1.95
Minimum	0.00
Maximum	5,949.23
Range Width	5,949.23
Mean Standard Error	1.83

Forecast: G-Risked Oil in Oil Fields (cont'd)

Percentiles:	MMBO
P100	0.00
P95	0.00
P90	0.00
P85	0.00
P80	0.00
P75	0.00
P70	0.00
P65	0.00
P60	0.00
P55	0.00
P50	0.00
P45	63.11
P40	95.31
P35	139.30
P30	193.24
P25	258.86
P20	344.60
P15	459.62
P10	637.95
P5	969.86
P0	5,949.23

Forecast: G-Risked Gas in Oil Fields

Summary:
Entire range is from 0.00 to 30,044.83
After 50,000 trials, the standard error of the mean is 9.86



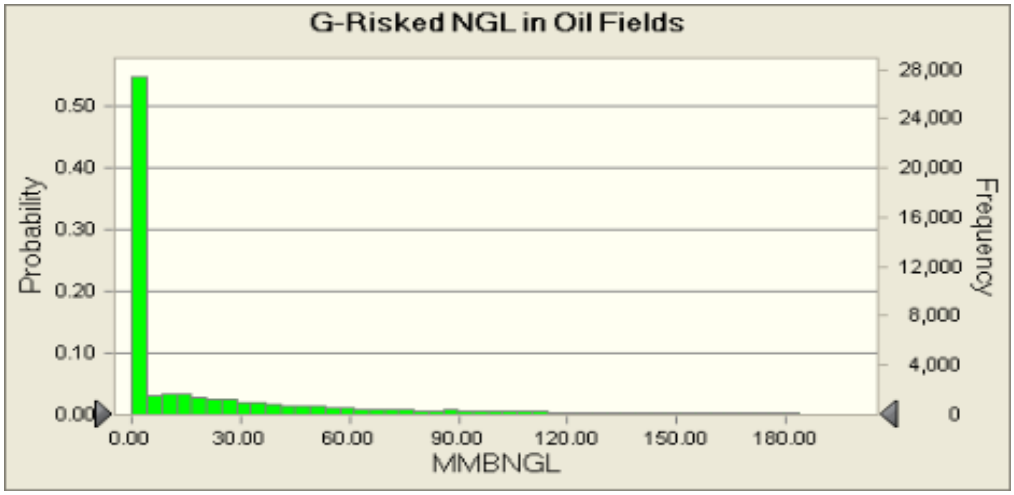
Statistics:	Forecast values
Trials	50,000
Mean	1,095.40
Median	0.00
Mode	0.00
Standard Deviation	2,204.82
Variance	4,861,209.76
Skewness	3.91
Kurtosis	25.57
Coefficient of Variability	2.01
Minimum	0.00
Maximum	30,044.83
Range Width	30,044.83
Mean Standard Error	9.86

Forecast: G-Risked Gas in Oil Fields (cont'd)

Percentiles:	BCFG
P100	0.00
P95	0.00
P90	0.00
P85	0.00
P80	0.00
P75	0.00
P70	0.00
P65	0.00
P60	0.00
P55	0.00
P50	0.00
P45	197.86
P40	428.81
P35	667.21
P30	945.58
P25	1,291.78
P20	1,758.19
P15	2,369.96
P10	3,334.80
P5	5,241.38
P0	30,044.83

Forecast: G-Risked NGL in Oil Fields

Summary:
Entire range is from 0.00 to 842.65
After 50,000 trials, the standard error of the mean is 0.27



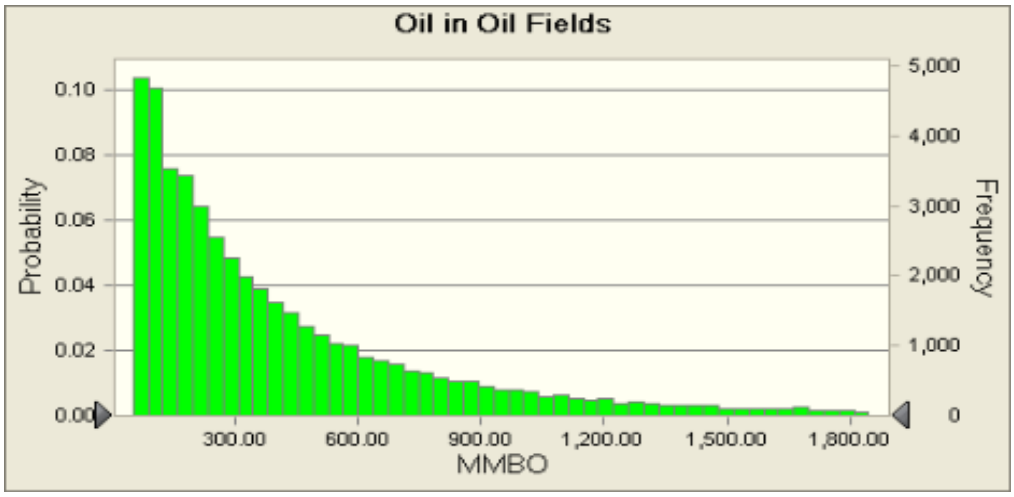
Statistics:	Forecast values
Trials	50,000
Mean	29.62
Median	0.00
Mode	0.00
Standard Deviation	60.82
Variance	3,699.19
Skewness	4.00
Kurtosis	26.58
Coefficient of Variability	2.05
Minimum	0.00
Maximum	842.65
Range Width	842.65
Mean Standard Error	0.27

Forecast: G-Risked NGL in Oil Fields (cont'd)

Percentiles:	MMBNGL
P100	0.00
P95	0.00
P90	0.00
P85	0.00
P80	0.00
P75	0.00
P70	0.00
P65	0.00
P60	0.00
P55	0.00
P50	0.00
P45	4.33
P40	10.57
P35	16.89
P30	24.55
P25	33.97
P20	46.73
P15	64.27
P10	90.50
P5	143.11
P0	842.65

Forecast: Conditional Oil in Oil Fields

Summary:
Entire range is from 51.60 to 5,949.23 (filtered)
Filter range is from 0.00 to Infinity
After 46,588 trials, the standard error of the mean is 2.30



