Appendix 15. Detailed Assessment Results for Greater Ungava Fault Zone Assessment Unit 52080105

Greater Ungava Fault Zone

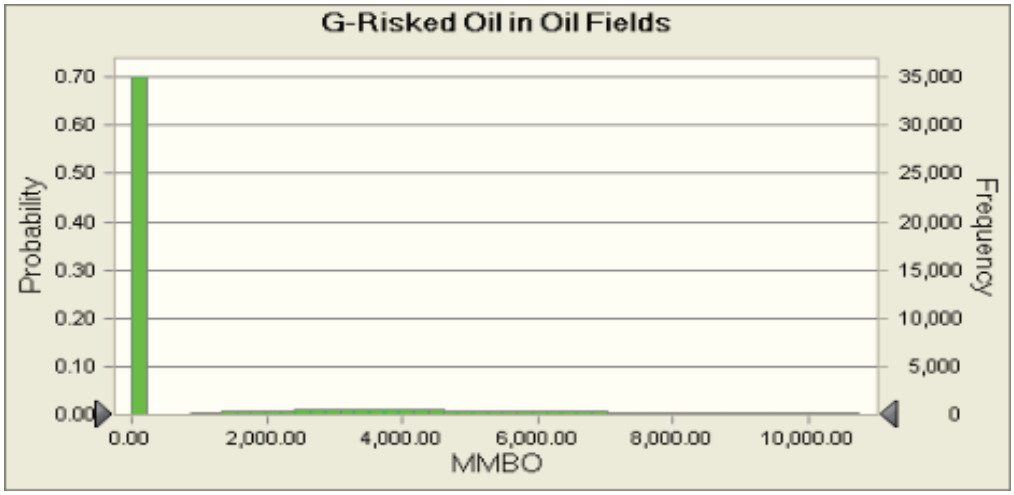
Monte Carlo Results

Forecast: G-Risked Oil in Oil Fields

Summary:

Entire range is from 0.00 to 35,578.17

After 50,000 trials, the standard error of the mean is 14.46



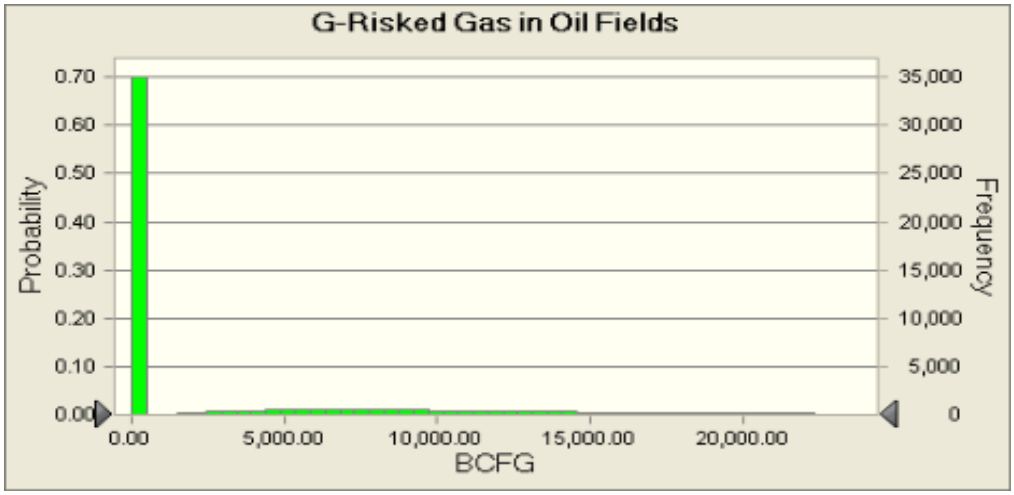
Statistics:	Forecast values
Trials	50,000
Mean	1,674.86
Median	0.00
Mode	0.00
Standard Deviation	3,232.70
Variance	10,450,362.71
Skewness	2.47
Kurtosis	10.61
Coefficient of Variability	1.93
Minimum	0.00
Maximum	35,578.17
Range Width	35,578.17
Mean Standard Error	14.46

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	2,476.33
P20	3,574.18
P15	4,746.64
P10	6,199.69
P5	8,514.35
P0	35,578.17

Forecast: G-Risked Gas in Oil Fields

Summary:
Entire range is from 0.00 to 92,810.74
After 50,000 trials, the standard error of the mean is 32.19



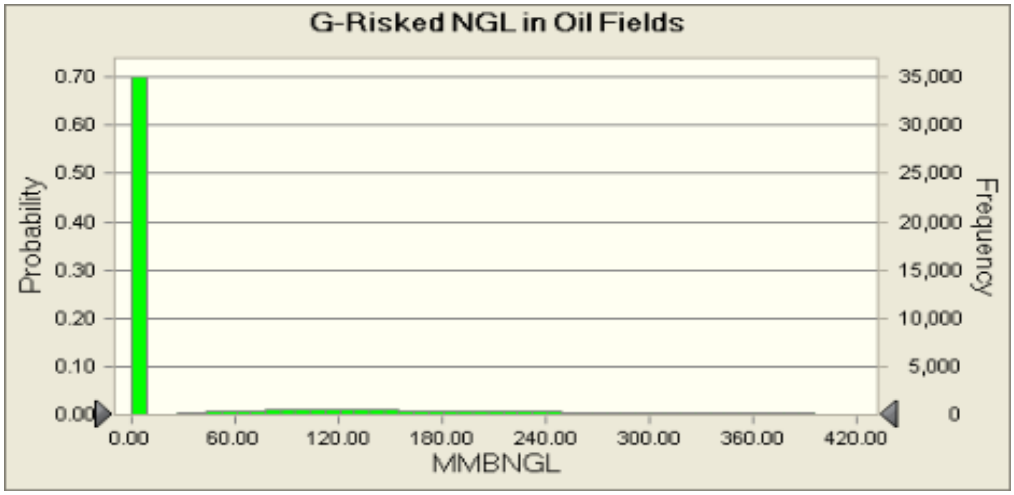
Statistics:	Forecast values
Trials	50,000
Mean	3,622.06
Median	0.00
Mode	0.00
Standard Deviation	7,197.27
Variance	51,800,654.39
Skewness	2.68
Kurtosis	12.41
Coefficient of Variability	1.99
Minimum	0.00
Maximum	92,810.74
Range Width	92,810.74
Mean Standard Error	32.19

