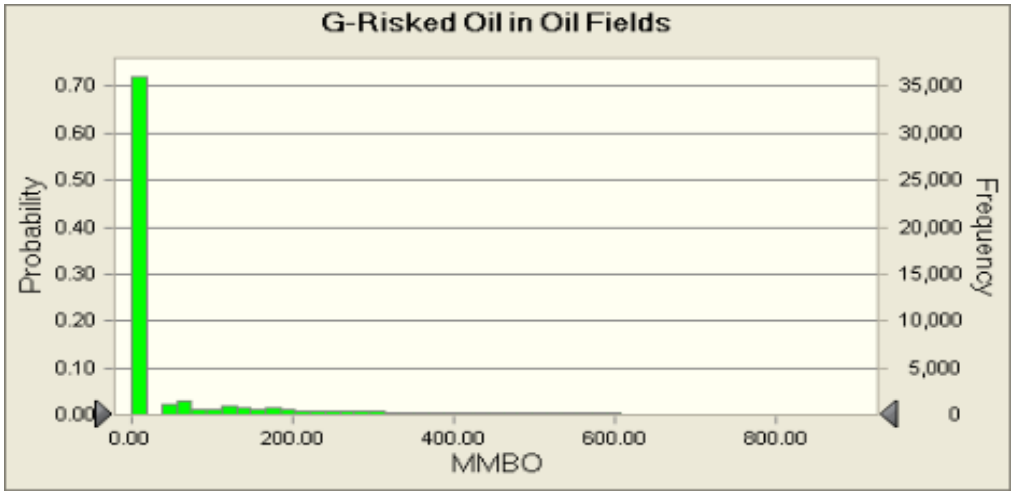
12560101
Vilkitskii Basin
Monte Carlo Results

Forecast: G-Risked Oil in Oil Fields

Summary:
Entire range is from 0.00 to 5,782.85
After 50,000 trials, the standard error of the mean is 1.28



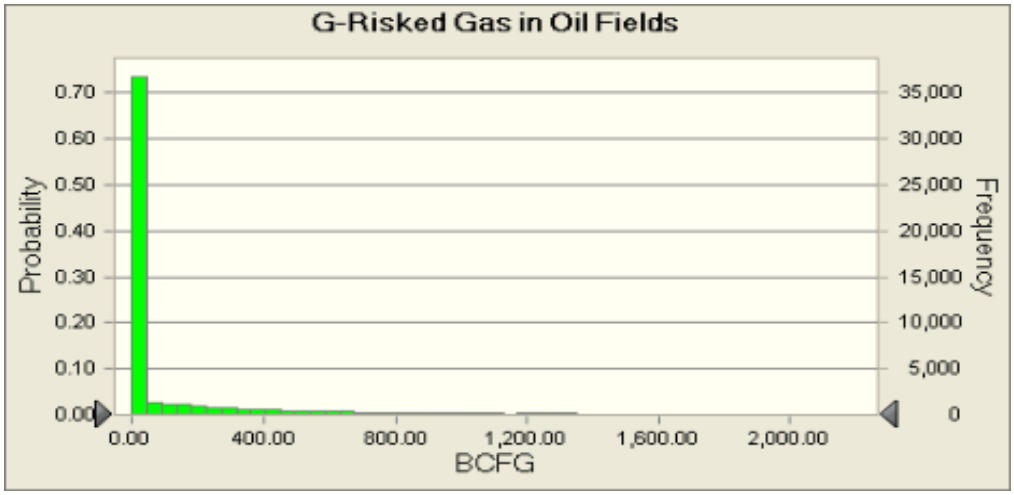
Statistics:	Forecast values
Trials	50,000
Mean	98.03
Median	0.00
Mode	0.00
Standard Deviation	287.19
Variance	82,479.19
Skewness	6.35
Kurtosis	63.66
Coefficient of Variability	2.93
Minimum	0.00
Maximum	5,782.85
Range Width	5,782.85
Mean Standard Error	1.28

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	0.00
P40	0.00
P35	0.00
P30	0.00
P25	58.97
P20	115.13
P15	181.48
P10	292.35
P5	529.88
P0	5,782.85

Forecast: G-Risked Gas in Oil Fields

Summary:
Entire range is from 0.00 to 39,337.49
After 50,000 trials, the standard error of the mean is 3.21



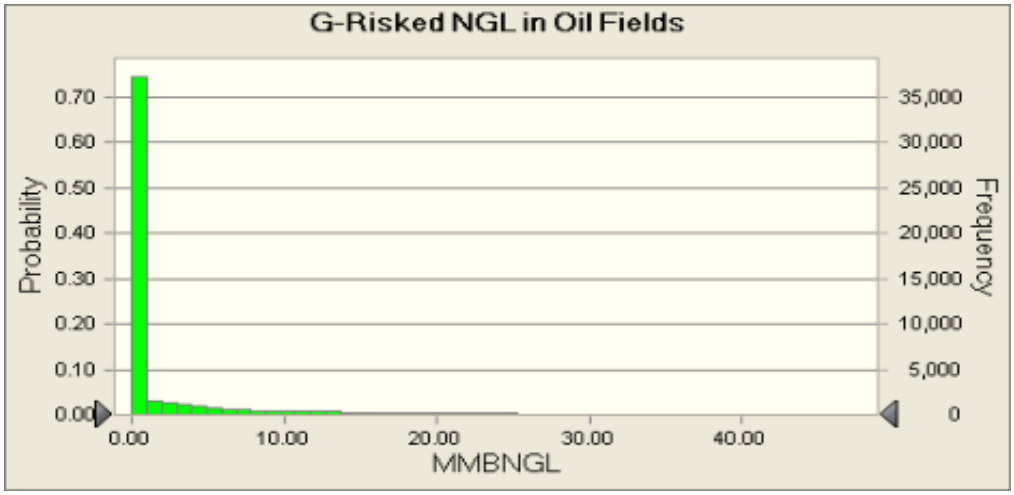
Statistics:	Forecast values
Trials	50,000
Mean	197.59
Median	0.00
Mode	0.00
Standard Deviation	717.61
Variance	514,968.02
Skewness	12.43
Kurtosis	336.18
Coefficient of Variability	3.63
Minimum	0.00
Maximum	39,337.49
Range Width	39,337.49
Mean Standard Error	3.21

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	0.00
P40	0.00
P35	0.00
P30	0.00
P25	72.41
P20	170.33
P15	312.99
P10	546.44
P5	1,042.71
P0	39,337.49

Forecast: G-Risked NGL in Oil Fields

Summary:
Entire range is from 0.00 to 1,374.62
After 50,000 trials, the standard error of the mean is 0.07