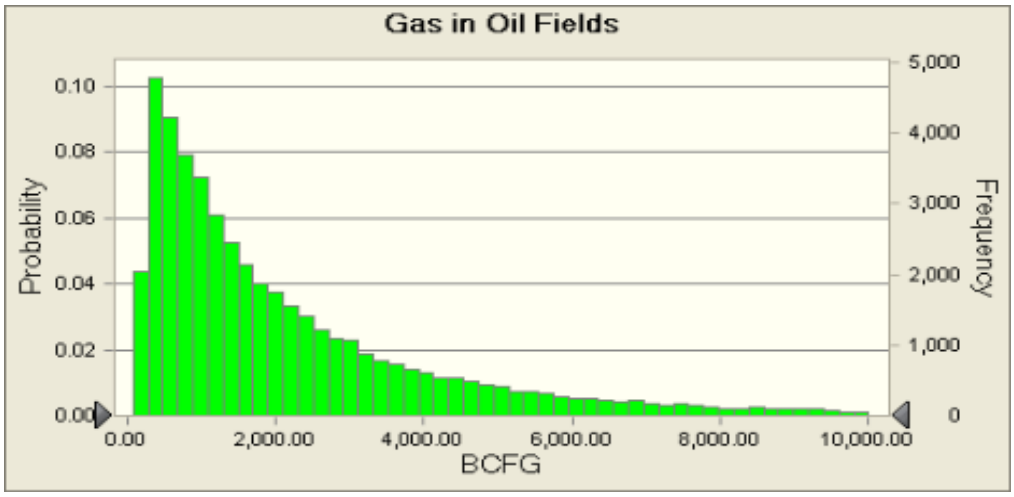
Statistics:	Forecast values
Trials	46,588
Mean	456.01
Median	291.26
Mode	---
Standard Deviation	495.97
Variance	245,982.26
Skewness	3.05
Kurtosis	17.19
Coefficient of Variability	1.09
Minimum	51.60
Maximum	5,949.23
Range Width	5,897.63
Mean Standard Error	2.30
Filtered Values	3412

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

Percentiles:	MMBO
P100	51.60
P95	73.15
P90	87.09
P85	103.02
P80	122.99
P75	146.75
P70	171.07
P65	196.06
P60	224.66
P55	255.77
P50	291.25
P45	332.99
P40	378.90
P35	432.37
P30	496.37
P25	575.48
P20	676.34
P15	808.88
P10	1,006.21
P5	1,386.29
P0	5,949.23

Forecast: Conditional Gas in Oil Fields

Summary:
Entire range is from 63.73 to 33,034.05 (filtered)
Filter range is from 0.00 to Infinity
After 46,588 trials, the standard error of the mean is 12.62



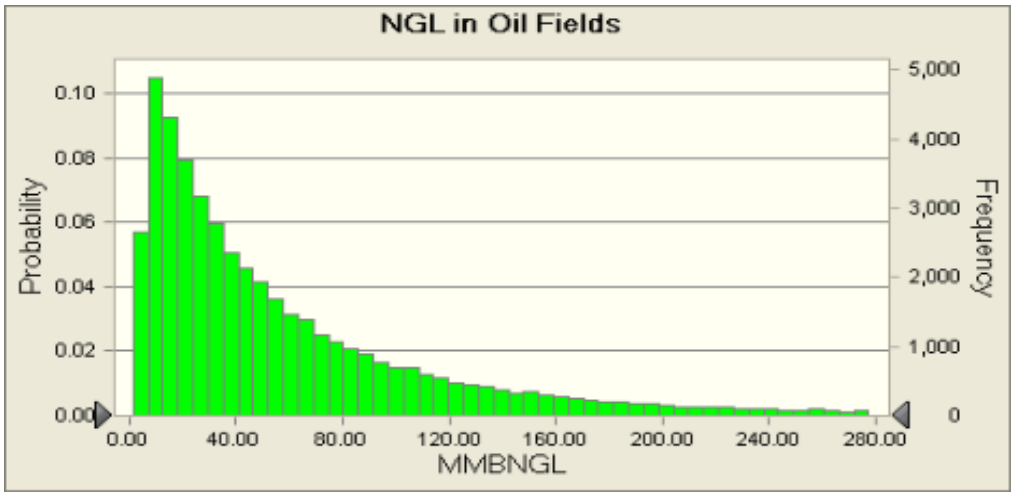
Statistics:	Forecast values
Trials	46,588
Mean	2,386.33
Median	1,478.21
Mode	---
Standard Deviation	2,724.63
Variance	7,423,634.84
Skewness	3.07
Kurtosis	17.31
Coefficient of Variability	1.14
Minimum	63.73
Maximum	33,034.05
Range Width	32,970.32
Mean Standard Error	12.62
Filtered Values	3412

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

Percentiles:	BCFG
P100	63.73
P95	279.33
P90	377.99
P85	477.10
P80	588.60
P75	704.68
P70	830.68
P65	966.71
P60	1,115.35
P55	1,284.40
P50	1,478.21
P45	1,698.47
P40	1,953.43
P35	2,242.72
P30	2,585.54
P25	3,010.01
P20	3,560.64
P15	4,323.98
P10	5,423.98
P5	7,532.79
P0	33,034.05

Forecast: Conditional NGL in Oil Fields

Summary:
Entire range is from 1.25 to 952.86 (filtered)
Filter range is from 0.00 to Infinity
After 46,588 trials, the standard error of the mean is 0.35



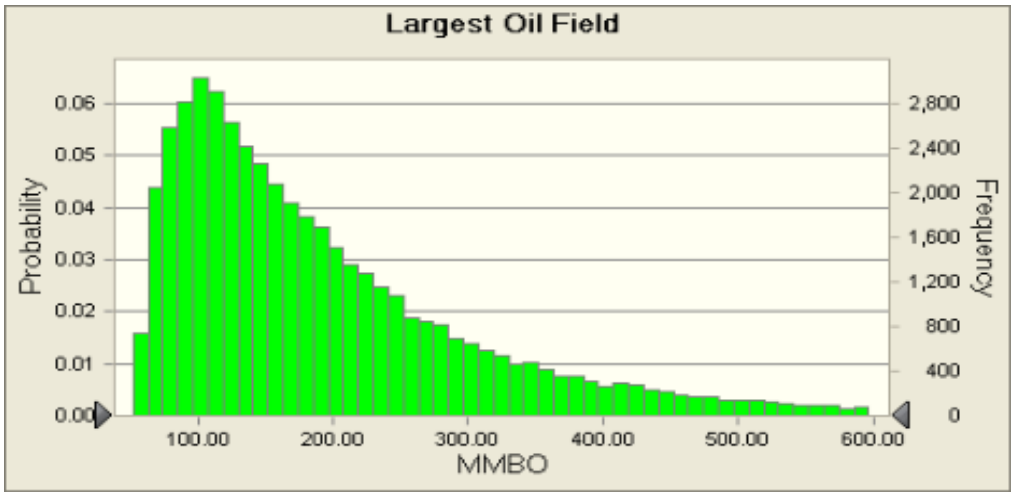
Statistics:	Forecast values
Trials	46,588
Mean	64.55
Median	39.29
Mode	---
Standard Deviation	76.05
Variance	5,784.09
Skewness	3.12
Kurtosis	17.75
Coefficient of Variability	1.18
Minimum	1.25
Maximum	952.86
Range Width	951.61
Mean Standard Error	0.35
Filtered Values	3412