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	4,989.94
P20	7,396.53
P15	9,979.74
P10	13,262.94
P5	18,770.98
P0	92,810.74

Forecast: G-Risked NGL in Oil Fields

Summary:
Entire range is from 0.00 to 1,732.23
After 50,000 trials, the standard error of the mean is 0.57



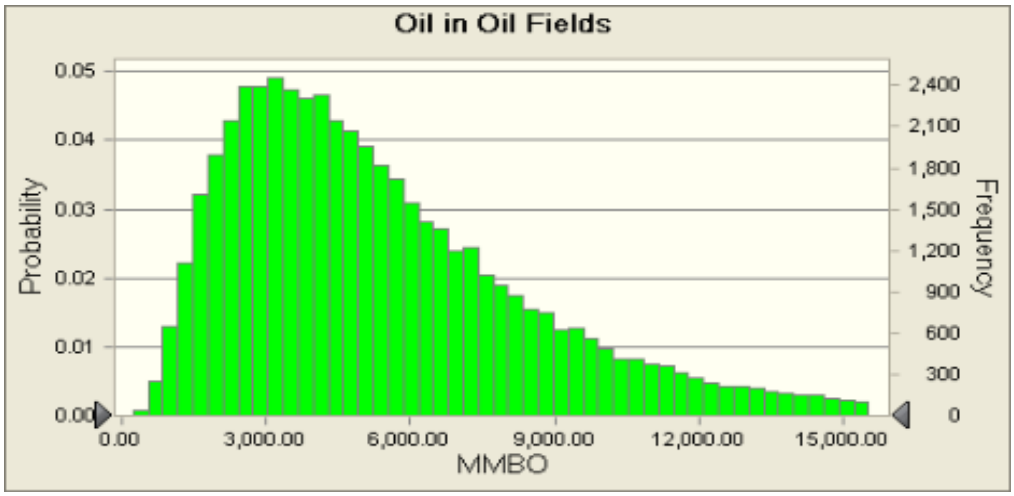
Statistics:	Forecast values
Trials	50,000
Mean	63.52
Median	0.00
Mode	0.00
Standard Deviation	127.66
Variance	16,297.14
Skewness	2.79
Kurtosis	13.47
Coefficient of Variability	2.01
Minimum	0.00
Maximum	1,732.23
Range Width	1,732.23
Mean Standard Error	0.57

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	85.53
P20	128.47
P15	174.32
P10	231.30
P5	329.20
P0	1,732.23

Forecast: Conditional Oil in Oil Fields

Summary:
Entire range is from 219.56 to 36,329.42
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 15.92



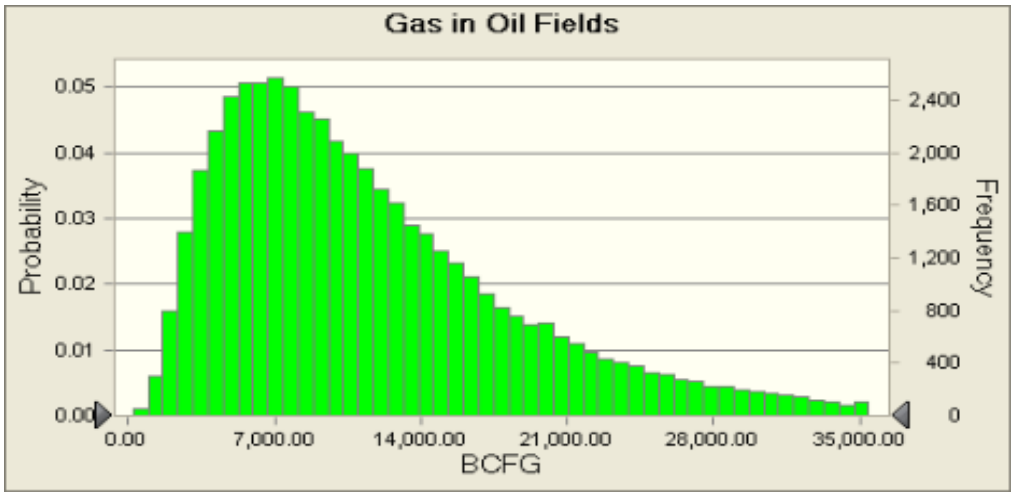
Statistics:	Forecast values
Trials	50,000
Mean	5,574.35
Median	4,737.98
Mode	---
Standard Deviation	3,559.16
Variance	12,667,584.51
Skewness	1.62
Kurtosis	7.12
Coefficient of Variability	0.6385
Minimum	219.56
Maximum	36,329.42
Range Width	36,109.87
Mean Standard Error	15.92

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

Percentiles:	MMBO
P100	219.56
P95	1,564.02
P90	2,011.46
P85	2,385.50
P80	2,711.86
P75	3,037.00
P70	3,354.66
P65	3,688.90
P60	4,030.08
P55	4,361.90
P50	4,737.97
P45	5,124.01
P40	5,550.15
P35	6,019.30
P30	6,566.11
P25	7,179.97
P20	7,924.62
P15	8,867.38
P10	10,179.28
P5	12,492.00
P0	36,329.42

Forecast: Conditional Gas in Oil Fields

Summary:
Entire range is from 214.85 to 101,744.92
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 37.31



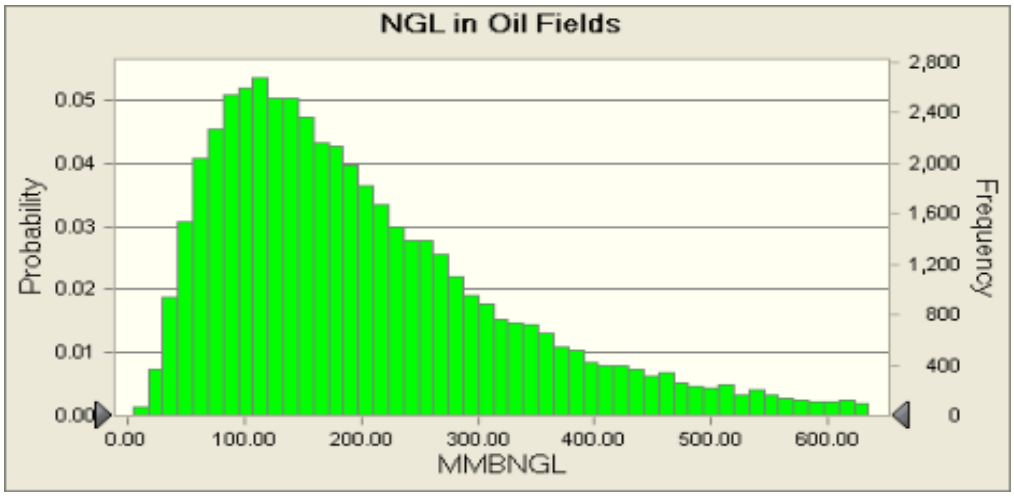
Statistics:	Forecast values
Trials	50,000
Mean	12,075.76
Median	9,999.30
Mode	---
Standard Deviation	8,342.18
Variance	69,592,045.58
Skewness	1.82
Kurtosis	8.34
Coefficient of Variability	0.6908
Minimum	214.85
Maximum	101,744.92
Range Width	101,530.07
Mean Standard Error	37.31