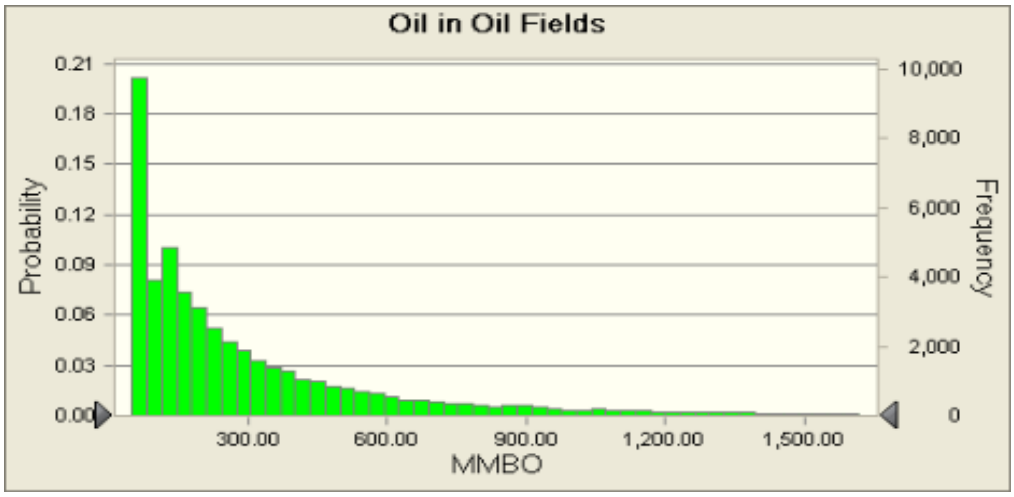
Statistics:	Forecast values
Trials	50,000
Mean	3.69
Median	0.00
Mode	0.00
Standard Deviation	15.67
Variance	245.44
Skewness	24.42
Kurtosis	1,438.61
Coefficient of Variability	4.25
Minimum	0.00
Maximum	1,374.62
Range Width	1,374.62
Mean Standard Error	0.07

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	0.00
P40	0.00
P35	0.00
P30	0.00
P25	1.11
P20	2.82
P15	5.37
P10	9.83
P5	19.19
P0	1,374.62

Forecast: Conditional Oil in Oil Fields

Summary:
Entire range is from 50.01 to 5,782.85 (filtered)
Filter range is from 0.00 to Infinity
After 48,410 trials, the standard error of the mean is 2.05



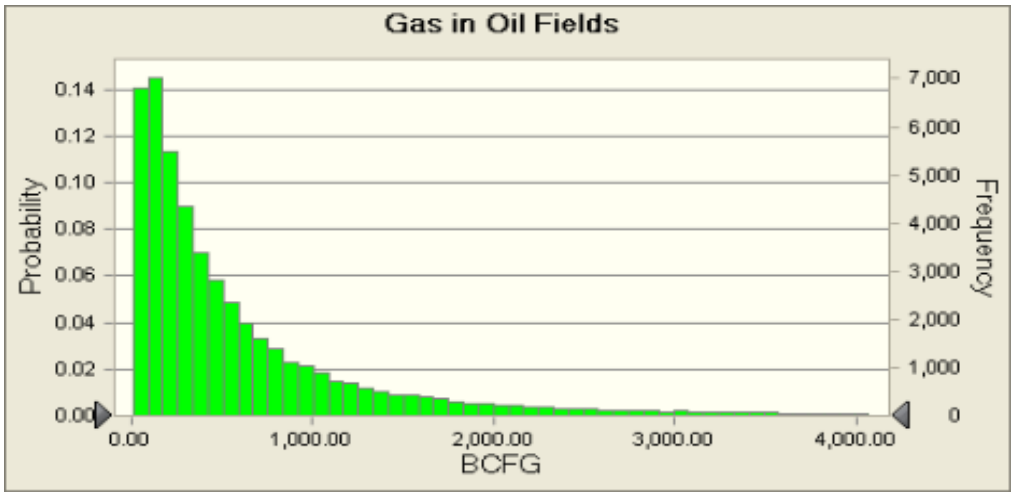
Statistics:	Forecast values
Trials	48,410
Mean	350.30
Median	199.59
Mode	---
Standard Deviation	451.39
Variance	203,753.83
Skewness	3.81
Kurtosis	24.09
Coefficient of Variability	1.29
Minimum	50.01
Maximum	5,782.85
Range Width	5,732.84
Mean Standard Error	2.05
Filtered Values	1590

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

Percentiles:	MMBO
P100	50.01
P95	53.44
P90	58.22
P85	66.05
P80	81.33
P75	106.05
P70	118.36
P65	133.37
P60	154.29
P55	175.49
P50	199.58
P45	227.89
P40	260.63
P35	300.74
P30	350.48
P25	409.28
P20	492.32
P15	602.23
P10	783.07
P5	1,150.21
P0	5,782.85

Forecast: Conditional Gas in Oil Fields

Summary:
Entire range is from 5.33 to 39,337.49 (filtered)
Filter range is from 0.00 to Infinity
After 48,410 trials, the standard error of the mean is 5.47



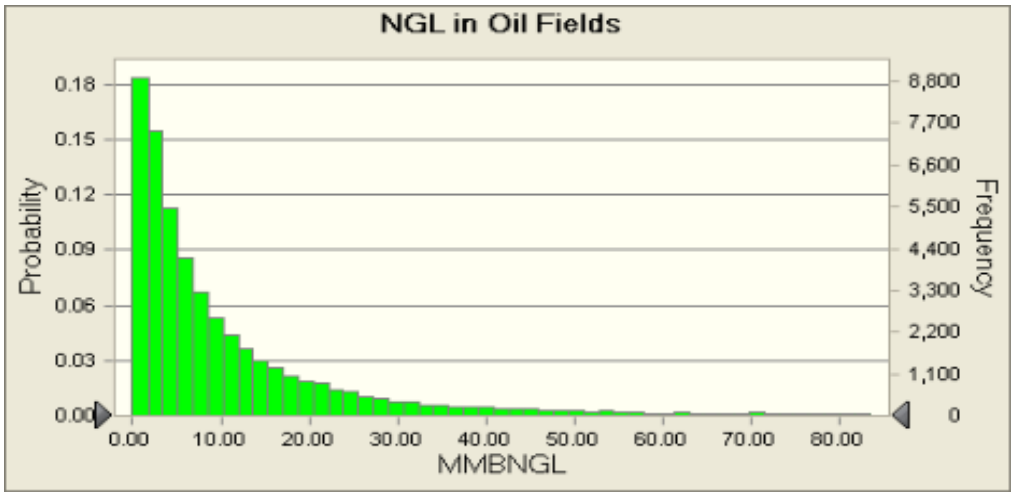
Statistics:	Forecast values
Trials	48,410
Mean	703.91
Median	349.96
Mode	---
Standard Deviation	1,203.06
Variance	1,447,346.74
Skewness	7.47
Kurtosis	112.14
Coefficient of Variability	1.71
Minimum	5.33
Maximum	39,337.49
Range Width	39,332.16
Mean Standard Error	5.47
Filtered Values	1590

