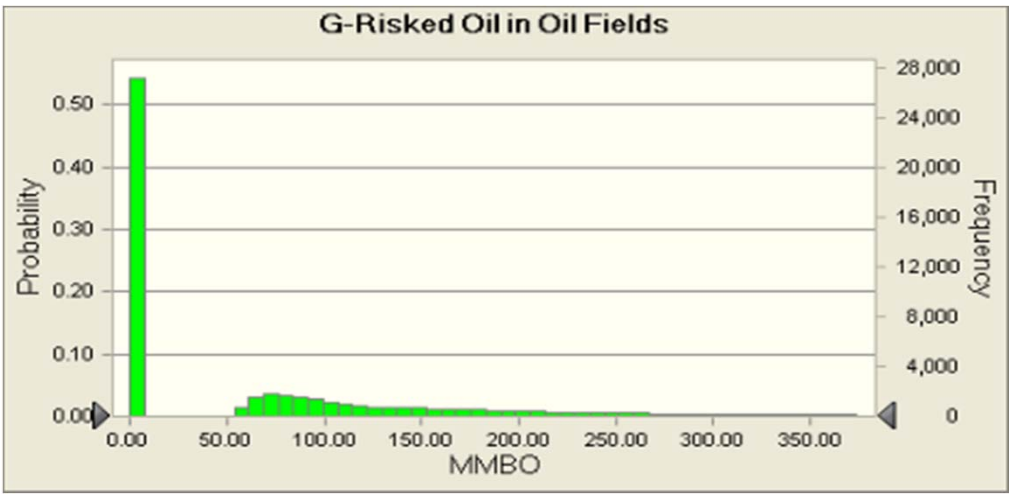
12520101
Zyryanka Basin
Monte Carlo Results

Forecast: G-Risked Oil in Oil Fields

Summary:
Entire range is from 0.00 to 1,138.64
After 50,000 trials, the standard error of the mean is 0.48



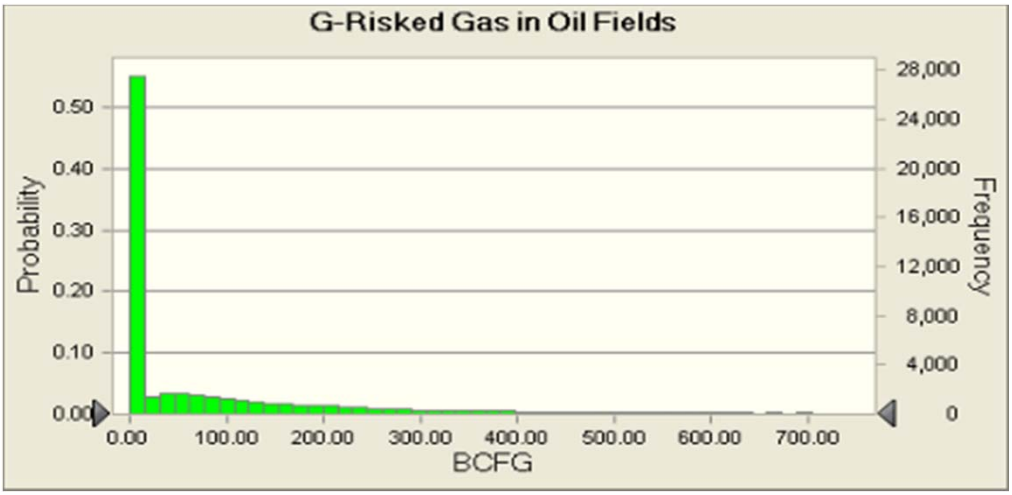
Statistics:	Forecast values
Trials	50,000
Mean	72.45
Median	0.00
Mode	0.00
Standard Deviation	107.38
Variance	11,529.98
Skewness	2.18
Kurtosis	9.83
Coefficient of Variability	1.48
Minimum	0.00
Maximum	1,138.64
Range Width	1,138.64
Mean Standard Error	0.48

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	58.36
P40	71.29
P35	82.63
P30	95.29
P25	112.14
P20	136.19
P15	168.22
P10	210.52
P5	286.34
P0	1,138.64

Forecast: G-Risked Gas in Oil Fields

Summary:
Entire range is from 0.00 to 6,055.50
After 50,000 trials, the standard error of the mean is 1.03



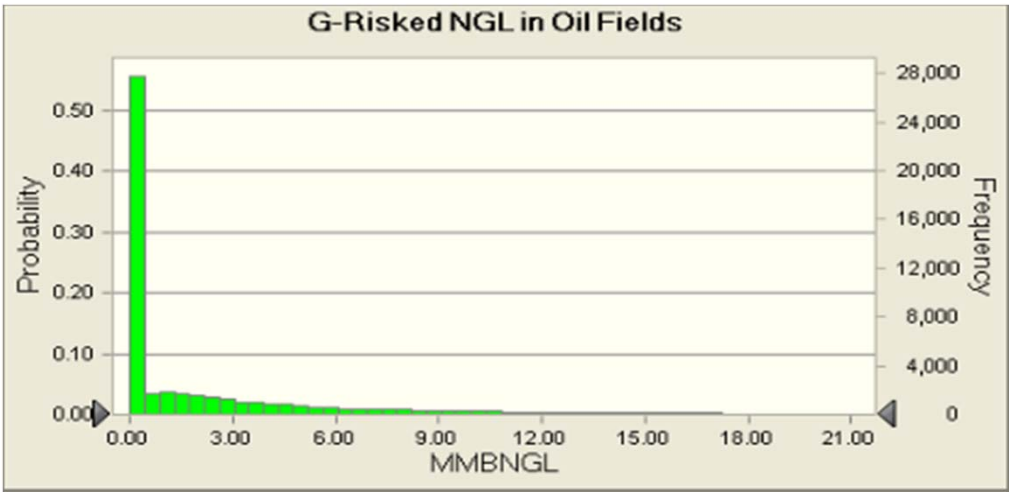
Statistics:	Forecast values
Trials	50,000
Mean	106.30
Median	0.00
Mode	0.00
Standard Deviation	229.46
Variance	52,651.70
Skewness	5.46
Kurtosis	59.26
Coefficient of Variability	2.16
Minimum	0.00
Maximum	6,055.50
Range Width	6,055.50
Mean Standard Error	1.03

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	14.99
P40	40.90
P35	64.89
P30	91.01
P25	123.57
P20	165.27
P15	223.20
P10	312.47
P5	496.34
P0	6,055.50

Forecast: G-Risked NGL in Oil Fields

Summary:
Entire range is from 0.00 to 184.73
After 50,000 trials, the standard error of the mean is 0.03