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

Percentiles:	MMBNGL
P100	1.25
P95	6.45
P90	9.12
P85	11.88
P80	14.74
P75	17.85
P70	21.25
P65	25.07
P60	29.24
P55	33.91
P50	39.28
P45	45.43
P40	52.08
P35	60.15
P30	69.75
P25	81.72
P20	96.79
P15	117.02
P10	148.43
P5	206.27
P0	952.86

Forecast: Largest Oil Field

Summary:
Entire range is from 51.60 to 1,098.49 (filtered)
Filter range is from 0.00 to Infinity
After 46,588 trials, the standard error of the mean is 0.65



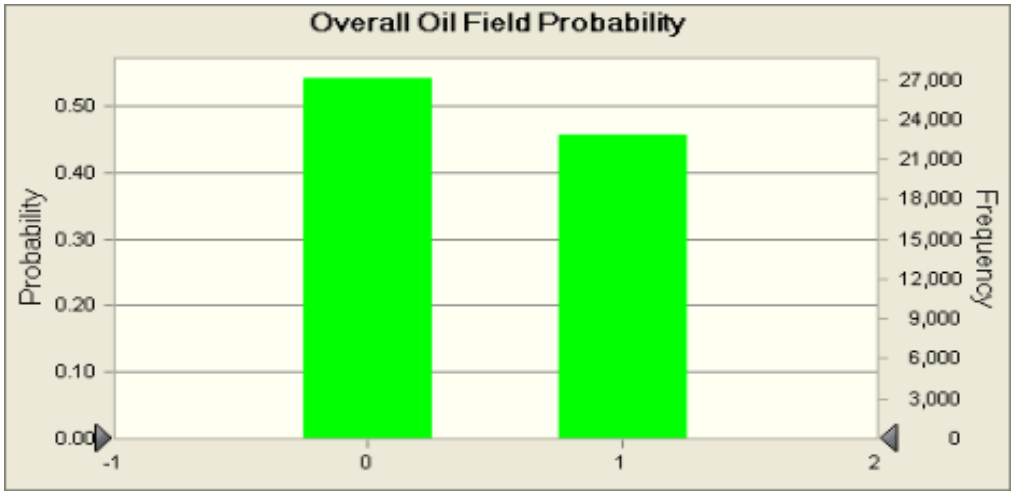
Statistics:	Forecast values
Trials	46,588
Mean	203.40
Median	161.77
Mode	---
Standard Deviation	140.55
Variance	19,753.00
Skewness	2.21
Kurtosis	9.70
Coefficient of Variability	0.6910
Minimum	51.60
Maximum	1,098.49
Range Width	1,046.90
Mean Standard Error	0.65
Filtered Values	3412

Forecast: Largest Oil Field (cont'd)

Percentiles:	MMBO
P100	51.60
P95	71.72
P90	82.16
P85	91.26
P80	100.14
P75	109.01
P70	117.88
P65	127.52
P60	138.31
P55	149.61
P50	161.77
P45	175.37
P40	190.40
P35	206.83
P30	226.44
P25	249.00
P20	278.61
P15	317.00
P10	374.69
P5	479.37
P0	1,098.49

Forecast: Overall Oil Field Probability

Summary:
Entire range is from 0.00 to 1.00
After 50,000 trials, the standard error of the mean is 0.00



Statistics:	Forecast values
Trials	50,000
Mean	0.4573
Median	0.00
Mode	0.00
Standard Deviation	0.50
Variance	0.25
Skewness	0.1715
Kurtosis	1.03
Coefficient of Variability	1.09
Minimum	0.00
Maximum	1.00
Range Width	1.00
Mean Standard Error	0.00

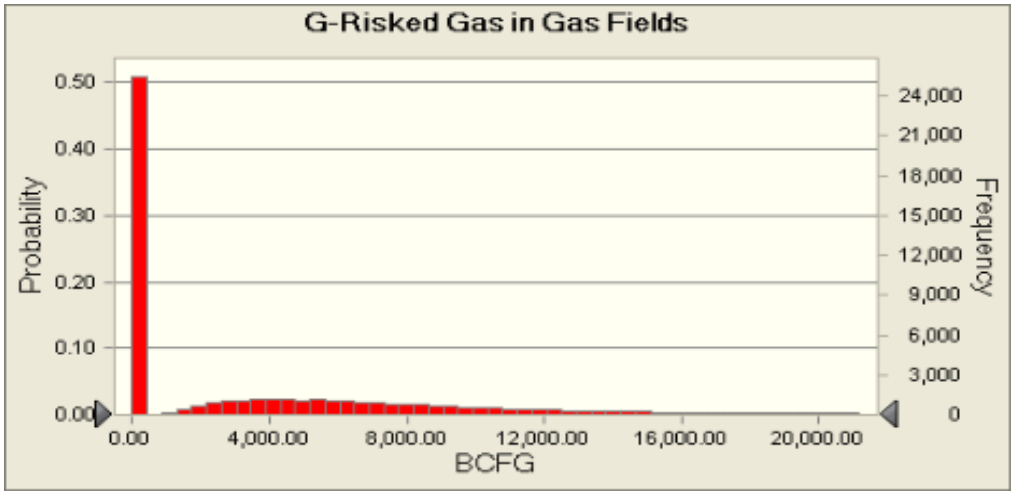
= the probability of at least one undiscovered oil accumulation of minimum size or larger

Forecast: Overall Oil Field Probability (cont'd)

Percentiles:	Forecast values
P100	0.00
P95	0.00
P90	0.00
P85	0.00
P80	0.00
P75	0.00
P70	0.00
P65	0.00
P60	0.00
P55	0.00
P50	0.00
P45	1.00
P40	1.00
P35	1.00
P30	1.00
P25	1.00
P20	1.00
P15	1.00
P10	1.00
P5	1.00
P0	1.00

Forecast: G-Risked Gas in Gas Fields

Summary:
Entire range is from 0.00 to 62,891.93
After 50,000 trials, the standard error of the mean is 27.17