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

Percentiles:	BCFG
P100	5.33
P95	43.92
P90	68.00
P85	93.00
P80	120.19
P75	149.15
P70	180.60
P65	215.12
P60	254.93
P55	298.63
P50	349.96
P45	409.21
P40	477.77
P35	558.80
P30	657.45
P25	783.06
P20	955.68
P15	1,202.16
P10	1,601.16
P5	2,466.21
P0	39,337.49

Forecast: Conditional NGL in Oil Fields

Summary:
Entire range is from 0.05 to 1,374.62 (filtered)
Filter range is from 0.00 to Infinity
After 48,410 trials, the standard error of the mean is 0.11



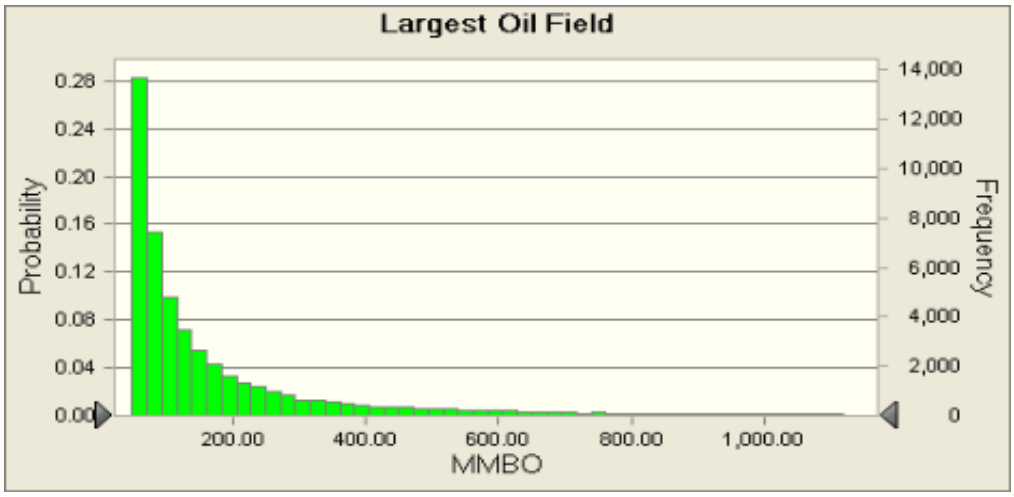
Statistics:	Forecast values
Trials	48,410
Mean	13.09
Median	6.06
Mode	---
Standard Deviation	25.06
Variance	628.21
Skewness	10.94
Kurtosis	300.40
Coefficient of Variability	1.92
Minimum	0.05
Maximum	1,374.62
Range Width	1,374.58
Mean Standard Error	0.11
Filtered Values	1590

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

Percentiles:	MMBNGL
P100	0.05
P95	0.63
P90	1.03
P85	1.45
P80	1.90
P75	2.40
P70	2.98
P65	3.59
P60	4.28
P55	5.12
P50	6.06
P45	7.16
P40	8.43
P35	10.02
P30	11.92
P25	14.30
P20	17.61
P15	22.09
P10	29.69
P5	46.61
P0	1,374.62

Forecast: Largest Oil Field

Summary:
Entire range is from 50.01 to 3,991.15 (filtered)
Filter range is from 0.00 to Infinity
After 48,410 trials, the standard error of the mean is 1.50



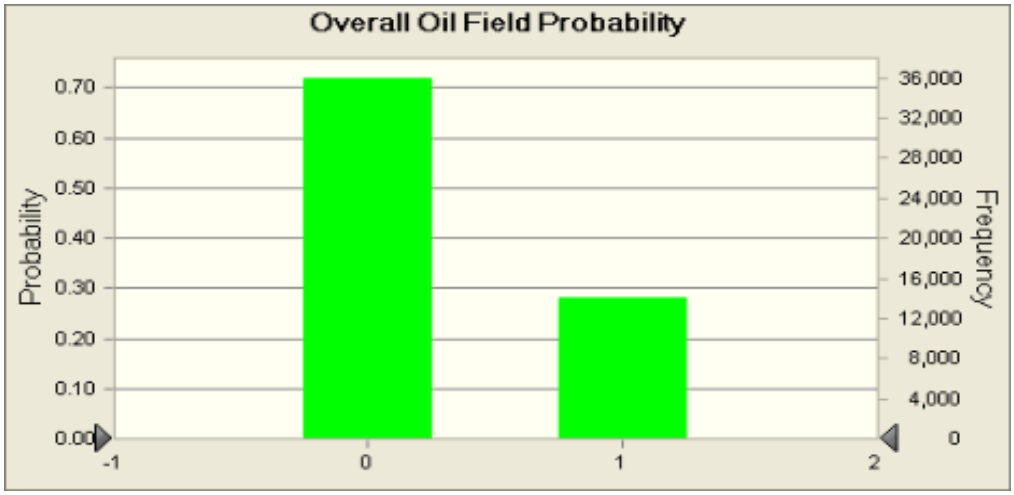
Statistics:	Forecast values
Trials	48,410
Mean	215.12
Median	107.73
Mode	---
Standard Deviation	329.80
Variance	108,770.65
Skewness	5.08
Kurtosis	37.60
Coefficient of Variability	1.53
Minimum	50.01
Maximum	3,991.15
Range Width	3,941.13
Mean Standard Error	1.50
Filtered Values	1590

Forecast: Largest Oil Field (cont'd)

Percentiles:	MMBO
P100	50.01
P95	53.03
P90	56.08
P85	59.69
P80	63.87
P75	68.63
P70	74.29
P65	80.70
P60	88.28
P55	97.14
P50	107.73
P45	120.72
P40	136.29
P35	155.67
P30	179.99
P25	213.87
P20	259.65
P15	330.04
P10	448.57
P5	721.19
P0	3,991.15

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



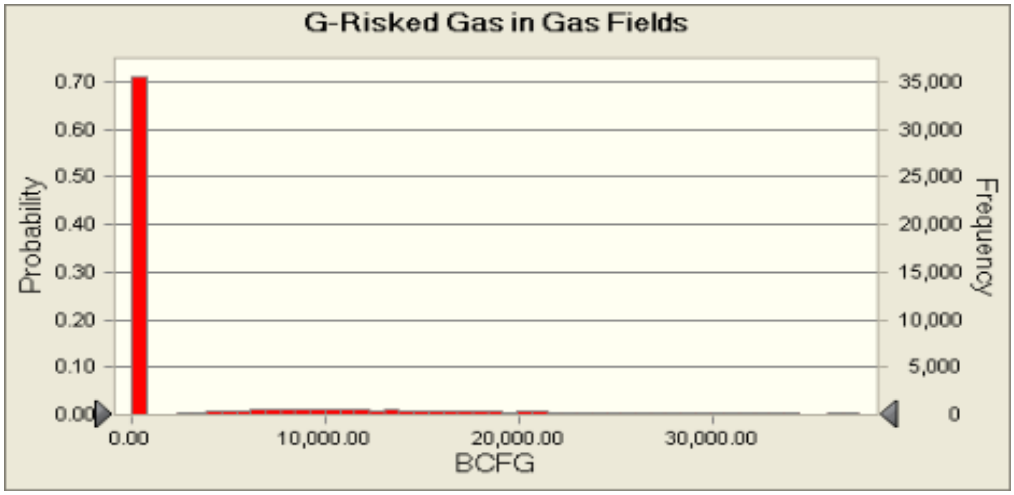
Statistics:	Forecast values	
Trials	50,000	
Mean	0.2796	= the probability of at least one undiscovered oil accumulation of minimum size or larger
Median	0.00	
Mode	0.00	
Standard Deviation	0.45	
Variance	0.20	
Skewness	0.9819	
Kurtosis	1.96	
Coefficient of Variability	1.61	
Minimum	0.00	
Maximum	1.00	
Range Width	1.00	
Mean Standard Error	0.00	