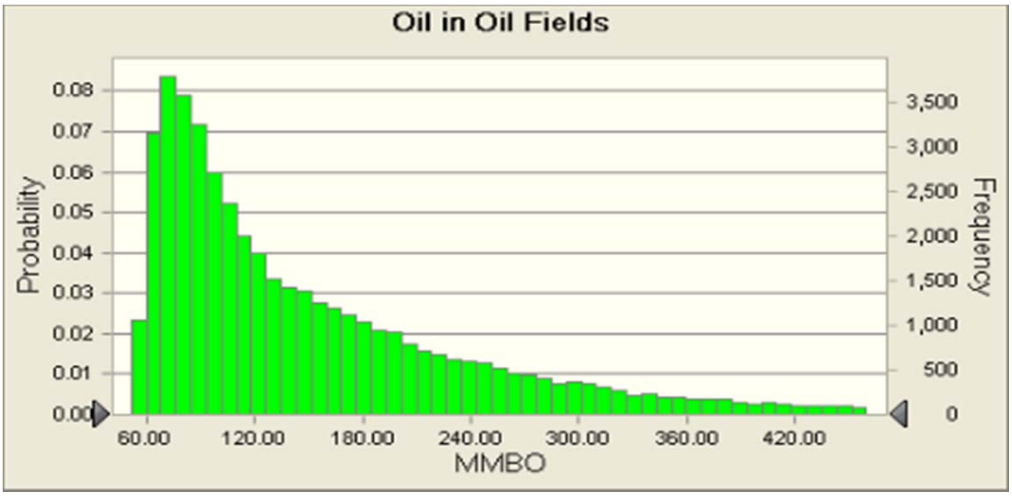
Statistics:	Forecast values
Trials	50,000
Mean	2.86
Median	0.00
Mode	0.00
Standard Deviation	6.53
Variance	42.59
Skewness	6.25
Kurtosis	79.09
Coefficient of Variability	2.28
Minimum	0.00
Maximum	184.73
Range Width	184.73
Mean Standard Error	0.03

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	0.34
P40	0.98
P35	1.58
P30	2.31
P25	3.13
P20	4.29
P15	5.84
P10	8.29
P5	13.40
P0	184.73

Forecast: Conditional Oil in Oil Fields

Summary:
Entire range is from 51.42 to 1,138.64 (filtered)
Filter range is from 0.00 to Infinity
After 45,370 trials, the standard error of the mean is 0.50



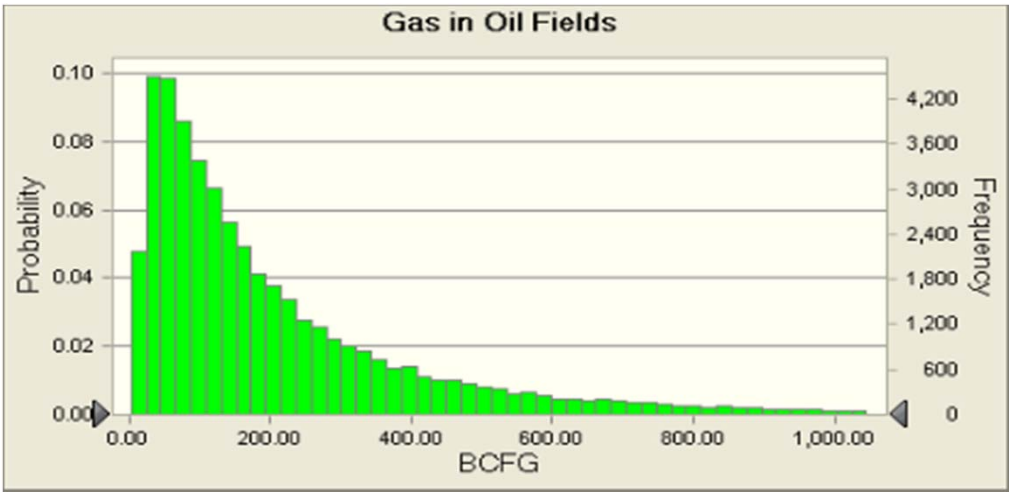
Statistics:	Forecast values
Trials	45,370
Mean	158.42
Median	121.46
Mode	---
Standard Deviation	107.52
Variance	11,561.50
Skewness	2.17
Kurtosis	9.79
Coefficient of Variability	0.6787
Minimum	51.42
Maximum	1,138.64
Range Width	1,087.22
Mean Standard Error	0.50
Filtered Values	4630

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

Percentiles:	MMBO
P100	51.42
P95	63.46
P90	68.80
P85	73.83
P80	78.79
P75	84.13
P70	89.84
P65	96.05
P60	103.32
P55	111.76
P50	121.46
P45	133.06
P40	146.42
P35	160.82
P30	177.36
P25	196.76
P20	220.79
P15	252.11
P10	296.23
P5	373.84
P0	1,138.64

Forecast: Conditional Gas in Oil Fields

Summary:
Entire range is from 2.72 to 6,055.50 (filtered)
Filter range is from 0.00 to Infinity
After 45,370 trials, the standard error of the mean is 1.36



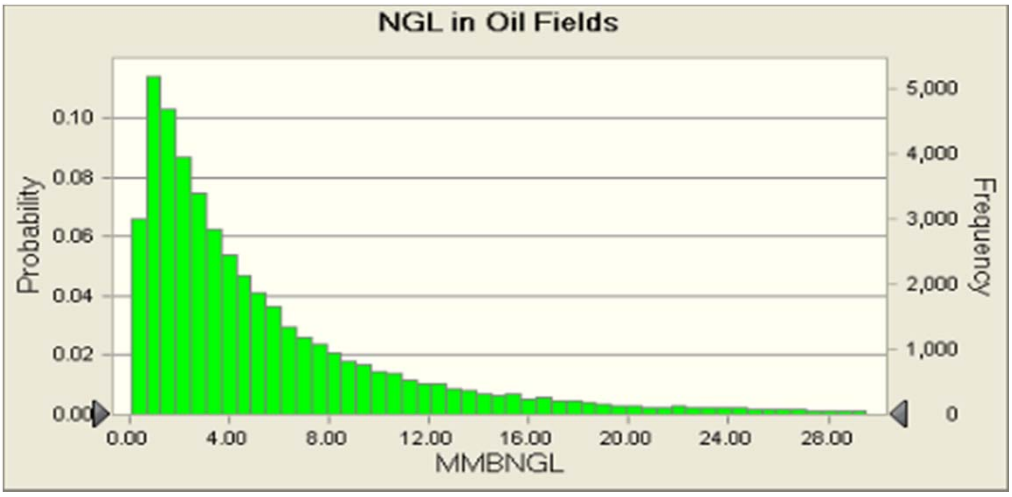
Statistics:	Forecast values
Trials	45,370
Mean	232.68
Median	140.46
Mode	---
Standard Deviation	290.34
Variance	84,299.14
Skewness	4.28
Kurtosis	37.30
Coefficient of Variability	1.25
Minimum	2.72
Maximum	6,055.50
Range Width	6,052.78
Mean Standard Error	1.36
Filtered Values	4630