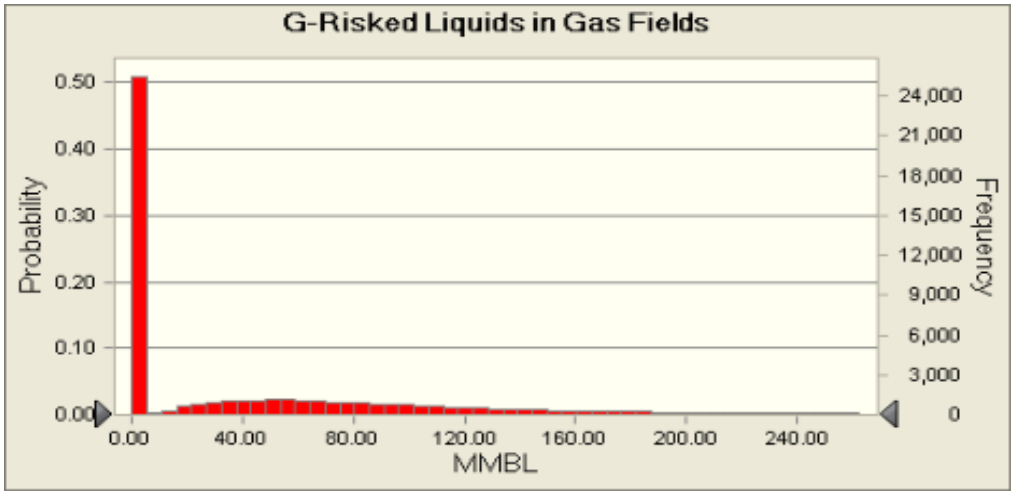
Statistics:	Forecast values
Trials	50,000
Mean	4,130.82
Median	0.00
Mode	0.00
Standard Deviation	6,075.06
Variance	36,906,309.96
Skewness	2.28
Kurtosis	10.72
Coefficient of Variability	1.47
Minimum	0.00
Maximum	62,891.93
Range Width	62,891.93
Mean Standard Error	27.17

Forecast: G-Risked Gas in Gas Fields (cont'd)

Percentiles:	BCFG
P100	0.00
P95	0.00
P90	0.00
P85	0.00
P80	0.00
P75	0.00
P70	0.00
P65	0.00
P60	0.00
P55	0.00
P50	0.00
P45	2,604.96
P40	3,603.14
P35	4,556.69
P30	5,538.03
P25	6,619.76
P20	7,892.35
P15	9,457.73
P10	11,784.94
P5	15,908.09
P0	62,891.93

Forecast: G-Risked Liquids in Gas Fields

Summary:
Entire range is from 0.00 to 804.81
After 50,000 trials, the standard error of the mean is 0.34



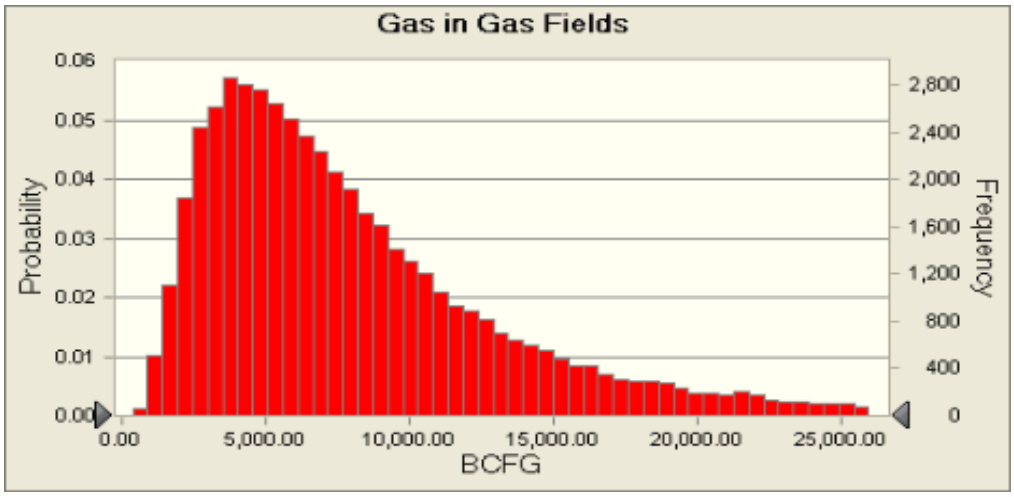
Statistics:	Forecast values
Trials	50,000
Mean	50.28
Median	0.00
Mode	0.00
Standard Deviation	75.66
Variance	5,724.36
Skewness	2.36
Kurtosis	11.33
Coefficient of Variability	1.50
Minimum	0.00
Maximum	804.81
Range Width	804.81
Mean Standard Error	0.34

Forecast: G-Risked Liquids in Gas Fields (cont'd)

Percentiles:	MMBL
P100	0.00
P95	0.00
P90	0.00
P85	0.00
P80	0.00
P75	0.00
P70	0.00
P65	0.00
P60	0.00
P55	0.00
P50	0.00
P45	28.28
P40	41.28
P35	53.39
P30	65.83
P25	79.39
P20	95.26
P15	115.38
P10	145.74
P5	200.08
P0	804.81

Forecast: Conditional Gas in Gas Fields

Summary:
Entire range is from 368.26 to 62,891.93
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 28.04



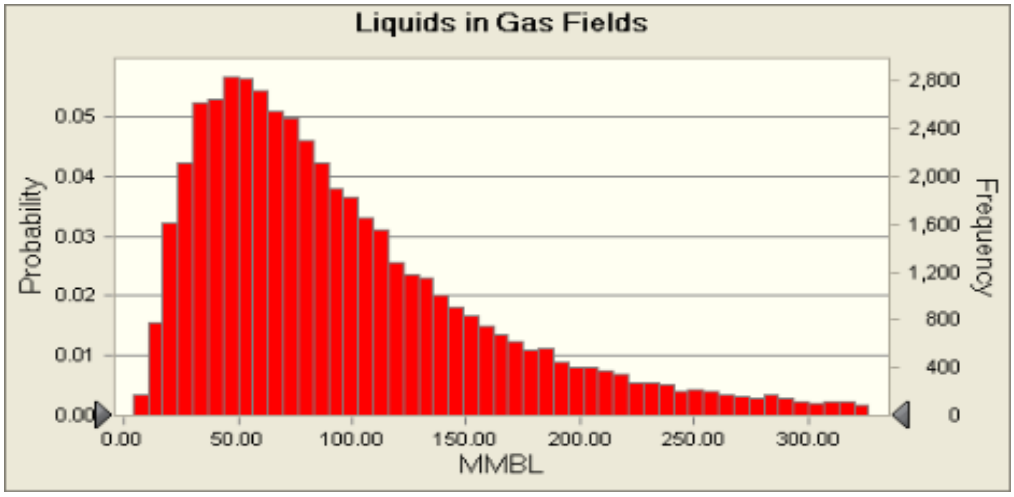
Statistics:	Forecast values
Trials	50,000
Mean	8,428.84
Median	6,745.06
Mode	---
Standard Deviation	6,270.88
Variance	39,323,891.28
Skewness	2.20
Kurtosis	10.54
Coefficient of Variability	0.7440
Minimum	368.26
Maximum	62,891.93
Range Width	62,523.67
Mean Standard Error	28.04

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

Percentiles:	BCFG
P100	368.26
P95	2,188.99
P90	2,795.77
P85	3,291.73
P80	3,763.76
P75	4,228.79
P70	4,687.37
P65	5,177.39
P60	5,666.74
P55	6,184.14
P50	6,745.01
P45	7,350.30
P40	8,008.23
P35	8,753.24
P30	9,602.23
P25	10,616.52
P20	11,896.63
P15	13,565.14
P10	16,035.85
P5	20,590.12
P0	62,891.93