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	0.00
P40	0.00
P35	0.00
P30	0.00
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 176,397.37
After 50,000 trials, the standard error of the mean is 51.01



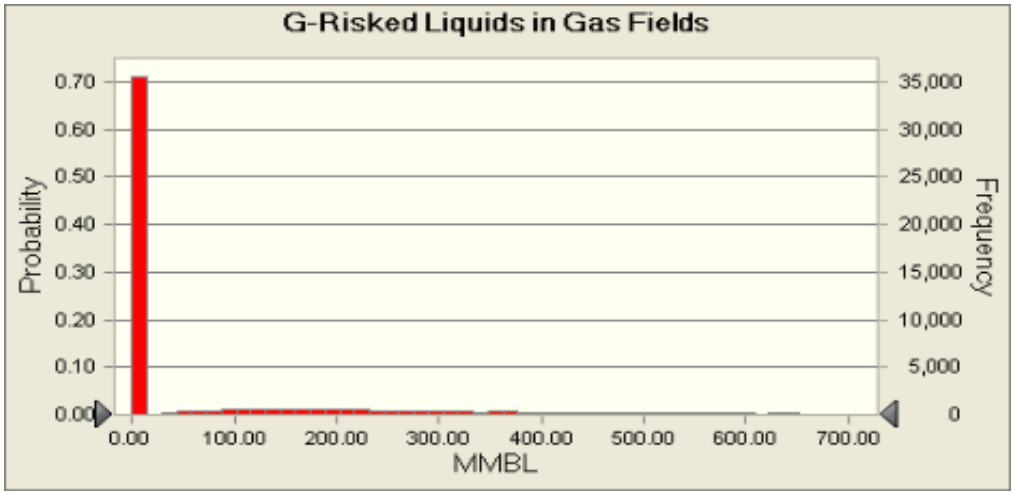
Statistics:	Forecast values
Trials	50,000
Mean	5,544.28
Median	0.00
Mode	0.00
Standard Deviation	11,405.67
Variance	130,089,331.98
Skewness	2.83
Kurtosis	13.78
Coefficient of Variability	2.06
Minimum	0.00
Maximum	176,397.37
Range Width	176,397.37
Mean Standard Error	51.01

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	0.00
P40	0.00
P35	0.00
P30	0.00
P25	6,880.87
P20	10,704.97
P15	15,014.29
P10	20,646.86
P5	29,850.50
P0	176,397.37

Forecast: G-Risked Liquids in Gas Fields

Summary:
Entire range is from 0.00 to 4,140.38
After 50,000 trials, the standard error of the mean is 0.98



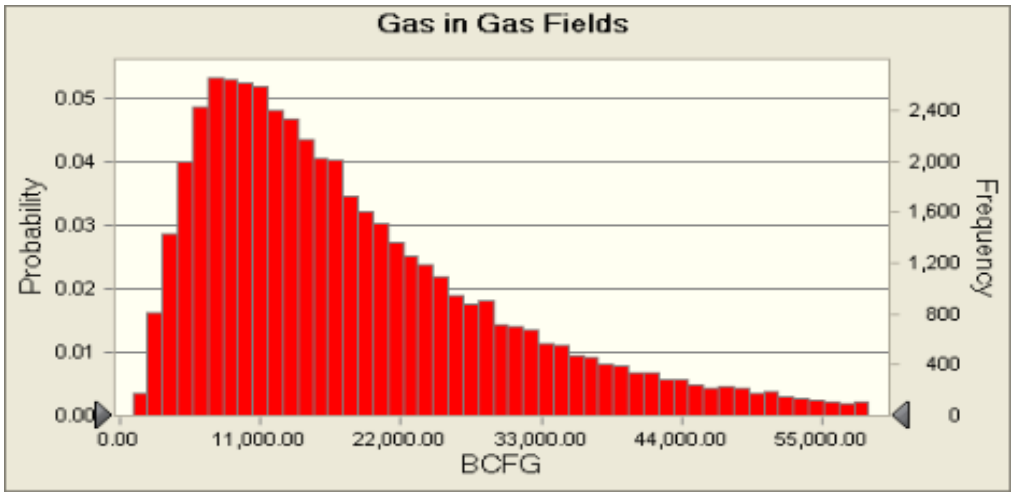
Statistics:	Forecast values
Trials	50,000
Mean	97.94
Median	0.00
Mode	0.00
Standard Deviation	218.26
Variance	47,638.83
Skewness	3.81
Kurtosis	26.83
Coefficient of Variability	2.23
Minimum	0.00
Maximum	4,140.38
Range Width	4,140.38
Mean Standard Error	0.98

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	0.00
P40	0.00
P35	0.00
P30	0.00
P25	105.22
P20	171.39
P15	248.87
P10	353.72
P5	528.18
P0	4,140.38

Forecast: Conditional Gas in Gas Fields

Summary:
Entire range is from 989.01 to 176,397.37
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 62.85



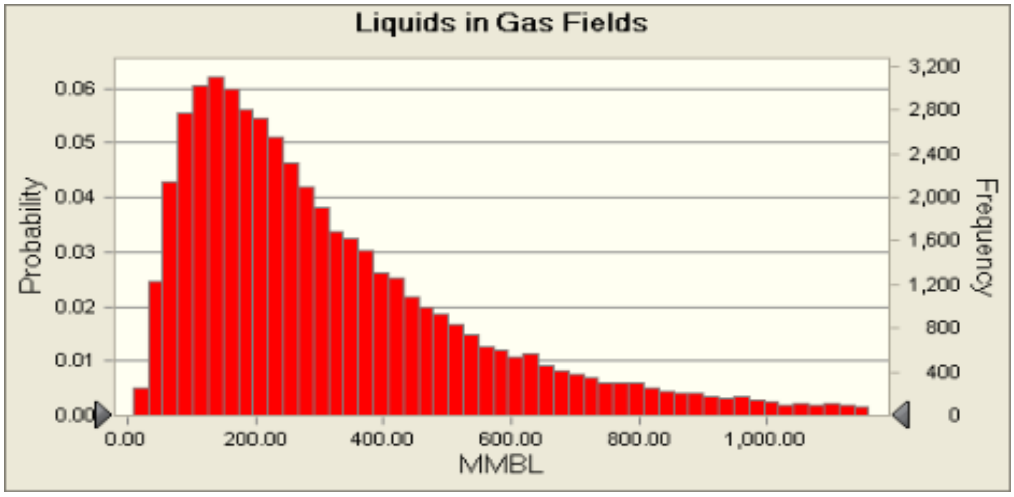
Statistics:	Forecast values
Trials	50,000
Mean	19,306.94
Median	15,550.72
Mode	---
Standard Deviation	14,054.10
Variance	197,517,596.95
Skewness	1.80
Kurtosis	8.03
Coefficient of Variability	0.7279
Minimum	989.01
Maximum	176,397.37
Range Width	175,408.36
Mean Standard Error	62.85