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

Percentiles:	BCFG
P100	214.85
P95	3,073.13
P90	4,022.71
P85	4,820.26
P80	5,521.30
P75	6,239.43
P70	6,942.85
P65	7,635.03
P60	8,377.91
P55	9,183.51
P50	9,999.06
P45	10,888.79
P40	11,850.67
P35	12,896.29
P30	14,134.55
P25	15,528.70
P20	17,264.51
P15	19,589.31
P10	22,710.08
P5	28,337.51
P0	101,744.92

Forecast: Conditional NGL in Oil Fields

Summary:
Entire range is from 3.47 to 1,850.89
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 0.68



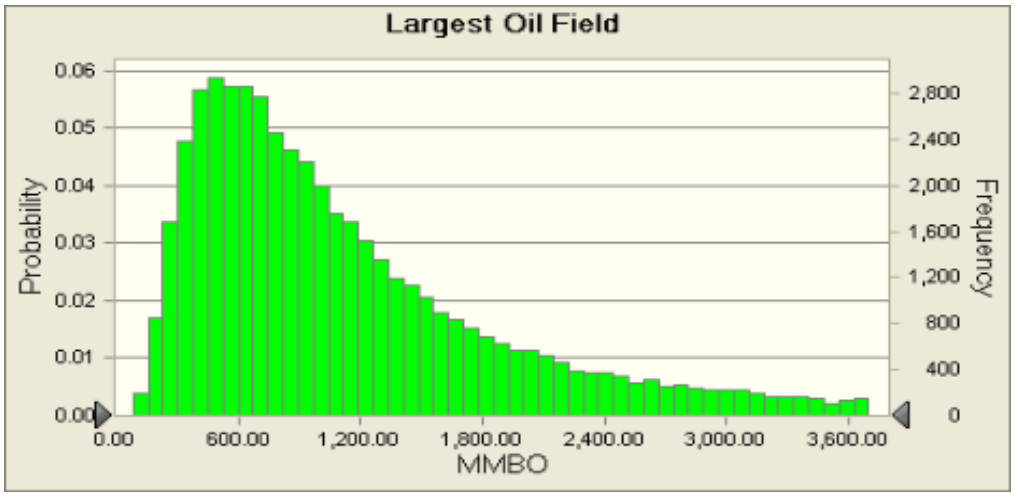
Statistics:	Forecast values
Trials	50,000
Mean	212.10
Median	173.90
Mode	---
Standard Deviation	151.16
Variance	22,849.85
Skewness	1.96
Kurtosis	9.57
Coefficient of Variability	0.7127
Minimum	3.47
Maximum	1,850.89
Range Width	1,847.42
Mean Standard Error	0.68

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

Percentiles:	MMBNGL
P100	3.47
P95	52.09
P90	68.31
P85	82.47
P80	94.94
P75	107.42
P70	119.54
P65	132.34
P60	145.17
P55	158.91
P50	173.90
P45	189.43
P40	206.31
P35	225.61
P30	248.14
P25	272.19
P20	303.74
P15	345.02
P10	403.36
P5	506.51
P0	1,850.89

Forecast: Largest Oil Field

Summary:
Entire range is from 79.95 to 4,998.39
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 4.00



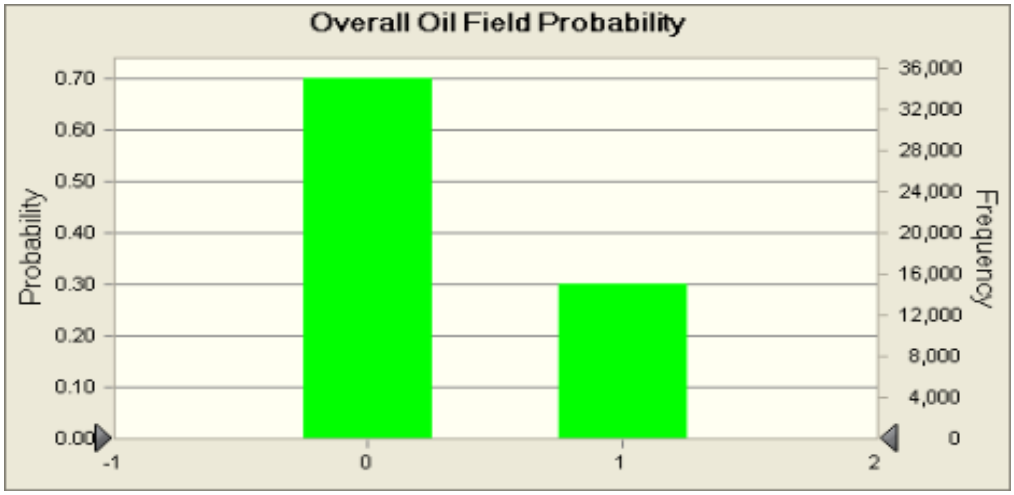
Statistics:	Forecast values
Trials	50,000
Mean	1,192.95
Median	920.77
Mode	---
Standard Deviation	895.19
Variance	801,371.71
Skewness	1.63
Kurtosis	5.72
Coefficient of Variability	0.7504
Minimum	79.95
Maximum	4,998.39
Range Width	4,918.44
Mean Standard Error	4.00

Forecast: Largest Oil Field (cont'd)

Percentiles:	MMBO
P100	79.95
P95	293.57
P90	372.80
P85	438.95
P80	502.74
P75	564.89
P70	627.62
P65	694.72
P60	763.32
P55	840.86
P50	920.76
P45	1,009.51
P40	1,109.97
P35	1,223.45
P30	1,356.91
P25	1,520.70
P20	1,730.72
P15	2,017.81
P10	2,429.38
P5	3,128.49
P0	4,998.39