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

Percentiles:	BCFG
P100	2.72
P95	24.51
P90	35.57
P85	45.93
P80	56.39
P75	67.65
P70	79.56
P65	93.01
P60	107.42
P55	122.88
P50	140.46
P45	160.58
P40	183.92
P35	211.18
P30	243.65
P25	284.61
P20	336.74
P15	409.45
P10	522.95
P5	739.64
P0	6,055.50

Forecast: Conditional NGL in Oil Fields

Summary:
Entire range is from 0.06 to 184.73 (filtered)
Filter range is from 0.00 to Infinity
After 45,370 trials, the standard error of the mean is 0.04



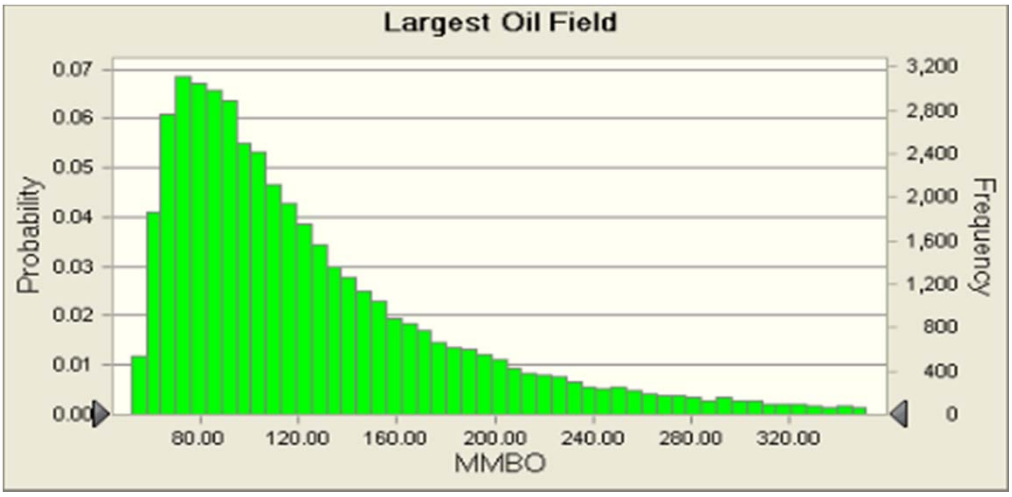
Statistics:	Forecast values
Trials	45,370
Mean	6.24
Median	3.60
Mode	---
Standard Deviation	8.32
Variance	69.16
Skewness	4.62
Kurtosis	43.02
Coefficient of Variability	1.33
Minimum	0.06
Maximum	184.73
Range Width	184.67
Mean Standard Error	0.04
Filtered Values	4630

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

Percentiles:	MMBNGL
P100	0.06
P95	0.57
P90	0.85
P85	1.11
P80	1.38
P75	1.67
P70	1.98
P65	2.32
P60	2.70
P55	3.12
P50	3.60
P45	4.15
P40	4.78
P35	5.51
P30	6.38
P25	7.52
P20	8.98
P15	10.99
P10	14.22
P5	20.55
P0	184.73

Forecast: Largest Oil Field

Summary:
Entire range is from 51.42 to 798.73 (filtered)
Filter range is from 0.00 to Infinity
After 45,370 trials, the standard error of the mean is 0.37



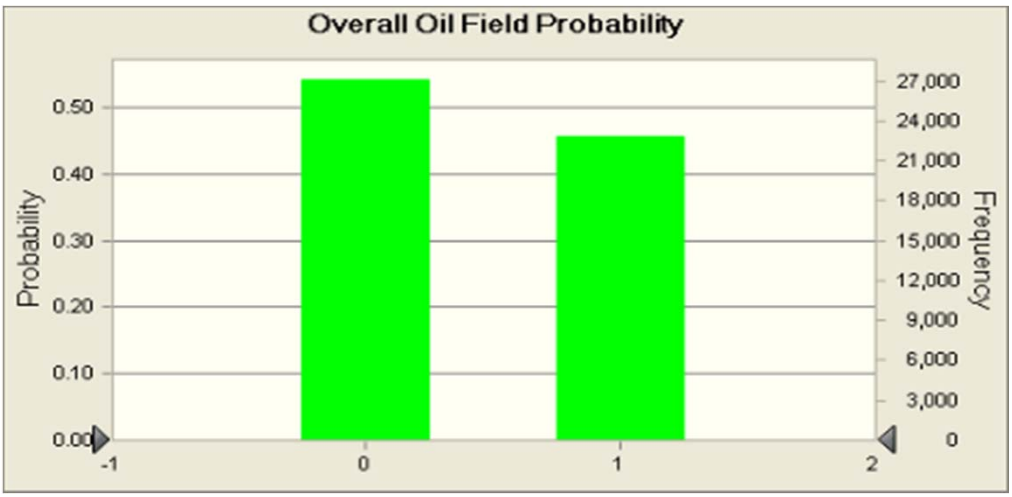
Statistics:	Forecast values
Trials	45,370
Mean	132.12
Median	108.10
Mode	---
Standard Deviation	78.37
Variance	6,141.28
Skewness	2.62
Kurtosis	13.17
Coefficient of Variability	0.5931
Minimum	51.42
Maximum	798.73
Range Width	747.31
Mean Standard Error	0.37
Filtered Values	4630

Forecast: Largest Oil Field (cont'd)

Percentiles:	MMBO
P100	51.42
P95	63.34
P90	68.48
P85	73.14
P80	77.50
P75	82.09
P70	86.70
P65	91.40
P60	96.46
P55	102.18
P50	108.10
P45	114.95
P40	122.36
P35	131.09
P30	141.50
P25	153.88
P20	170.04
P15	191.38
P10	222.86
P5	282.45
P0	798.73

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



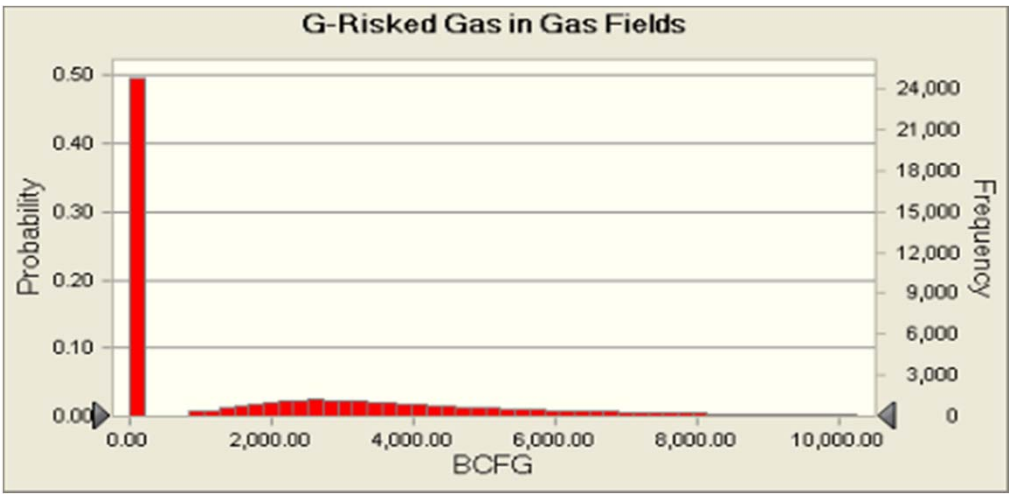
Statistics:	Forecast values	
Trials	50,000	
Mean	0.4573	= the probability of at least one undiscovered oil accumulation of minimum size or larger
Median	0.00	
Mode	0.00	
Standard Deviation	0.50	
Variance	0.25	
Skewness	0.1713	
Kurtosis	1.03	
Coefficient of Variability	1.09	
Minimum	0.00	
Maximum	1.00	
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	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 27,169.89
After 50,000 trials, the standard error of the mean is 12.88