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

Percentiles:	BCFG
P100	989.01
P95	4,580.98
P90	5,979.87
P85	7,146.70
P80	8,270.70
P75	9,369.95
P70	10,503.60
P65	11,643.59
P60	12,885.36
P55	14,125.98
P50	15,550.65
P45	16,982.31
P40	18,604.28
P35	20,468.36
P30	22,626.33
P25	25,088.10
P20	28,244.92
P15	32,144.77
P10	37,754.85
P5	47,329.71
P0	176,397.37

Forecast: Conditional Liquids in Gas Fields

Summary:
Entire range is from 7.68 to 4,801.63
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 1.31



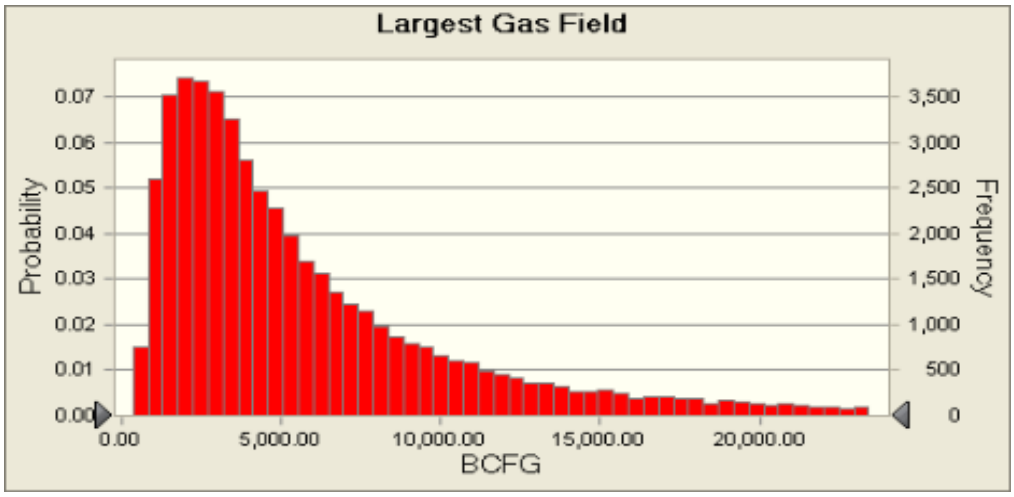
Statistics:	Forecast values
Trials	50,000
Mean	339.99
Median	256.70
Mode	---
Standard Deviation	292.71
Variance	85,681.34
Skewness	2.73
Kurtosis	16.99
Coefficient of Variability	0.8609
Minimum	7.68
Maximum	4,801.63
Range Width	4,793.95
Mean Standard Error	1.31

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

Percentiles:	MMBL
P100	7.68
P95	66.92
P90	90.28
P85	110.22
P80	129.57
P75	148.47
P70	168.32
P65	188.90
P60	210.00
P55	231.99
P50	256.70
P45	283.51
P40	314.37
P35	349.48
P30	388.59
P25	434.13
P20	492.24
P15	571.38
P10	684.42
P5	887.99
P0	4,801.63

Forecast: Largest Gas Field

Summary:
Entire range is from 348.67 to 39,981.77
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 27.25



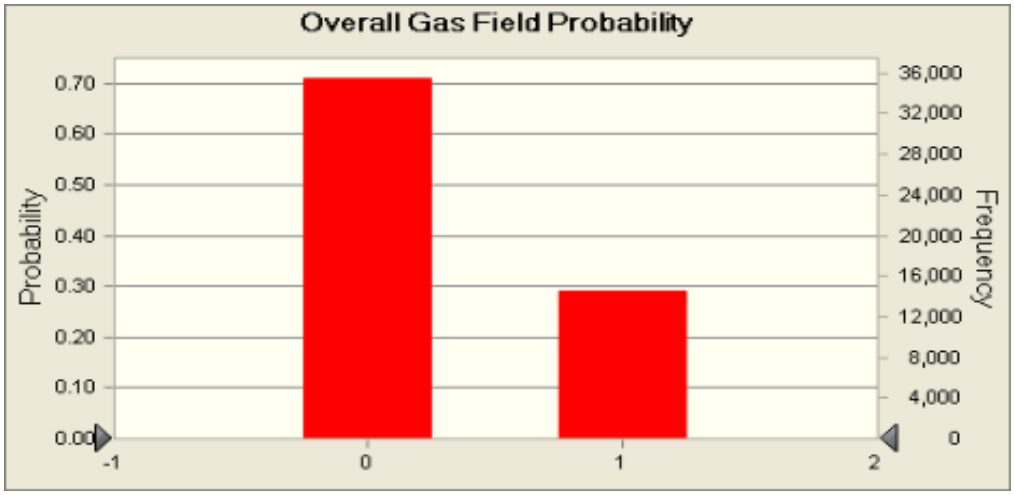
Statistics:	Forecast values
Trials	50,000
Mean	6,359.38
Median	4,324.66
Mode	---
Standard Deviation	6,093.09
Variance	37,125,696.79
Skewness	2.30
Kurtosis	9.28
Coefficient of Variability	0.9581
Minimum	348.67
Maximum	39,981.77
Range Width	39,633.10
Mean Standard Error	27.25

Forecast: Largest Gas Field (cont'd)

Percentiles:	BCFG
P100	348.67
P95	1,162.87
P90	1,521.30
P85	1,840.88
P80	2,159.20
P75	2,478.66
P70	2,799.79
P65	3,130.79
P60	3,480.12
P55	3,891.44
P50	4,324.46
P45	4,819.06
P40	5,375.60
P35	6,065.93
P30	6,865.40
P25	7,856.49
P20	9,167.88
P15	10,936.32
P10	13,735.72
P5	19,121.79
P0	39,981.77

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	0.2892	= the probability of at least one undiscovered gas accumulation of minimum size or larger
Median	0.00	
Mode	0.00	
Standard Deviation	0.45	
Variance	0.21	
Skewness	0.9299	
Kurtosis	1.86	
Coefficient of Variability	1.57	
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	0.00
P40	0.00
P35	0.00
P30	0.00
P25	1.00
P20	1.00
P15	1.00
P10	1.00
P5	1.00
P0	1.00