Forecast: Conditional Liquids in Gas Fields

Summary:
Entire range is from 3.50 to 897.40
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 0.36



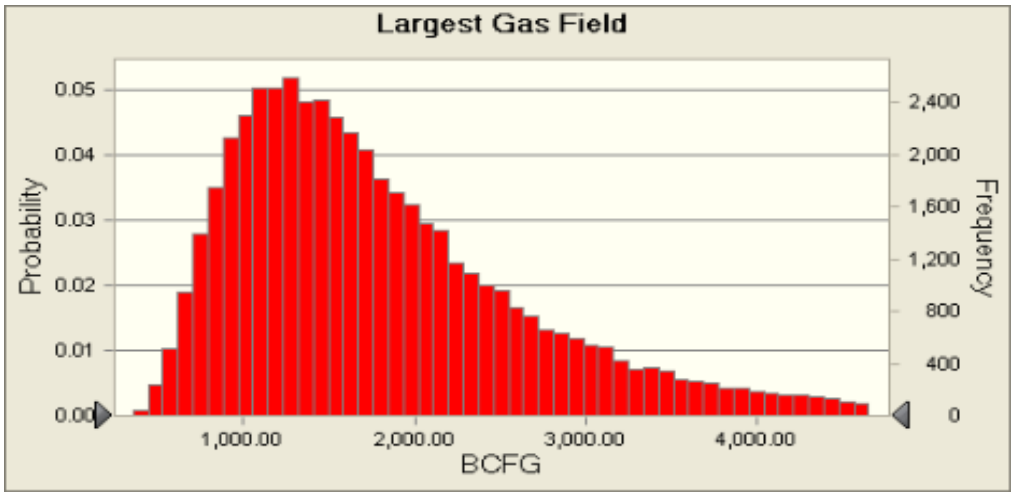
Statistics:	Forecast values
Trials	50,000
Mean	102.65
Median	80.80
Mode	---
Standard Deviation	80.07
Variance	6,410.85
Skewness	2.22
Kurtosis	10.84
Coefficient of Variability	0.7800
Minimum	3.50
Maximum	897.40
Range Width	893.91
Mean Standard Error	0.36

Forecast: Conditional Liquids in Gas Fields (cont'd)

Percentiles:	MMBL
P100	3.50
P95	23.08
P90	30.75
P85	36.99
P80	43.23
P75	49.02
P70	54.89
P65	60.87
P60	67.33
P55	73.70
P50	80.79
P45	88.51
P40	97.13
P35	106.52
P30	117.28
P25	130.81
P20	147.12
P15	168.74
P10	200.51
P5	258.52
P0	897.40

Forecast: Largest Gas Field

Summary:
Entire range is from 352.77 to 6,499.25
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 4.45



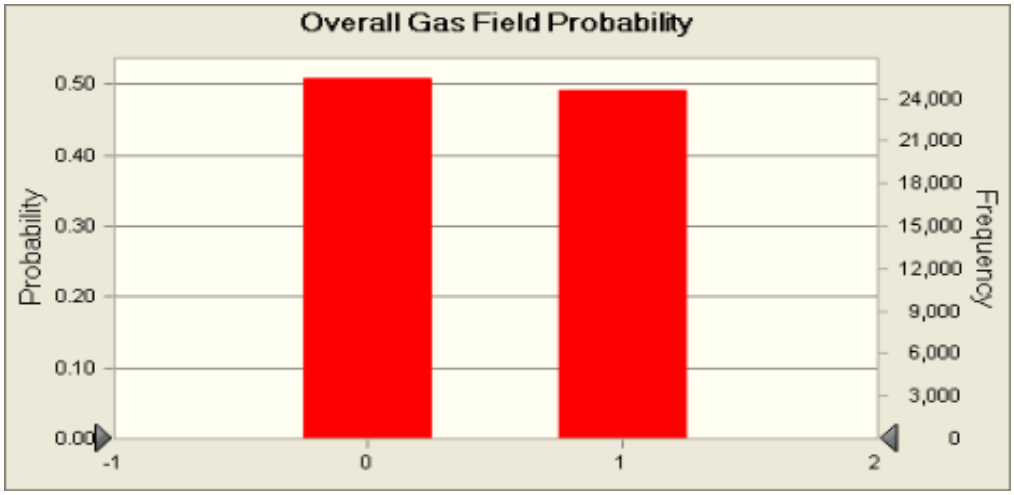
Statistics:	Forecast values
Trials	50,000
Mean	1,869.17
Median	1,621.96
Mode	---
Standard Deviation	994.63
Variance	989,289.40
Skewness	1.50
Kurtosis	5.73
Coefficient of Variability	0.5321
Minimum	352.77
Maximum	6,499.25
Range Width	6,146.48
Mean Standard Error	4.45

Forecast: Largest Gas Field (cont'd)

Percentiles:	BCFG
P100	352.77
P95	755.17
P90	884.40
P85	986.19
P80	1,081.65
P75	1,167.13
P70	1,252.82
P65	1,339.68
P60	1,430.55
P55	1,522.91
P50	1,621.92
P45	1,726.10
P40	1,844.98
P35	1,973.16
P30	2,119.82
P25	2,294.18
P20	2,506.77
P15	2,786.27
P10	3,174.41
P5	3,894.75
P0	6,499.25

Forecast: Overall Gas Field Probability

Summary:
Entire range is from 0.00 to 1.00
After 50,000 trials, the standard error of the mean is 0.00



Statistics:	Forecast values	
Trials	50,000	
Mean	0.4910	= the probability of at least one undiscovered gas accumulation of minimum size or larger
Median	0.00	
Mode	0.00	
Standard Deviation	0.50	
Variance	0.25	
Skewness	0.0359	
Kurtosis	1.00	
Coefficient of Variability	1.02	
Minimum	0.00	
Maximum	1.00	
Range Width	1.00	
Mean Standard Error	0.00	

Forecast: Overall Gas Field Probability (cont'd)

Percentiles:	Forecast values
P100	0.00
P95	0.00
P90	0.00
P85	0.00
P80	0.00
P75	0.00
P70	0.00
P65	0.00
P60	0.00
P55	0.00
P50	0.00
P45	1.00
P40	1.00
P35	1.00
P30	1.00
P25	1.00
P20	1.00
P15	1.00
P10	1.00
P5	1.00
P0	1.00