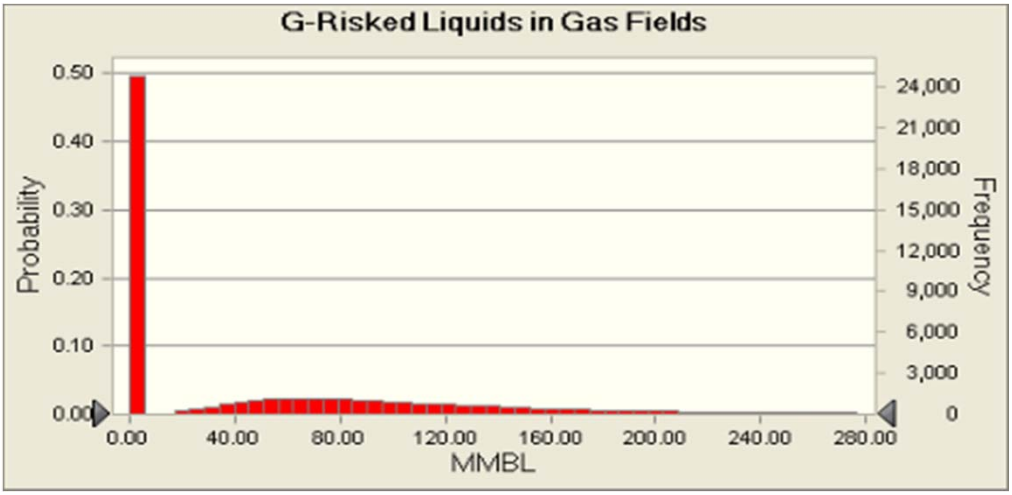
Statistics:	Forecast values
Trials	50,000
Mean	2,175.50
Median	942.14
Mode	0.00
Standard Deviation	2,879.66
Variance	8,292,431.42
Skewness	1.73
Kurtosis	7.21
Coefficient of Variability	1.32
Minimum	0.00
Maximum	27,169.89
Range Width	27,169.89
Mean Standard Error	12.88

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	941.69
P45	1,786.79
P40	2,263.80
P35	2,703.91
P30	3,165.97
P25	3,658.93
P20	4,246.08
P15	4,993.26
P10	5,995.99
P5	7,745.72
P0	27,169.89

Forecast: G-Risked Liquids in Gas Fields

Summary:
Entire range is from 0.00 to 852.67
After 50,000 trials, the standard error of the mean is 0.35



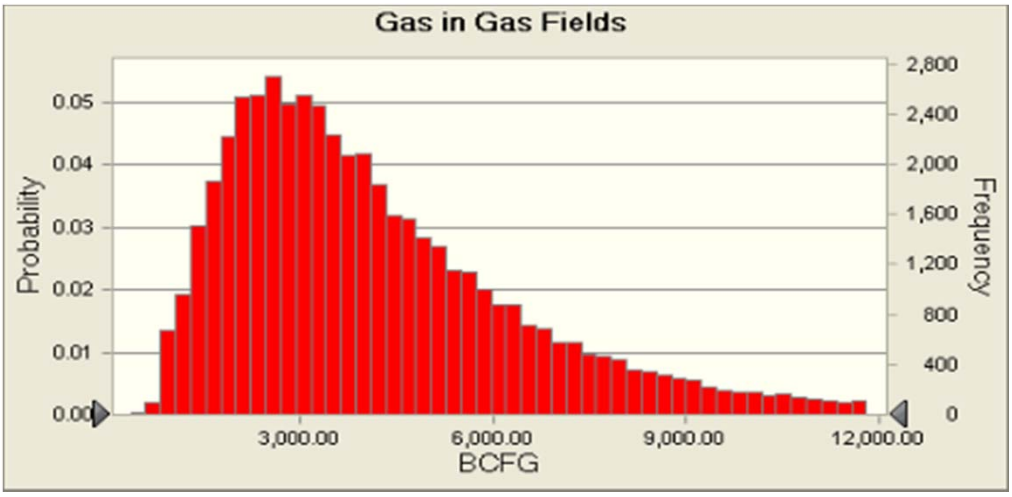
Statistics:	Forecast values
Trials	50,000
Mean	57.95
Median	21.79
Mode	0.00
Standard Deviation	77.91
Variance	6,070.41
Skewness	1.79
Kurtosis	7.51
Coefficient of Variability	1.34
Minimum	0.00
Maximum	852.67
Range Width	852.67
Mean Standard Error	0.35

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	21.77
P45	45.18
P40	58.49
P35	70.24
P30	82.74
P25	96.79
P20	113.04
P15	133.33
P10	161.40
P5	209.01
P0	852.67

Forecast: Conditional Gas in Gas Fields

Summary:
Entire range is from 347.48 to 27,169.89
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 11.98



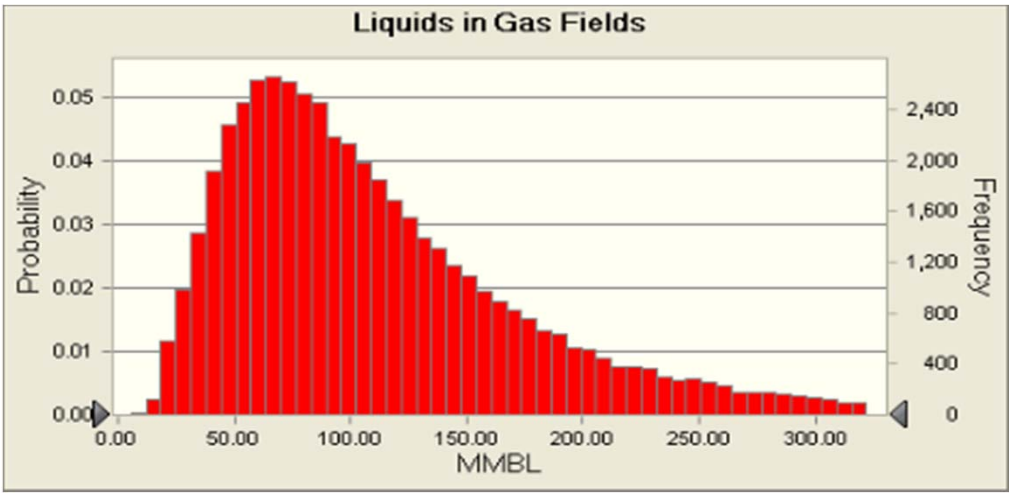
Statistics:	Forecast values
Trials	50,000
Mean	4,310.96
Median	3,640.90
Mode	---
Standard Deviation	2,678.75
Variance	7,175,720.28
Skewness	1.84
Kurtosis	8.30
Coefficient of Variability	0.6214
Minimum	347.48
Maximum	27,169.89
Range Width	26,822.41
Mean Standard Error	11.98