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	0.2988
Median	0.00
Mode	0.00
Standard Deviation	0.46
Variance	0.21
Skewness	0.8792
Kurtosis	1.77
Coefficient of Variability	1.53
Minimum	0.00
Maximum	1.00
Range Width	1.00
Mean Standard Error	0.00

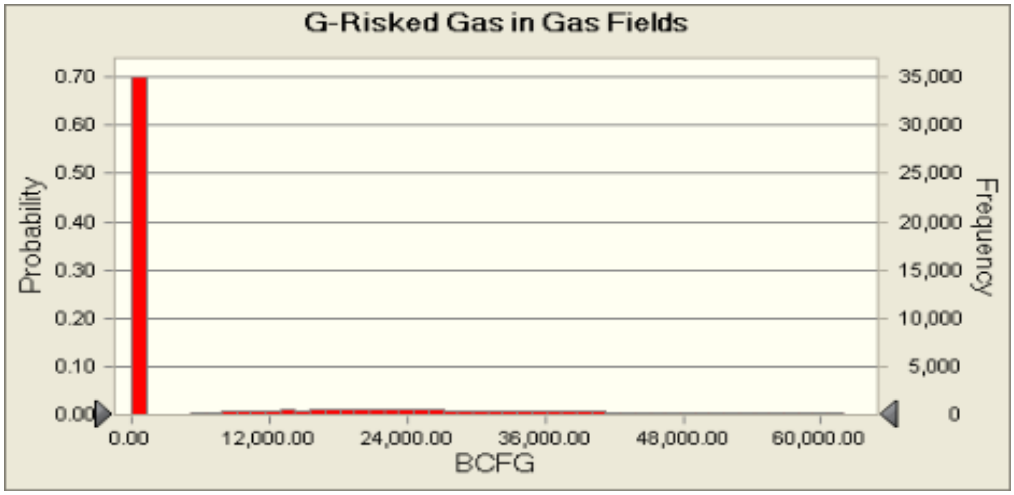
= the probability of at least one undiscovered oil accumulation of minimum size or larger

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	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 186,081.77
After 50,000 trials, the standard error of the mean is 85.13



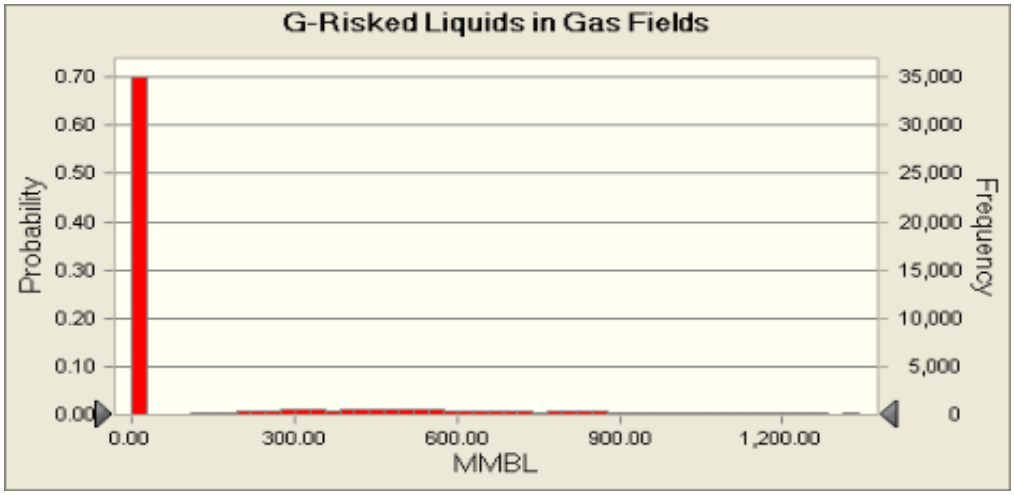
Statistics:	Forecast values
Trials	50,000
Mean	9,891.65
Median	0.00
Mode	0.00
Standard Deviation	19,035.31
Variance	362,342,881.66
Skewness	2.43
Kurtosis	10.18
Coefficient of Variability	1.92
Minimum	0.00
Maximum	186,081.77
Range Width	186,081.77
Mean Standard Error	85.13

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	14,579.37
P20	21,240.05
P15	28,059.60
P10	36,732.15
P5	50,624.58
P0	186,081.77

Forecast: G-Risked Liquids in Gas Fields

Summary:
Entire range is from 0.00 to 3,898.34
After 50,000 trials, the standard error of the mean is 1.81



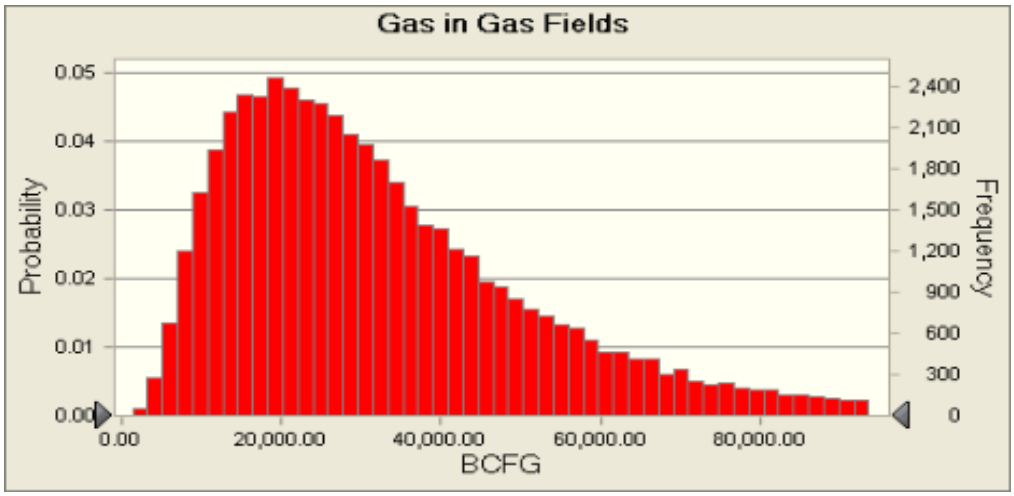
Statistics:	Forecast values
Trials	50,000
Mean	208.88
Median	0.00
Mode	0.00
Standard Deviation	403.71
Variance	162,982.25
Skewness	2.46
Kurtosis	10.45
Coefficient of Variability	1.93
Minimum	0.00
Maximum	3,898.34
Range Width	3,898.34
Mean Standard Error	1.81