End of Forecasts

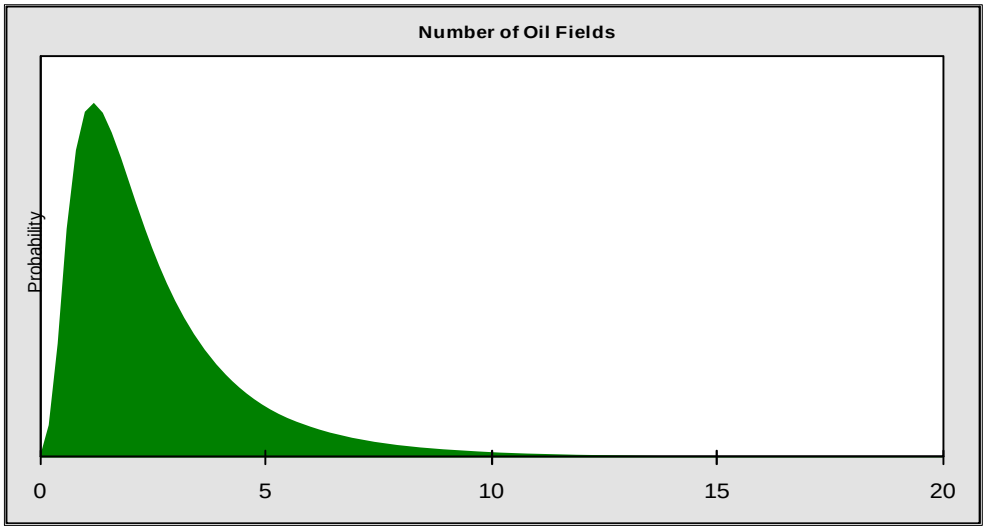
Assumptions

Assumption: Number of Oil Fields

Lognormal distribution with parameters:

Mean	2.64
Standard Deviation	2.27

Selected range is from 0.00 to 20.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	2.61	2.62
Median	1.99	2.00
Mode	---	---
Standard Deviation	2.15	2.15
Variance	4.61	4.64
Skewness	2.40	2.40
Kurtosis	11.67	11.68
Coefficient of Variability	0.8238	0.8228
Minimum	0.08	0.00
Maximum	19.93	20.00
Range Width	19.85	20.00
Mean Standard Error	0.01	---

Assumption: Number of Oil Fields (cont'd)

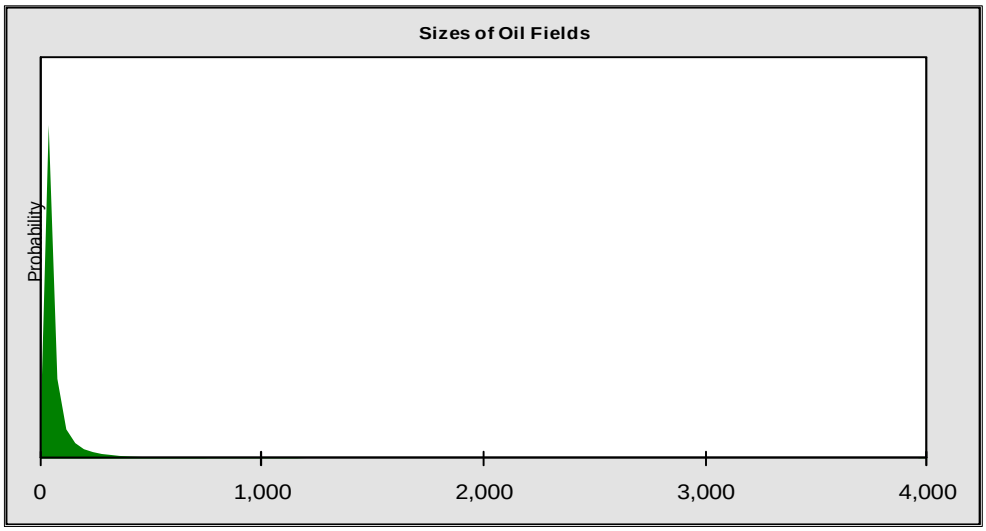
Percentiles:	Simulated values	Theoretical values
P100	0.08	0.00
P95	0.59	0.59
P90	0.77	0.77
P85	0.92	0.92
P80	1.07	1.07
P75	1.20	1.21
P70	1.35	1.35
P65	1.49	1.50
P60	1.65	1.65
P55	1.81	1.82
P50	1.99	2.00
P45	2.18	2.19
P40	2.40	2.41
P35	2.64	2.66
P30	2.92	2.95
P25	3.28	3.30
P20	3.72	3.74
P15	4.30	4.32
P10	5.15	5.18
P5	6.77	6.77
P0	19.93	20.00

Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	136.38
Standard Deviation	362.97

Selected range is from 50.00 to 4,000.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	130.07	129.93
Median	69.79	69.96
Mode	---	---
Standard Deviation	215.32	212.65
Variance	46,362.87	45,219.76
Skewness	7.57	7.78
Kurtosis	82.14	87.95
Coefficient of Variability	1.66	1.64
Minimum	50.01	50.00
Maximum	3,840.52	4,000.00
Range Width	3,790.51	3,950.00
Mean Standard Error	0.96	---

Assumption: Sizes of Oil Fields (cont'd)

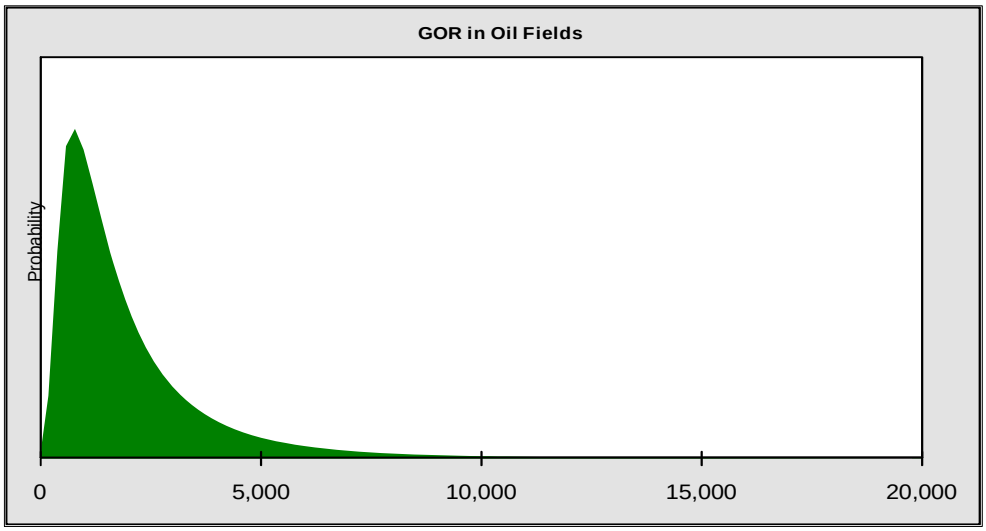
Percentiles:	Simulated values	Theoretical values
P100	50.01	50.00
P95	51.20	51.20
P90	52.23	52.23
P85	53.41	53.39
P80	54.74	54.73
P75	56.25	56.30
P70	58.09	58.14
P65	60.28	60.33
P60	62.83	62.94
P55	65.88	66.10
P50	69.79	69.96
P45	74.50	74.74
P40	80.37	80.77
P35	88.07	88.55
P30	98.42	98.88
P25	113.05	113.15
P20	134.81	133.98
P15	167.95	167.03
P10	229.30	227.54
P5	385.44	378.24
P0	3,840.52	4,000.00