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

Percentiles:	BCFG
P100	347.48
P95	1,417.74
P90	1,739.55
P85	2,001.13
P80	2,231.30
P75	2,461.44
P70	2,678.32
P65	2,913.92
P60	3,142.42
P55	3,379.72
P50	3,640.82
P45	3,923.65
P40	4,218.26
P35	4,571.90
P30	4,960.35
P25	5,417.79
P20	5,958.95
P15	6,666.71
P10	7,687.93
P5	9,456.08
P0	27,169.89

Forecast: Conditional Liquids in Gas Fields

Summary:
Entire range is from 5.33 to 852.67
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 0.33



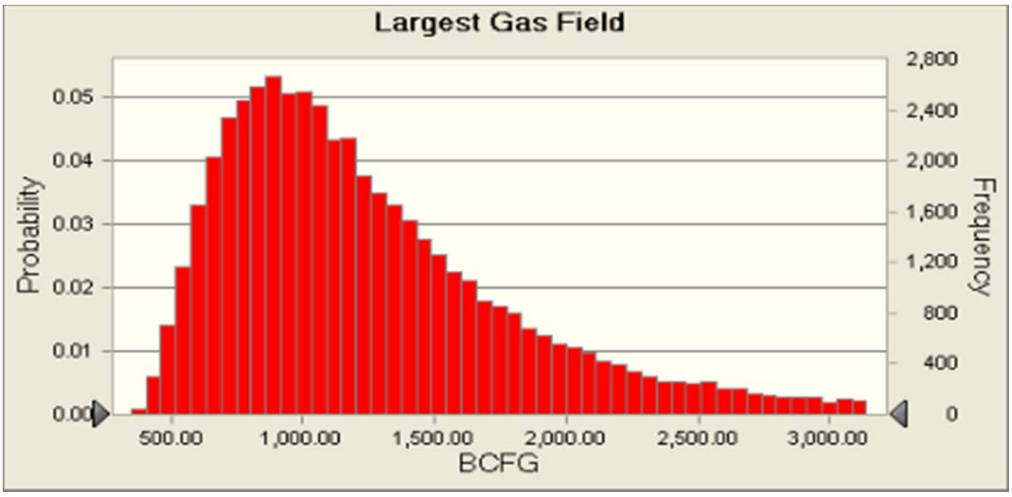
Statistics:	Forecast values
Trials	50,000
Mean	114.90
Median	96.31
Mode	---
Standard Deviation	74.00
Variance	5,476.42
Skewness	1.84
Kurtosis	8.30
Coefficient of Variability	0.6441
Minimum	5.33
Maximum	852.67
Range Width	847.34
Mean Standard Error	0.33

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

Percentiles:	MMBL
P100	5.33
P95	34.95
P90	43.94
P85	51.06
P80	57.60
P75	63.72
P70	69.79
P65	75.97
P60	82.39
P55	88.96
P50	96.31
P45	104.05
P40	112.48
P35	121.75
P30	132.54
P25	145.17
P20	160.57
P15	180.44
P10	208.66
P5	258.73
P0	852.67

Forecast: Largest Gas Field

Summary:
Entire range is from 347.48 to 4,797.27
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 2.94



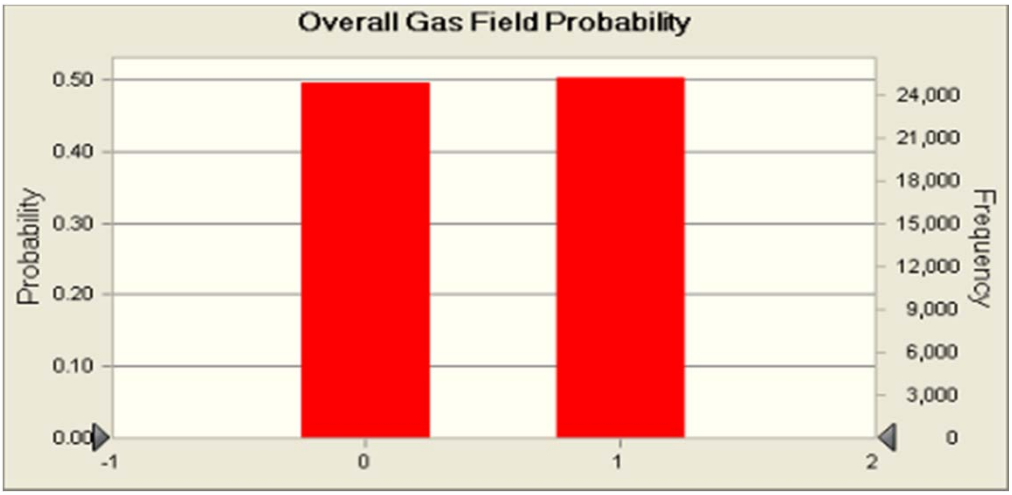
Statistics:	Forecast values
Trials	50,000
Mean	1,295.73
Median	1,128.44
Mode	---
Standard Deviation	657.94
Variance	432,891.31
Skewness	1.72
Kurtosis	6.93
Coefficient of Variability	0.5078
Minimum	347.48
Maximum	4,797.27
Range Width	4,449.79
Mean Standard Error	2.94

Forecast: Largest Gas Field (cont'd)

Percentiles:	BCFG
P100	347.48
P95	586.36
P90	666.18
P85	729.10
P80	787.16
P75	842.45
P70	896.24
P65	950.52
P60	1,007.27
P55	1,063.84
P50	1,128.41
P45	1,193.11
P40	1,268.61
P35	1,351.72
P30	1,445.17
P25	1,553.35
P20	1,692.04
P15	1,868.82
P10	2,130.96
P5	2,613.09
P0	4,797.27

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	0.5040	= the probability of at least one undiscovered gas accumulation of minimum size or larger
Median	1.00	
Mode	1.00	
Standard Deviation	0.50	
Variance	0.25	
Skewness	-0.0158	
Kurtosis	1.00	
Coefficient of Variability	0.9921	
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	1.00
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