End of Forecasts

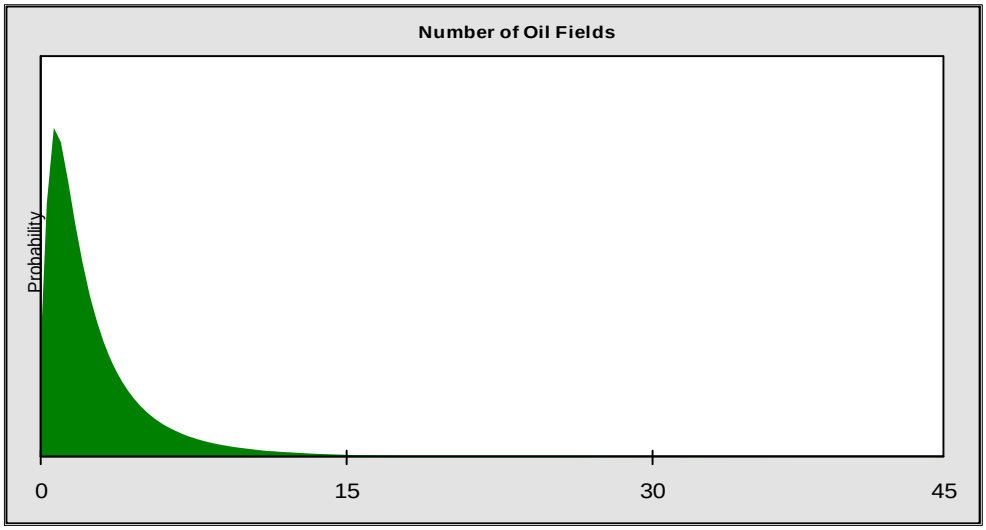
Assumptions

Assumption: Number of Oil Fields

Lognormal distribution with parameters:

Mean	3.07
Standard Deviation	3.58

Selected range is from 0.00 to 35.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	3.01	3.03
Median	1.98	2.00
Mode	---	---
Standard Deviation	3.25	3.27
Variance	10.56	10.70
Skewness	3.20	3.19
Kurtosis	18.68	18.34
Coefficient of Variability	1.08	1.08
Minimum	0.06	0.00
Maximum	34.83	35.00
Range Width	34.77	35.00
Mean Standard Error	0.01	---

Assumption: Number of Oil Fields (cont'd)

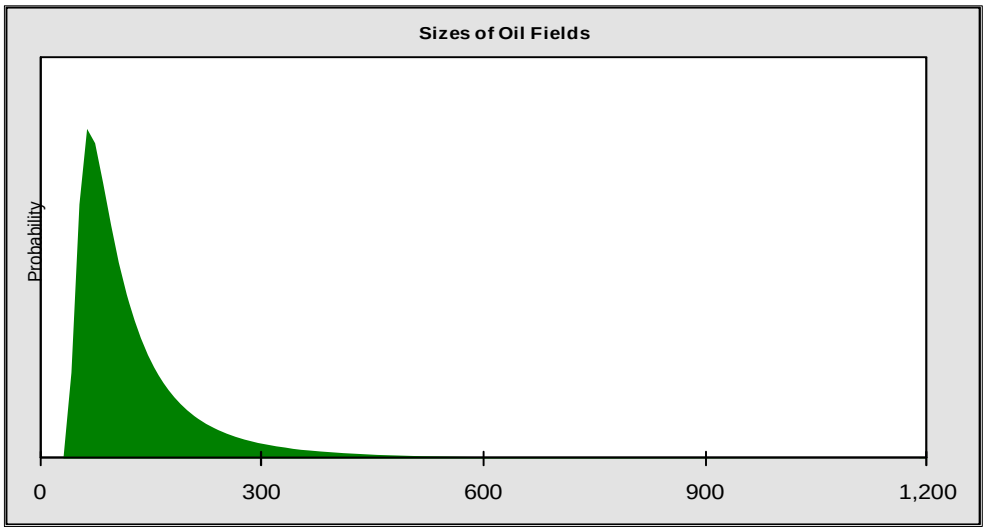
Percentiles:	Simulated values	Theoretical values
P100	0.06	0.00
P95	0.43	0.44
P90	0.61	0.61
P85	0.76	0.77
P80	0.91	0.92
P75	1.06	1.07
P70	1.22	1.23
P65	1.39	1.40
P60	1.57	1.58
P55	1.76	1.78
P50	1.98	2.00
P45	2.23	2.24
P40	2.51	2.53
P35	2.85	2.85
P30	3.24	3.24
P25	3.73	3.73
P20	4.36	4.35
P15	5.22	5.21
P10	6.52	6.52
P5	8.97	9.10
P0	34.83	35.00

Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	142.14
Standard Deviation	107.39

Selected range is from 50.00 to 1,100.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	140.88	140.83
Median	109.87	109.93
Mode	---	---
Standard Deviation	98.54	98.14
Variance	9,709.41	9,631.01
Skewness	3.25	3.19
Kurtosis	19.04	18.34
Coefficient of Variability	0.70	0.70
Minimum	51.46	50.00
Maximum	1,097.35	1,100.00
Range Width	1,045.90	1,050.00
Mean Standard Error	0.44	---

Assumption: Sizes of Oil Fields (cont'd)

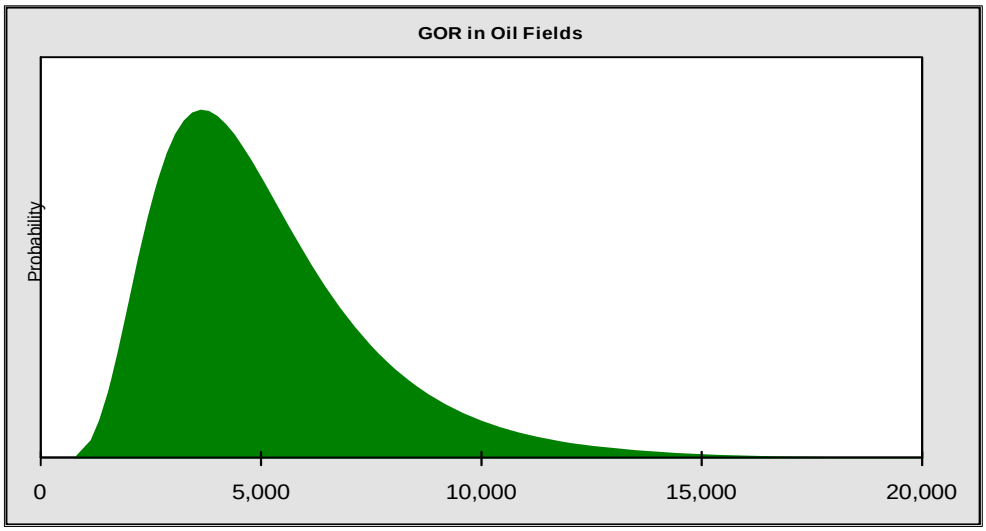
Percentiles:	Simulated values	Theoretical values
P100	51.46	50.00
P95	63.19	63.07
P90	68.25	68.30
P85	73.01	72.96
P80	77.64	77.50
P75	82.43	82.10
P70	87.10	86.88
P65	92.25	91.95
P60	97.64	97.40
P55	103.39	103.35
P50	109.87	109.93
P45	117.11	117.32
P40	125.44	125.76
P35	135.20	135.60
P30	146.91	147.34
P25	161.52	161.82
P20	180.98	180.49
P15	206.48	206.18
P10	244.95	245.72
P5	320.97	323.00
P0	1,097.35	1,100.00