Assumption: GOR in Oil Fields

Lognormal distribution with parameters:

Mean	2,023.71
Standard Deviation	2,105.00

Selected range is from 50.00 to 20,000.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	2,017.44	1,999.47
Median	1,413.42	1,398.52
Mode	---	---
Standard Deviation	1,956.69	1,947.54
Variance	3,828,639.98	3,792,919.98
Skewness	2.90	2.94
Kurtosis	15.82	16.04
Coefficient of Variability	0.9699	0.9740
Minimum	87.55	50.00
Maximum	19,987.59	20,000.00
Range Width	19,900.04	19,950.00
Mean Standard Error	8.75	---

Assumption: GOR in Oil Fields (cont'd)

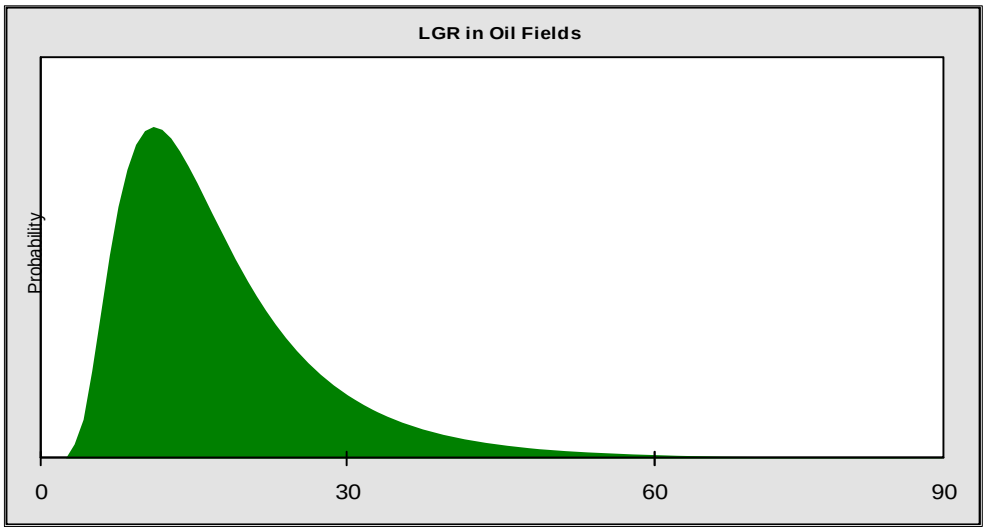
Percentiles:	Simulated values	Theoretical values
P100	87.55	50.00
P95	370.28	371.77
P90	493.09	491.60
P85	597.56	596.75
P80	700.02	697.88
P75	806.50	799.43
P70	912.89	904.11
P65	1,024.23	1,014.11
P60	1,139.95	1,131.55
P55	1,269.91	1,258.76
P50	1,413.40	1,398.52
P45	1,567.53	1,554.43
P40	1,745.85	1,731.28
P35	1,958.86	1,935.90
P30	2,207.72	2,178.46
P25	2,510.91	2,475.18
P20	2,894.14	2,854.26
P15	3,407.66	3,370.93
P10	4,191.36	4,156.61
P5	5,742.56	5,666.57
P0	19,987.59	20,000.00

Assumption: LGR in Oil Fields

Lognormal distribution with parameters:

Mean	18.71
Standard Deviation	10.89

Selected range is from 2.00 to 90.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	18.65	18.62
Median	16.04	15.99
Mode	---	---
Standard Deviation	10.55	10.51
Variance	111.27	110.50
Skewness	1.83	1.81
Kurtosis	8.06	7.95
Coefficient of Variability	0.5656	0.5645
Minimum	2.92	2.00
Maximum	89.71	90.00
Range Width	86.78	88.00
Mean Standard Error	0.05	---

Assumption: LGR in Oil Fields (cont'd)

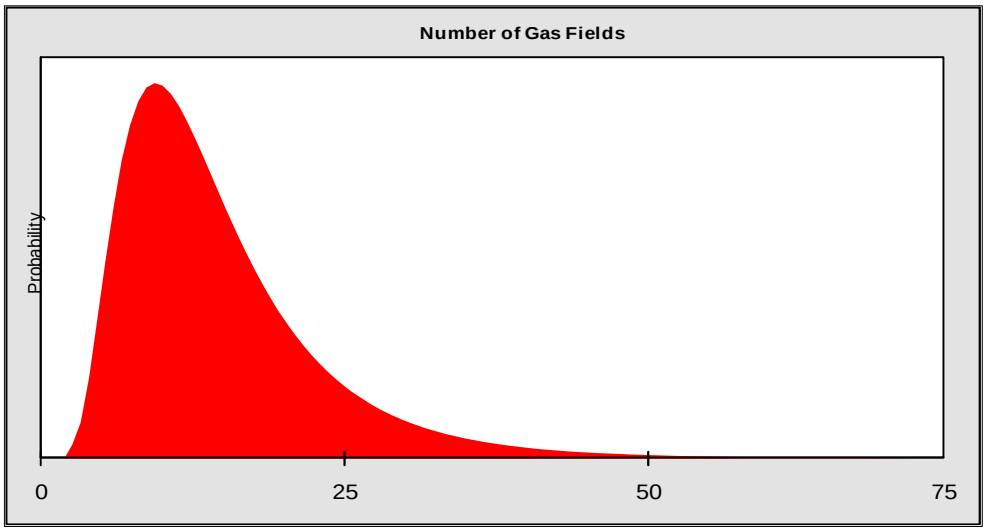
Percentiles:	Simulated values	Theoretical values
P100	2.92	2.00
P95	7.26	7.26
P90	8.53	8.53
P85	9.54	9.55
P80	10.48	10.48
P75	11.37	11.37
P70	12.27	12.24
P65	13.15	13.13
P60	14.07	14.03
P55	15.01	14.98
P50	16.04	15.99
P45	17.12	17.07
P40	18.29	18.26
P35	19.59	19.59
P30	21.09	21.10
P25	22.92	22.88
P20	25.08	25.06
P15	27.96	27.88
P10	31.94	31.92
P5	39.11	39.05
P0	89.71	90.00

Assumption: Number of Gas Fields

Lognormal distribution with parameters:

Mean	15.09
Standard Deviation	8.66

Selected range is from 1.00 to 70.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	15.06	15.02
Median	12.99	12.99
Mode	---	---
Standard Deviation	8.41	8.38
Variance	70.72	70.25
Skewness	1.67	1.71
Kurtosis	7.03	7.39
Coefficient of Variability	0.5583	0.5581
Minimum	2.44	1.00
Maximum	69.09	70.00
Range Width	66.65	69.00
Mean Standard Error	0.04	---