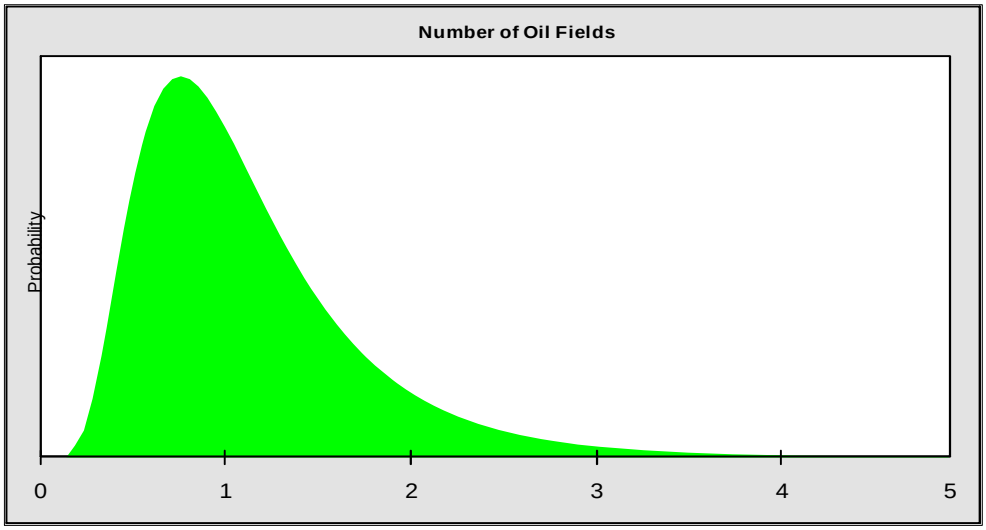
Assumptions

Assumption: Number of Oil Fields

Lognormal distribution with parameters:

Mean	1.15
Standard Deviation	0.64

Selected range is from 0.00 to 5.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	1.14	1.14
Median	1.00	1.00
Mode	---	---
Standard Deviation	0.62	0.62
Variance	0.38	0.39
Skewness	1.54	1.55
Kurtosis	6.56	6.59
Coefficient of Variability	0.5439	0.5450
Minimum	0.11	0.00
Maximum	4.99	5.00
Range Width	4.88	5.00
Mean Standard Error	0.00	---

Assumption: Number of Oil Fields (cont'd)

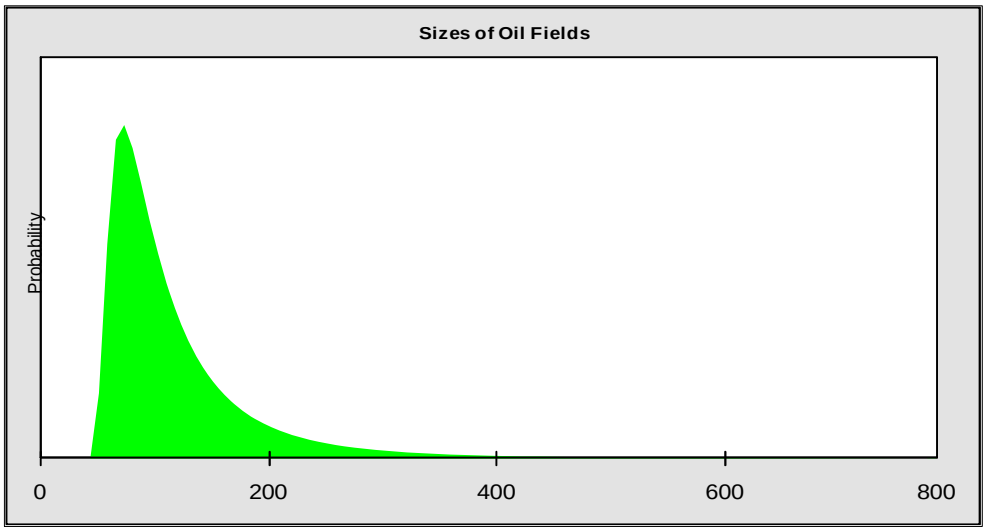
Percentiles:	Simulated values	Theoretical values
P100	0.11	0.00
P95	0.42	0.42
P90	0.51	0.51
P85	0.58	0.58
P80	0.64	0.64
P75	0.70	0.70
P70	0.76	0.76
P65	0.82	0.82
P60	0.87	0.88
P55	0.93	0.94
P50	1.00	1.00
P45	1.07	1.07
P40	1.14	1.14
P35	1.22	1.22
P30	1.31	1.31
P25	1.42	1.42
P20	1.55	1.55
P15	1.71	1.71
P10	1.94	1.94
P5	2.34	2.34
P0	4.99	5.00

Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	123.41
Standard Deviation	78.91

Selected range is from 50.00 to 800.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	123.10	122.50
Median	100.39	99.95
Mode	---	---
Standard Deviation	73.23	72.94
Variance	5,362.51	5,319.65
Skewness	2.87	2.96
Kurtosis	15.22	16.23
Coefficient of Variability	0.59	0.60
Minimum	51.42	50.00
Maximum	798.73	800.00
Range Width	747.31	750.00
Mean Standard Error	0.33	---

Assumption: Sizes of Oil Fields (cont'd)

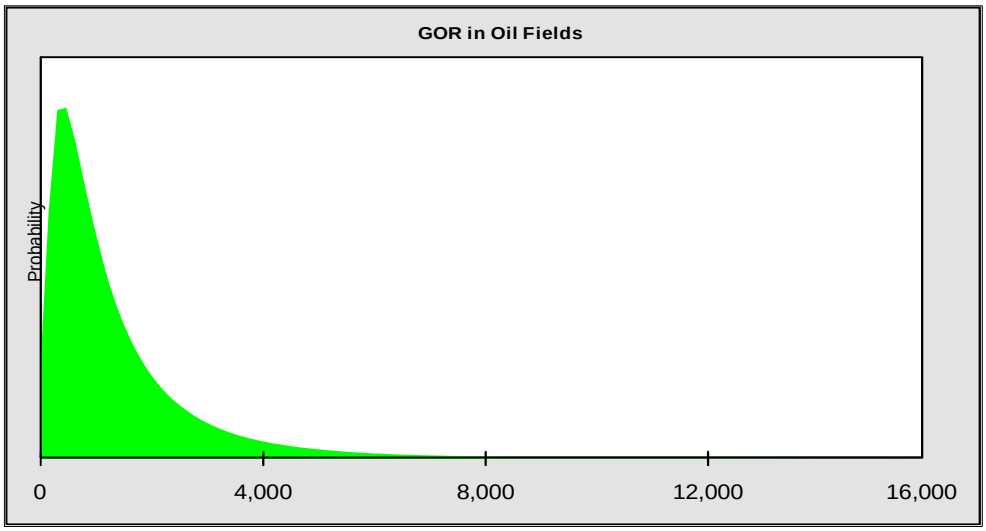
Percentiles:	Simulated values	Theoretical values
P100	51.42	50.00
P95	61.80	61.82
P90	66.18	66.25
P85	70.22	70.15
P80	74.00	73.90
P75	77.80	77.67
P70	81.74	81.55
P65	85.83	85.64
P60	90.27	90.01
P55	94.99	94.74
P50	100.39	99.95
P45	106.11	105.75
P40	112.93	112.35
P35	120.48	119.98
P30	129.56	129.03
P25	140.68	140.11
P20	155.29	154.28
P15	175.48	173.61
P10	205.16	203.04
P5	262.21	259.67
P0	798.73	800.00