Assumption: GOR in Oil Fields

Lognormal distribution with parameters:

Mean	5,246.90
Standard Deviation	2,583.31

Selected range is from 100.00 to 20,000.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	5,214.66	5,229.13
Median	4,683.83	4,697.27
Mode	---	---
Standard Deviation	2,516.14	2,520.97
Variance	6,330,981.53	6,355,308.53
Skewness	1.40	1.39
Kurtosis	5.87	5.87
Coefficient of Variability	0.4825	0.4821
Minimum	823.68	100.00
Maximum	19,860.23	20,000.00
Range Width	19,036.54	19,900.00
Mean Standard Error	11.25	---

Assumption: GOR in Oil Fields (cont'd)

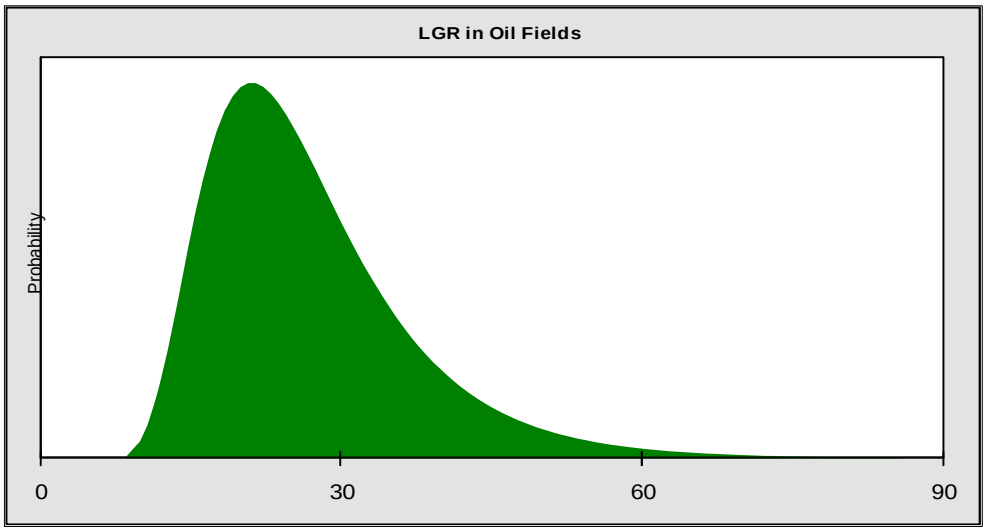
Percentiles:	Simulated values	Theoretical values
P100	823.68	100.00
P95	2,201.98	2,208.89
P90	2,599.63	2,605.10
P85	2,899.97	2,913.64
P80	3,172.71	3,185.73
P75	3,433.18	3,440.01
P70	3,681.89	3,686.15
P65	3,926.25	3,930.39
P60	4,172.17	4,177.48
P55	4,424.36	4,431.67
P50	4,683.81	4,697.27
P45	4,962.09	4,979.10
P40	5,273.33	5,283.12
P35	5,596.53	5,617.18
P30	5,971.29	5,992.43
P25	6,402.06	6,425.86
P20	6,914.80	6,945.78
P15	7,572.93	7,605.23
P10	8,501.28	8,524.03
P5	10,088.48	10,087.98
P0	19,860.23	20,000.00

Assumption: LGR in Oil Fields

Lognormal distribution with parameters:

Mean	27.12
Standard Deviation	10.44

Selected range is from 5.00 to 85.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	27.07	27.05
Median	25.04	24.99
Mode	---	---
Standard Deviation	10.23	10.21
Variance	104.58	104.25
Skewness	1.33	1.31
Kurtosis	5.66	5.52
Coefficient of Variability	0.3778	0.3775
Minimum	7.21	5.00
Maximum	84.95	85.00
Range Width	77.74	80.00
Mean Standard Error	0.05	---

Assumption: LGR in Oil Fields (cont'd)

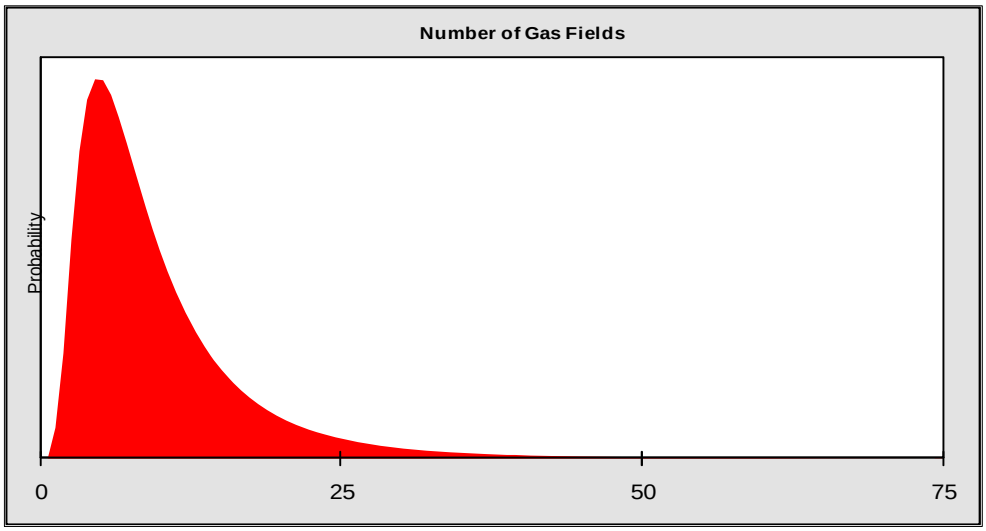
Percentiles:	Simulated values	Theoretical values
P100	7.21	5.00
P95	14.58	14.56
P90	16.26	16.25
P85	17.57	17.56
P80	18.71	18.71
P75	19.77	19.77
P70	20.85	20.80
P65	21.87	21.82
P60	22.90	22.84
P55	23.95	23.89
P50	25.04	24.99
P45	26.18	26.15
P40	27.39	27.39
P35	28.77	28.76
P30	30.24	30.28
P25	32.01	32.04
P20	34.22	34.14
P15	36.82	36.79
P10	40.51	40.46
P5	46.62	46.66
P0	84.95	85.00

Assumption: Number of Gas Fields

Lognormal distribution with parameters:

Mean	10.08
Standard Deviation	7.50

Selected range is from 1.00 to 66.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	10.01	10.01
Median	8.02	7.99
Mode	---	---
Standard Deviation	7.12	7.13
Variance	50.66	50.78
Skewness	2.31	2.30
Kurtosis	11.10	10.98
Coefficient of Variability	0.7111	0.7121
Minimum	1.34	1.00
Maximum	66.00	66.00
Range Width	64.65	65.00
Mean Standard Error	0.03	---