Assumption: Number of Gas Fields (cont'd)

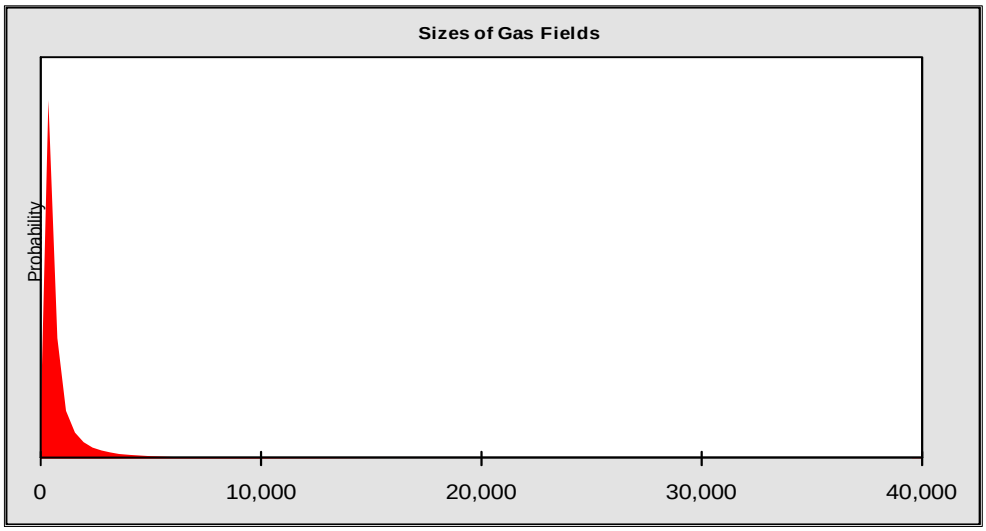
Percentiles:	Simulated values	Theoretical values
P100	2.44	1.00
P95	5.76	5.73
P90	6.83	6.81
P85	7.69	7.67
P80	8.46	8.45
P75	9.20	9.19
P70	9.91	9.91
P65	10.63	10.64
P60	11.36	11.39
P55	12.16	12.17
P50	12.99	12.99
P45	13.88	13.87
P40	14.87	14.84
P35	15.94	15.91
P30	17.17	17.13
P25	18.63	18.56
P20	20.41	20.29
P15	22.67	22.53
P10	26.00	25.72
P5	31.47	31.29
P0	69.09	70.00

Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:

Mean	1,346.89
Standard Deviation	3,500.06

Selected range is from 300.00 to 40,000.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	1,273.79	1,282.78
Median	599.53	599.41
Mode	---	---
Standard Deviation	2,283.05	2,309.07
Variance	5,212,333.64	5,331,822.92
Skewness	6.86	6.92
Kurtosis	69.88	71.18
Coefficient of Variability	1.79	1.80
Minimum	300.48	300.00
Maximum	39,809.00	40,000.00
Range Width	39,508.52	39,700.00
Mean Standard Error	10.21	---

Assumption: Sizes of Gas Fields (cont'd)

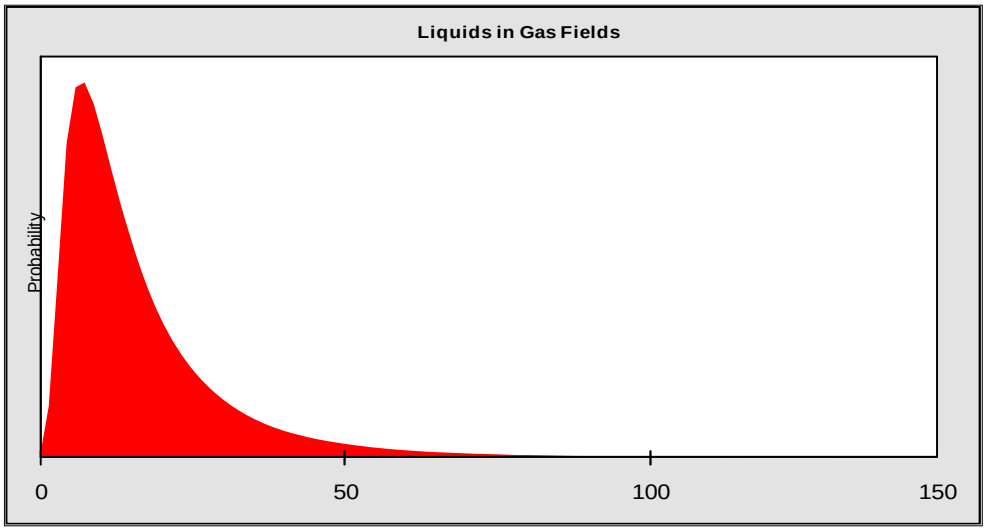
Percentiles:	Simulated values	Theoretical values
P100	300.48	300.00
P95	322.22	322.25
P90	339.82	339.52
P85	358.56	358.22
P80	379.65	379.20
P75	403.88	403.15
P70	430.40	430.76
P65	462.86	462.89
P60	500.35	500.66
P55	545.16	545.50
P50	599.52	599.41
P45	666.99	665.13
P40	748.04	746.69
P35	848.63	850.16
P30	986.75	985.18
P25	1,166.89	1,168.20
P20	1,428.36	1,429.89
P15	1,836.25	1,835.54
P10	2,551.92	2,557.11
P5	4,234.90	4,283.23
P0	39,809.00	40,000.00

Assumption: Liquids in Gas Fields

Lognormal distribution with parameters:

Mean	17.73
Standard Deviation	16.25

Selected range is from 1.00 to 150.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	17.64	17.55
Median	12.99	12.99
Mode	---	---
Standard Deviation	15.48	15.21
Variance	239.76	231.21
Skewness	2.77	2.69
Kurtosis	14.53	13.94
Coefficient of Variability	0.8779	0.8662
Minimum	1.50	1.00
Maximum	149.75	150.00
Range Width	148.25	149.00
Mean Standard Error	0.07	---

Assumption: Liquids in Gas Fields (cont'd)

Percentiles:	Simulated values	Theoretical values
P100	1.50	1.00
P95	4.14	4.14
P90	5.24	5.22
P85	6.16	6.15
P80	7.02	7.04
P75	7.92	7.92
P70	8.83	8.82
P65	9.76	9.76
P60	10.73	10.75
P55	11.81	11.82
P50	12.99	12.99
P45	14.28	14.28
P40	15.74	15.73
P35	17.42	17.41
P30	19.37	19.37
P25	21.81	21.76
P20	24.84	24.78
P15	28.94	28.85
P10	34.94	34.97
P5	46.78	46.53
P0	149.75	150.00

End of Assumptions

Simulation started on 5/21/2008 at 15:18:10
Simulation stopped on 5/21/2008 at 15:36:09