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	305.30
P20	443.16
P15	588.09
P10	780.62
P5	1,072.70
P0	3,898.34

Forecast: Conditional Gas in Gas Fields

Summary:
Entire range is from 1,440.00 to 193,978.35
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 95.87



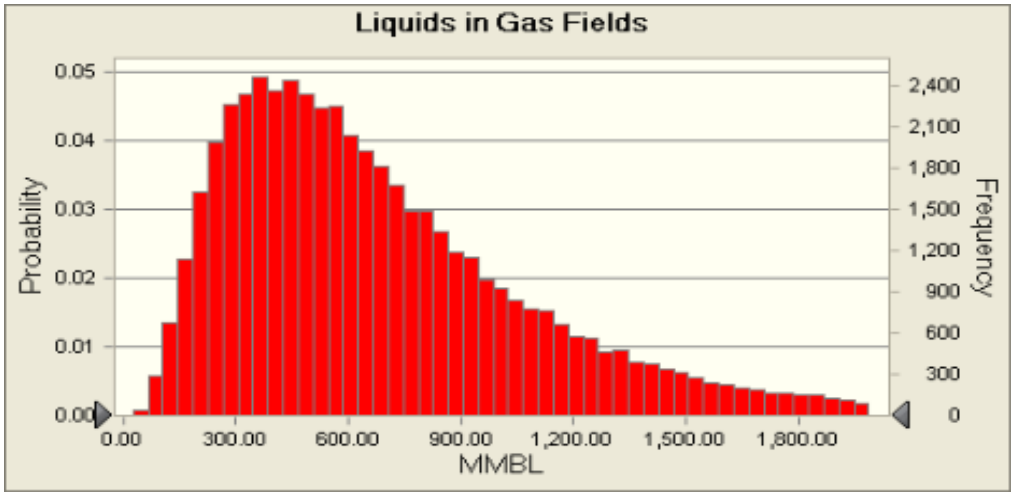
Statistics:	Forecast values
Trials	50,000
Mean	33,497.18
Median	28,421.48
Mode	---
Standard Deviation	21,437.68
Variance	459,573,943.33
Skewness	1.60
Kurtosis	6.91
Coefficient of Variability	0.6400
Minimum	1,440.00
Maximum	193,978.35
Range Width	192,538.34
Mean Standard Error	95.87

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

Percentiles:	BCFG
P100	1,440.00
P95	9,360.32
P90	12,025.27
P85	14,201.71
P80	16,222.83
P75	18,239.46
P70	20,154.96
P65	22,123.67
P60	24,177.58
P55	26,260.04
P50	28,421.21
P45	30,753.63
P40	33,262.59
P35	36,096.79
P30	39,438.60
P25	43,086.03
P20	47,647.59
P15	53,422.50
P10	61,403.90
P5	75,254.11
P0	193,978.35

Forecast: Conditional Liquids in Gas Fields

Summary:
Entire range is from 25.79 to 4,055.18
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 2.04



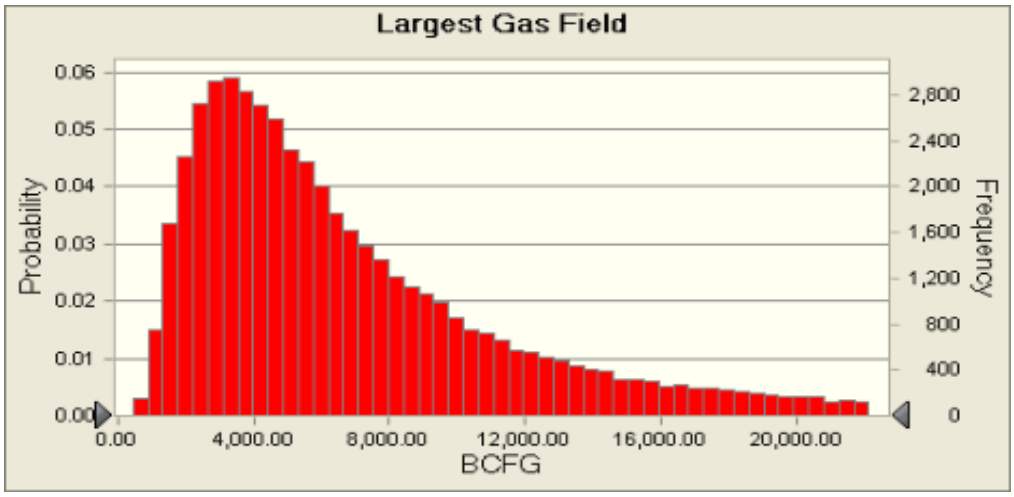
Statistics:	Forecast values
Trials	50,000
Mean	707.11
Median	597.33
Mode	---
Standard Deviation	457.00
Variance	208,846.15
Skewness	1.62
Kurtosis	6.95
Coefficient of Variability	0.6463
Minimum	25.79
Maximum	4,055.18
Range Width	4,029.39
Mean Standard Error	2.04

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

Percentiles:	MMBL
P100	25.79
P95	196.32
P90	252.38
P85	297.40
P80	340.66
P75	381.47
P70	423.38
P65	464.49
P60	507.70
P55	551.21
P50	597.28
P45	648.12
P40	701.06
P35	763.62
P30	830.18
P25	911.01
P20	1,006.63
P15	1,131.08
P10	1,301.50
P5	1,597.37
P0	4,055.18

Forecast: Largest Gas Field

Summary:
Entire range is from 439.62 to 29,993.71
Filter range is from 0.00 to Infinity
After 50,000 trials, the standard error of the mean is 23.91