Assumption: Number of Gas Fields (cont'd)

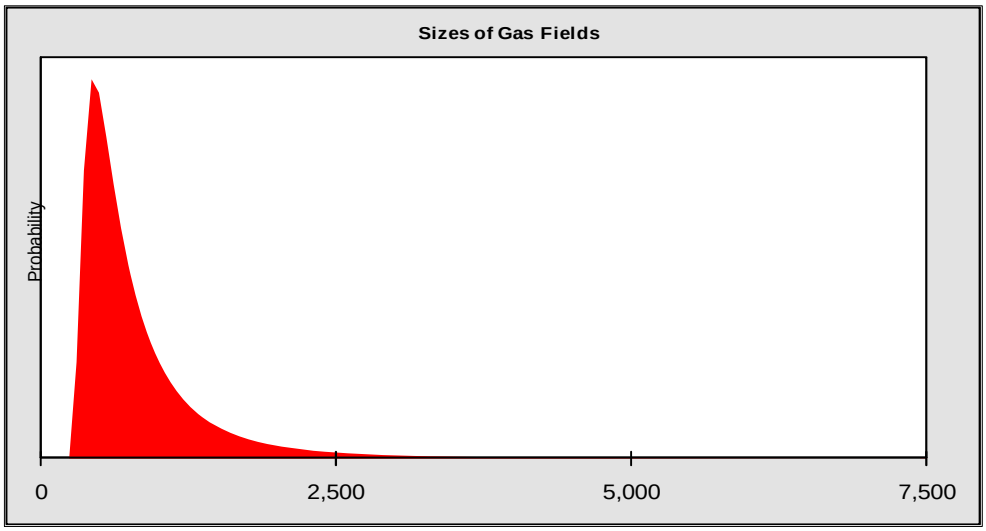
Percentiles:	Simulated values	Theoretical values
P100	1.34	1.00
P95	3.12	3.14
P90	3.78	3.78
P85	4.32	4.31
P80	4.82	4.81
P75	5.31	5.30
P70	5.81	5.79
P65	6.31	6.30
P60	6.84	6.83
P55	7.42	7.39
P50	8.02	7.99
P45	8.69	8.66
P40	9.43	9.39
P35	10.26	10.23
P30	11.22	11.20
P25	12.39	12.37
P20	13.82	13.82
P15	15.66	15.74
P10	18.50	18.57
P5	23.60	23.77
P0	66.00	66.00

Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:

Mean	850.22
Standard Deviation	635.97

Selected range is from 300.00 to 6,500.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	847.96	842.48
Median	659.54	659.58
Mode	---	---
Standard Deviation	593.26	581.87
Variance	351,958.48	338,578.17
Skewness	3.22	3.17
Kurtosis	18.56	18.11
Coefficient of Variability	0.70	0.69
Minimum	308.44	300.00
Maximum	6,480.91	6,500.00
Range Width	6,172.47	6,200.00
Mean Standard Error	2.65	---

Assumption: Sizes of Gas Fields (cont'd)

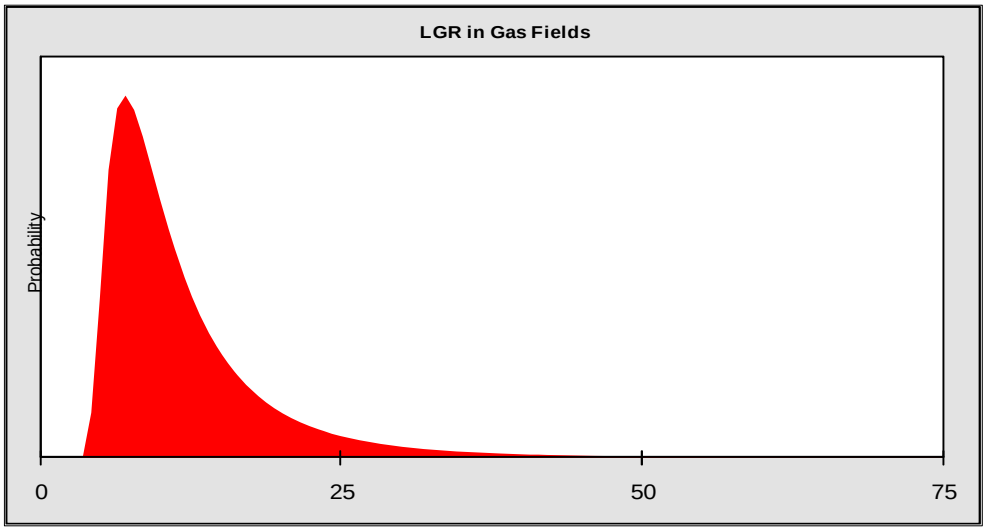
Percentiles:	Simulated values	Theoretical values
P100	308.44	300.00
P95	379.63	379.09
P90	411.37	410.51
P85	440.77	438.50
P80	467.95	465.71
P75	494.73	493.27
P70	524.07	521.91
P65	555.28	552.22
P60	587.95	584.80
P55	623.04	620.32
P50	659.54	659.58
P45	704.50	703.66
P40	753.35	753.97
P35	811.46	812.55
P30	885.10	882.47
P25	971.42	968.61
P20	1,084.30	1,079.53
P15	1,239.20	1,232.07
P10	1,485.62	1,466.58
P5	1,945.64	1,924.17
P0	6,480.91	6,500.00

Assumption: LGR in Gas Fields

Lognormal distribution with parameters:

Mean	12.26
Standard Deviation	7.82

Selected range is from 4.00 to 75.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	12.15	12.18
Median	9.99	9.99
Mode	---	---
Standard Deviation	7.30	7.33
Variance	53.31	53.79
Skewness	2.64	2.62
Kurtosis	13.62	13.40
Coefficient of Variability	0.6009	0.6022
Minimum	4.17	4.00
Maximum	74.98	75.00
Range Width	70.82	71.00
Mean Standard Error	0.03	---

Assumption: LGR in Gas Fields (cont'd)

Percentiles:	Simulated values	Theoretical values
P100	4.17	4.00
P95	5.60	5.61
P90	6.15	6.15
P85	6.62	6.62
P80	7.07	7.06
P75	7.51	7.50
P70	7.95	7.94
P65	8.39	8.41
P60	8.89	8.90
P55	9.41	9.42
P50	9.99	9.99
P45	10.61	10.63
P40	11.32	11.34
P35	12.14	12.15
P30	13.10	13.11
P25	14.23	14.27
P20	15.68	15.73
P15	17.60	17.70
P10	20.56	20.65
P5	26.06	26.19
P0	74.98	75.00

End of Assumptions

Simulation started on 3/26/2008 at 16:38:30
Simulation stopped on 3/26/2008 at 16:51:04