Assumption: GOR in Oil Fields

Lognormal distribution with parameters:

Mean	1,495.55
Standard Deviation	1,663.02

Selected range is from 1.00 to 16,000.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	1,470.58	1,475.83
Median	992.91	998.88
Mode	---	---
Standard Deviation	1,520.39	1,529.89
Variance	2,311,588.72	2,340,578.38
Skewness	3.02	3.06
Kurtosis	16.70	17.10
Coefficient of Variability	1.03	1.04
Minimum	12.86	1.00
Maximum	15,972.62	16,000.00
Range Width	15,959.76	15,999.00
Mean Standard Error	6.80	---

Assumption: GOR in Oil Fields (cont'd)

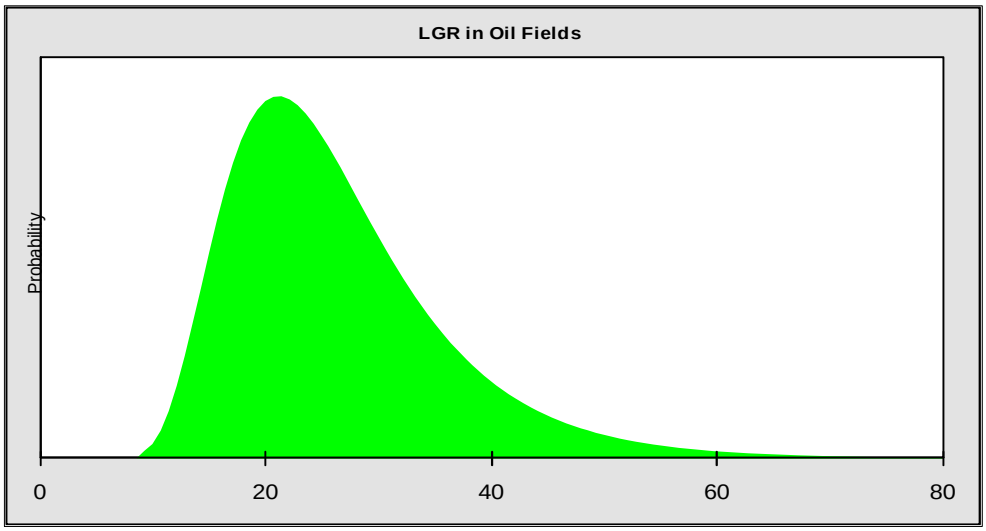
Percentiles:	Simulated values	Theoretical values
P100	12.86	1.00
P95	227.57	229.13
P90	314.05	317.06
P85	390.66	394.82
P80	467.23	470.04
P75	543.54	545.92
P70	623.58	624.46
P65	708.01	707.31
P60	796.71	796.07
P55	889.64	892.53
P50	992.88	998.88
P45	1,111.57	1,117.88
P40	1,245.74	1,253.33
P35	1,402.31	1,410.56
P30	1,591.42	1,597.61
P25	1,822.01	1,827.30
P20	2,111.83	2,121.94
P15	2,519.21	2,525.43
P10	3,148.23	3,142.51
P5	4,346.52	4,337.98
P0	15,972.62	16,000.00

Assumption: LGR in Oil Fields

Lognormal distribution with parameters:

Mean	26.92
Standard Deviation	9.82

Selected range is from 5.00 to 80.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	26.89	26.85
Median	25.03	24.99
Mode	---	---
Standard Deviation	9.65	9.61
Variance	93.20	92.44
Skewness	1.24	1.24
Kurtosis	5.23	5.25
Coefficient of Variability	0.3590	0.3580
Minimum	8.56	5.00
Maximum	79.97	80.00
Range Width	71.41	75.00
Mean Standard Error	0.04	---

Assumption: LGR in Oil Fields (cont'd)

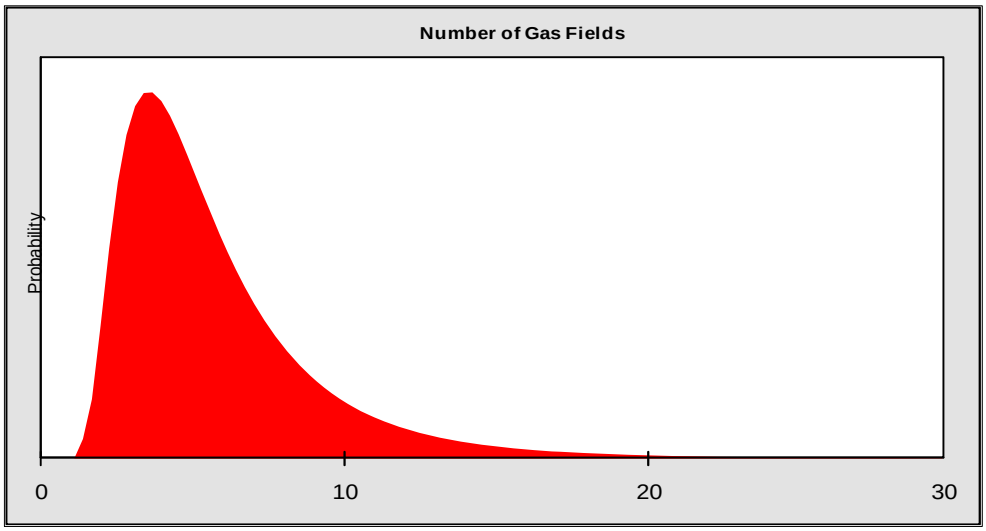
Percentiles:	Simulated values	Theoretical values
P100	8.56	5.00
P95	14.87	14.89
P90	16.56	16.56
P85	17.84	17.83
P80	18.94	18.95
P75	19.98	19.98
P70	20.96	20.98
P65	21.95	21.95
P60	22.95	22.94
P55	23.97	23.94
P50	25.03	24.99
P45	26.19	26.09
P40	27.34	27.27
P35	28.62	28.57
P30	30.04	30.01
P25	31.67	31.66
P20	33.64	33.63
P15	36.17	36.11
P10	39.74	39.53
P5	45.39	45.26
P0	79.97	80.00

Assumption: Number of Gas Fields

Lognormal distribution with parameters:

Mean	5.91
Standard Deviation	3.50

Selected range is from 1.00 to 30.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	5.88	5.88
Median	4.99	5.00
Mode	---	---
Standard Deviation	3.34	3.36
Variance	11.18	11.32
Skewness	1.99	1.99
Kurtosis	8.96	8.95
Coefficient of Variability	0.5692	0.5719
Minimum	1.30	1.00
Maximum	29.98	30.00
Range Width	28.68	29.00
Mean Standard Error	0.01	---

Assumption: Number of Gas Fields (cont'd)

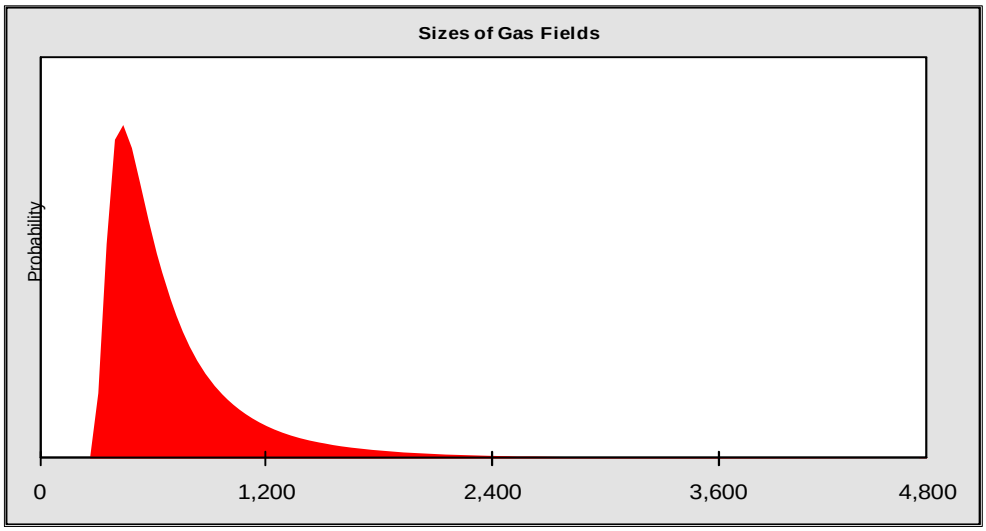
Percentiles:	Simulated values	Theoretical values
P100	1.30	1.00
P95	2.40	2.39
P90	2.77	2.76
P85	3.07	3.06
P80	3.34	3.33
P75	3.60	3.59
P70	3.87	3.86
P65	4.13	4.12
P60	4.41	4.40
P55	4.68	4.69
P50	4.99	5.00
P45	5.31	5.33
P40	5.68	5.70
P35	6.11	6.12
P30	6.59	6.59
P25	7.15	7.15
P20	7.84	7.85
P15	8.74	8.76
P10	10.04	10.07
P5	12.34	12.42
P0	29.98	30.00

Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:

Mean	740.46
Standard Deviation	473.48

Selected range is from 300.00 to 4,800.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	736.57	734.97
Median	599.21	599.67
Mode	---	---
Standard Deviation	441.98	437.62
Variance	195,346.33	191,507.34
Skewness	2.99	2.96
Kurtosis	16.53	16.23
Coefficient of Variability	0.60	0.60
Minimum	309.49	300.00
Maximum	4,750.15	4,800.00
Range Width	4,440.66	4,500.00
Mean Standard Error	1.98	---

Assumption: Sizes of Gas Fields (cont'd)

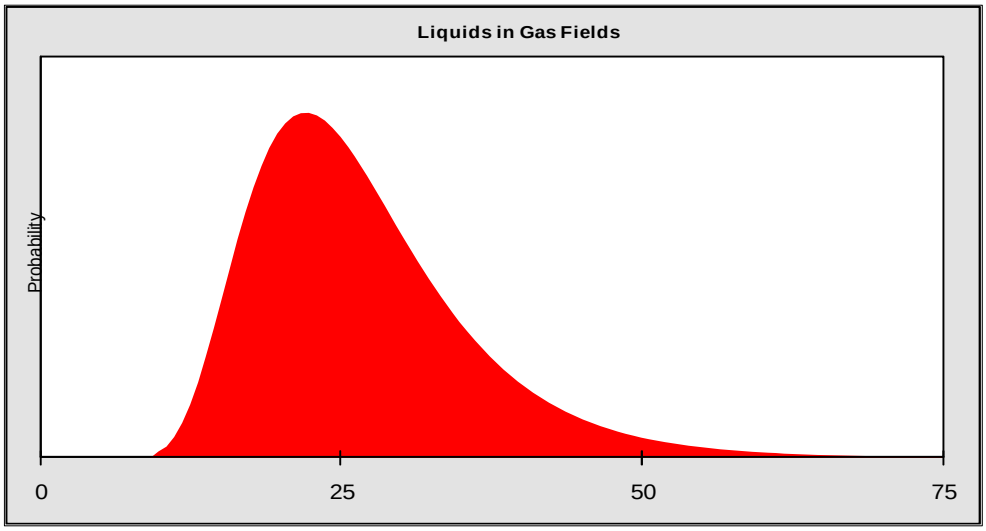
Percentiles:	Simulated values	Theoretical values
P100	309.49	300.00
P95	371.92	370.94
P90	397.79	397.53
P85	421.21	420.89
P80	443.43	443.39
P75	466.49	466.00
P70	489.16	489.32
P65	512.94	513.85
P60	539.19	540.05
P55	568.21	568.45
P50	599.20	599.67
P45	633.86	634.52
P40	674.64	674.07
P35	720.08	719.87
P30	774.50	774.19
P25	840.62	840.68
P20	927.50	925.70
P15	1,045.57	1,041.68
P10	1,222.06	1,218.22
P5	1,566.13	1,558.03
P0	4,750.15	4,800.00

Assumption: Liquids in Gas Fields

Lognormal distribution with parameters:

Mean	26.70
Standard Deviation	9.31

Selected range is from 4.00 to 75.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	26.65	26.64
Median	25.01	24.99
Mode	---	---
Standard Deviation	9.16	9.13
Variance	83.82	83.38
Skewness	1.13	1.13
Kurtosis	4.83	4.86
Coefficient of Variability	0.3435	0.3428
Minimum	8.54	4.00
Maximum	74.98	75.00
Range Width	66.44	71.00
Mean Standard Error	0.04	---

Assumption: Liquids in Gas Fields (cont'd)

Percentiles:	Simulated values	Theoretical values
P100	8.54	4.00
P95	14.98	14.98
P90	16.64	16.67
P85	17.92	17.95
P80	18.98	19.07
P75	20.08	20.09
P70	21.06	21.07
P65	22.03	22.03
P60	23.03	23.00
P55	24.00	23.98
P50	25.01	24.99
P45	26.06	26.05
P40	27.19	27.19
P35	28.47	28.43
P30	29.84	29.80
P25	31.38	31.37
P20	33.22	33.23
P15	35.59	35.55
P10	38.79	38.73
P5	44.16	44.02
P0	74.98	75.00

End of Assumptions

Simulation started on 6/14/2007 at 11:06:34
Simulation stopped on 6/14/2007 at 11:15:38