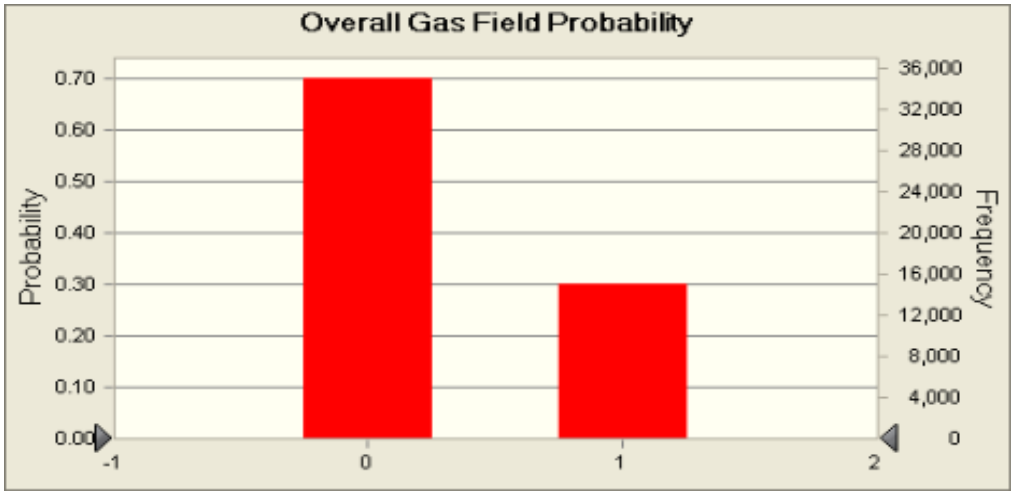
Statistics:	Forecast values
Trials	50,000
Mean	7,164.28
Median	5,531.24
Mode	---
Standard Deviation	5,346.23
Variance	28,582,151.22
Skewness	1.61
Kurtosis	5.63
Coefficient of Variability	0.7462
Minimum	439.62
Maximum	29,993.71
Range Width	29,554.09
Mean Standard Error	23.91

Forecast: Largest Gas Field (cont'd)

Percentiles:	BCFG
P100	439.62
P95	1,751.99
P90	2,240.45
P85	2,644.69
P80	3,025.96
P75	3,395.55
P70	3,783.33
P65	4,181.99
P60	4,602.92
P55	5,042.09
P50	5,531.18
P45	6,059.50
P40	6,677.62
P35	7,375.71
P30	8,211.79
P25	9,197.46
P20	10,421.16
P15	12,130.72
P10	14,538.88
P5	18,719.79
P0	29,993.71

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	0.2988
Median	0.00
Mode	0.00
Standard Deviation	0.46
Variance	0.21
Skewness	0.8792
Kurtosis	1.77
Coefficient of Variability	1.53
Minimum	0.00
Maximum	1.00
Range Width	1.00
Mean Standard Error	0.00

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

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

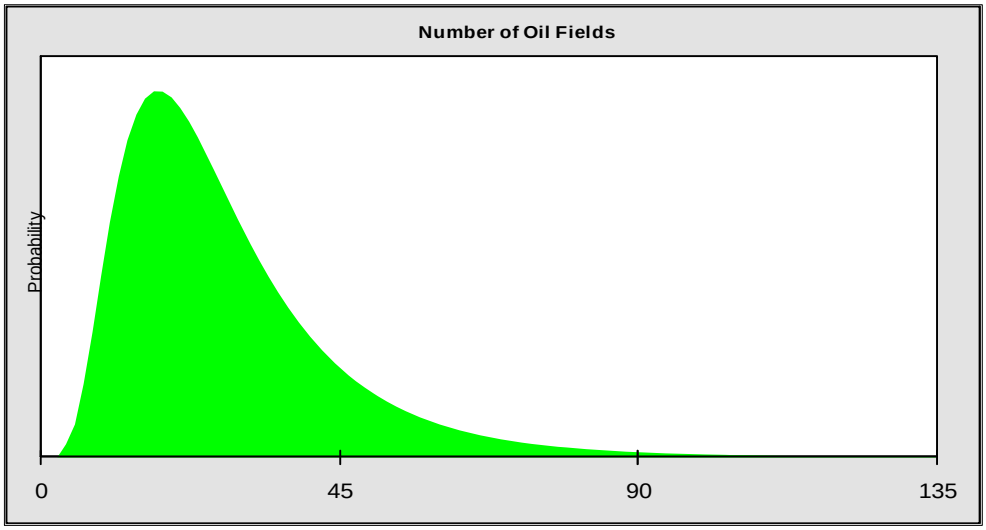
Assumptions

Assumption: Number of Oil Fields

Lognormal distribution with parameters:

Mean	29.02
Standard Deviation	16.88

Selected range is from 1.00 to 135.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	28.91	28.89
Median	25.06	24.98
Mode	---	---
Standard Deviation	16.30	16.36
Variance	265.66	267.73
Skewness	1.65	1.68
Kurtosis	7.11	7.21
Coefficient of Variability	0.5639	0.5664
Minimum	3.53	1.00
Maximum	134.86	135.00
Range Width	131.33	134.00
Mean Standard Error	0.07	---

Assumption: Number of Oil Fields (cont'd)

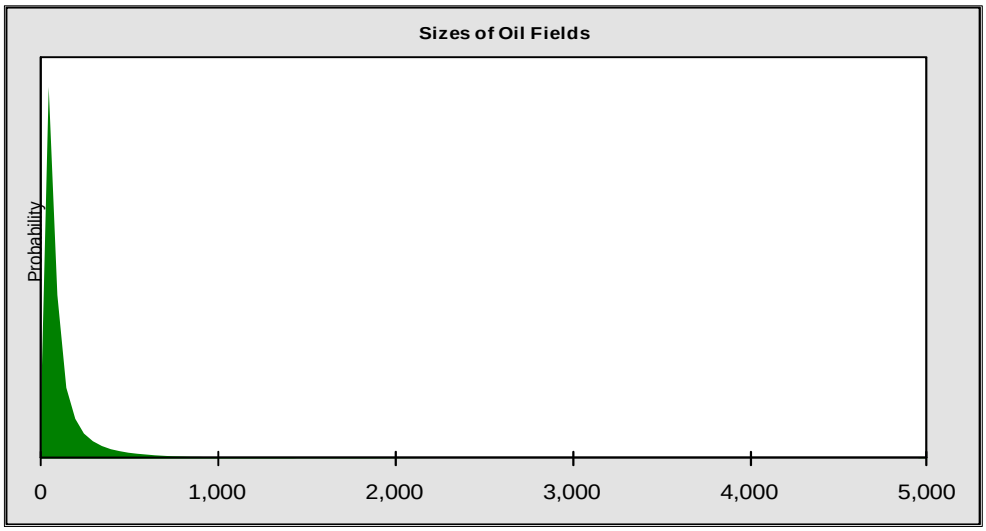
Percentiles:	Simulated values	Theoretical values
P100	3.53	1.00
P95	10.57	10.61
P90	12.76	12.76
P85	14.44	14.48
P80	16.04	16.02
P75	17.51	17.48
P70	18.95	18.92
P65	20.45	20.36
P60	21.95	21.83
P55	23.45	23.36
P50	25.06	24.98
P45	26.83	26.72
P40	28.69	28.61
P35	30.75	30.71
P30	33.14	33.10
P25	35.85	35.89
P20	39.23	39.28
P15	43.62	43.64
P10	49.88	49.84
P5	60.88	60.65
P0	134.86	135.00

Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	201.07
Standard Deviation	430.72

Selected range is from 50.00 to 5,000.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	194.92	193.21
Median	100.53	99.91
Mode	---	---
Standard Deviation	309.68	305.62
Variance	95,904.39	93,400.69
Skewness	6.21	6.32
Kurtosis	58.27	60.37
Coefficient of Variability	1.59	1.58
Minimum	50.12	50.00
Maximum	4,976.83	5,000.00
Range Width	4,926.72	4,950.00
Mean Standard Error	1.38	---

Assumption: Sizes of Oil Fields (cont'd)

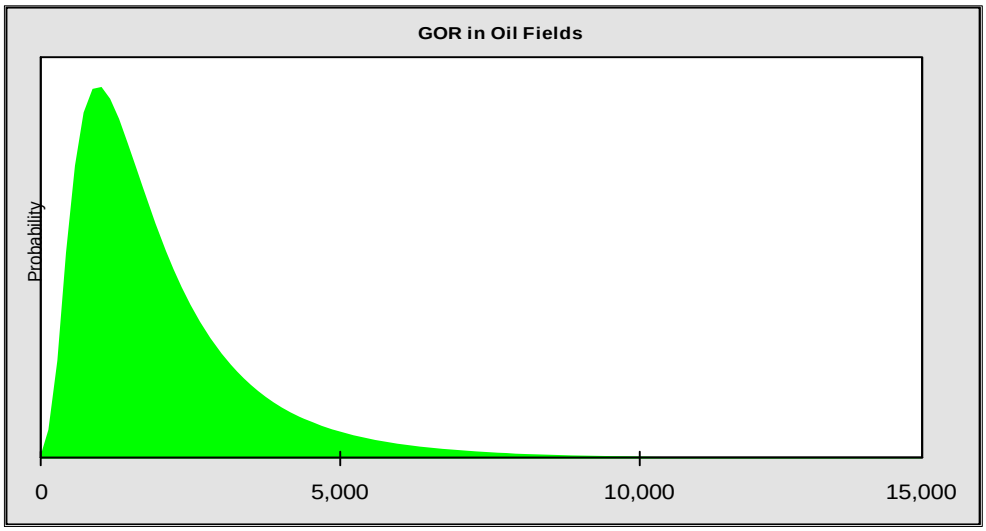
Percentiles:	Simulated values	Theoretical values
P100	50.12	50.00
P95	54.39	54.33
P90	57.60	57.43
P85	60.90	60.70
P80	64.58	64.29
P75	68.66	68.32
P70	73.23	72.89
P65	78.64	78.15
P60	84.75	84.25
P55	91.80	91.41
P50	100.53	99.91
P45	110.44	110.15
P40	123.37	122.71
P35	139.44	138.45
P30	159.37	158.73
P25	185.79	185.85
P20	224.20	224.05
P15	283.30	282.27
P10	388.73	383.69
P5	627.56	619.33
P0	4,976.83	5,000.00

Assumption: GOR in Oil Fields

Lognormal distribution with parameters:

Mean	2,177.90
Standard Deviation	1,732.86

Selected range is from 50.00 to 15,000.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	2,167.35	2,161.42
Median	1,706.99	1,698.52
Mode	---	---
Standard Deviation	1,648.10	1,648.56
Variance	2,716,245.53	2,717,764.83
Skewness	2.24	2.27
Kurtosis	10.58	10.76
Coefficient of Variability	0.7604	0.7627
Minimum	123.56	50.00
Maximum	14,847.74	15,000.00
Range Width	14,724.18	14,950.00
Mean Standard Error	7.37	---

Assumption: GOR in Oil Fields (cont'd)

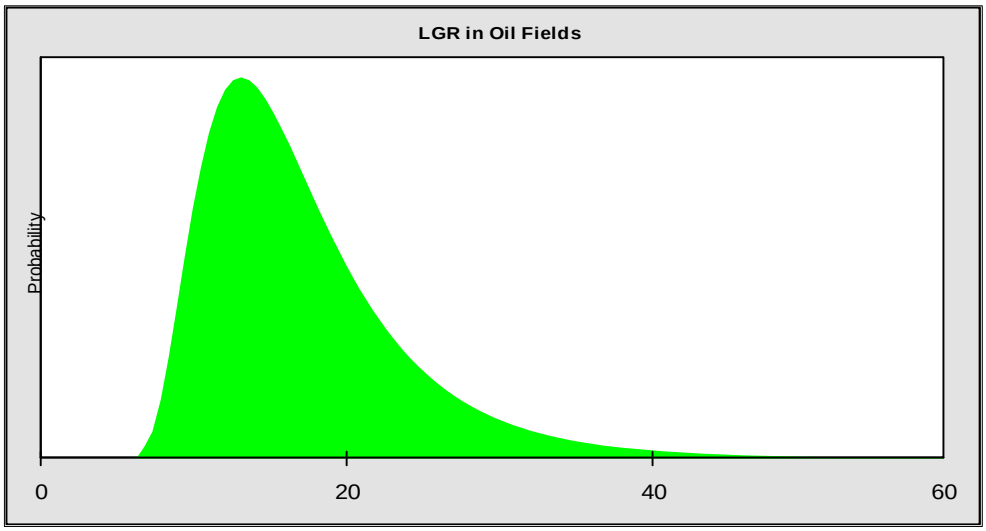
Percentiles:	Simulated values	Theoretical values
P100	123.56	50.00
P95	561.13	560.30
P90	712.44	711.20
P85	835.91	837.48
P80	954.39	954.82
P75	1,067.61	1,069.32
P70	1,186.76	1,184.43
P65	1,307.65	1,302.66
P60	1,430.40	1,426.21
P55	1,563.93	1,557.32
P50	1,706.98	1,698.52
P45	1,863.99	1,852.93
P40	2,038.90	2,024.60
P35	2,225.06	2,219.19
P30	2,444.44	2,444.96
P25	2,720.54	2,714.91
P20	3,058.66	3,051.23
P15	3,507.36	3,496.68
P10	4,179.90	4,150.84
P5	5,381.95	5,348.58
P0	14,847.74	15,000.00

Assumption: LGR in Oil Fields

Lognormal distribution with parameters:

Mean	17.60
Standard Deviation	7.03

Selected range is from 5.00 to 60.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	17.54	17.55
Median	16.00	15.99
Mode	---	---
Standard Deviation	6.85	6.84
Variance	46.97	46.75
Skewness	1.55	1.55
Kurtosis	6.58	6.59
Coefficient of Variability	0.3907	0.3897
Minimum	6.56	5.00
Maximum	59.60	60.00
Range Width	53.04	55.00
Mean Standard Error	0.03	---

Assumption: LGR in Oil Fields (cont'd)

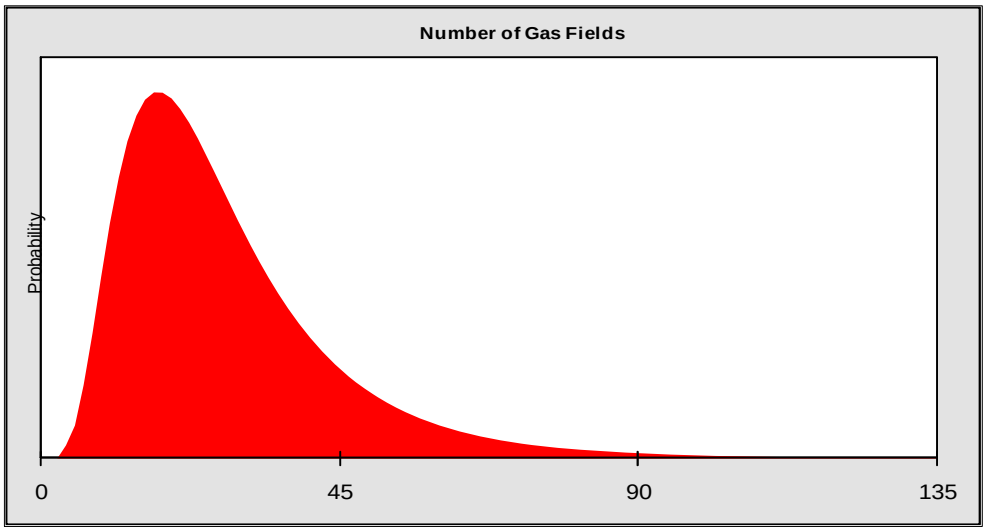
Percentiles:	Simulated values	Theoretical values
P100	6.56	5.00
P95	9.67	9.67
P90	10.62	10.64
P85	11.37	11.41
P80	12.05	12.09
P75	12.69	12.74
P70	13.34	13.37
P65	13.97	14.00
P60	14.61	14.63
P55	15.28	15.30
P50	16.00	15.99
P45	16.75	16.74
P40	17.53	17.54
P35	18.46	18.43
P30	19.45	19.44
P25	20.61	20.61
P20	22.00	22.03
P15	23.86	23.84
P10	26.43	26.39
P5	30.78	30.79
P0	59.60	60.00

Assumption: Number of Gas Fields

Lognormal distribution with parameters:

Mean	29.02
Standard Deviation	16.88

Selected range is from 1.00 to 135.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	28.97	28.89
Median	25.04	24.98
Mode	---	---
Standard Deviation	16.51	16.36
Variance	272.43	267.73
Skewness	1.69	1.68
Kurtosis	7.29	7.21
Coefficient of Variability	0.5698	0.5664
Minimum	3.37	1.00
Maximum	134.73	135.00
Range Width	131.37	134.00
Mean Standard Error	0.07	---

Assumption: Number of Gas Fields (cont'd)

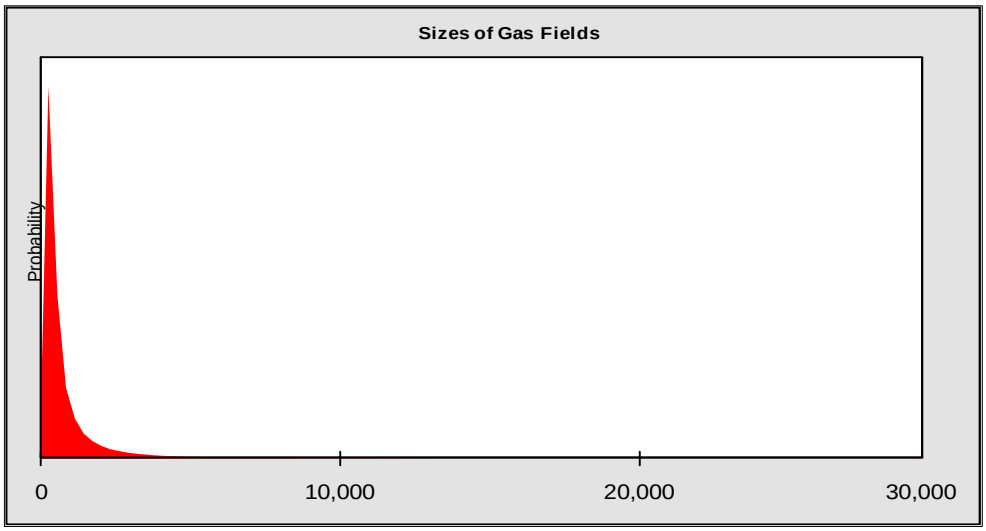
Percentiles:	Simulated values	Theoretical values
P100	3.37	1.00
P95	10.62	10.61
P90	12.71	12.76
P85	14.45	14.48
P80	15.95	16.02
P75	17.40	17.48
P70	18.88	18.92
P65	20.30	20.36
P60	21.82	21.83
P55	23.40	23.36
P50	25.04	24.98
P45	26.80	26.72
P40	28.69	28.61
P35	30.80	30.71
P30	33.24	33.10
P25	36.07	35.89
P20	39.48	39.28
P15	43.75	43.64
P10	50.03	49.84
P5	60.89	60.65
P0	134.73	135.00

Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:

Mean	1,206.42
Standard Deviation	2,584.33

Selected range is from 300.00 to 30,000.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	1,167.64	1,159.27
Median	599.44	599.44
Mode	---	---
Standard Deviation	1,881.94	1,833.69
Variance	3,541,698.00	3,362,424.93
Skewness	6.32	6.32
Kurtosis	59.38	60.37
Coefficient of Variability	1.61	1.58
Minimum	300.62	300.00
Maximum	29,791.67	30,000.00
Range Width	29,491.06	29,700.00
Mean Standard Error	8.42	---

Assumption: Sizes of Gas Fields (cont'd)

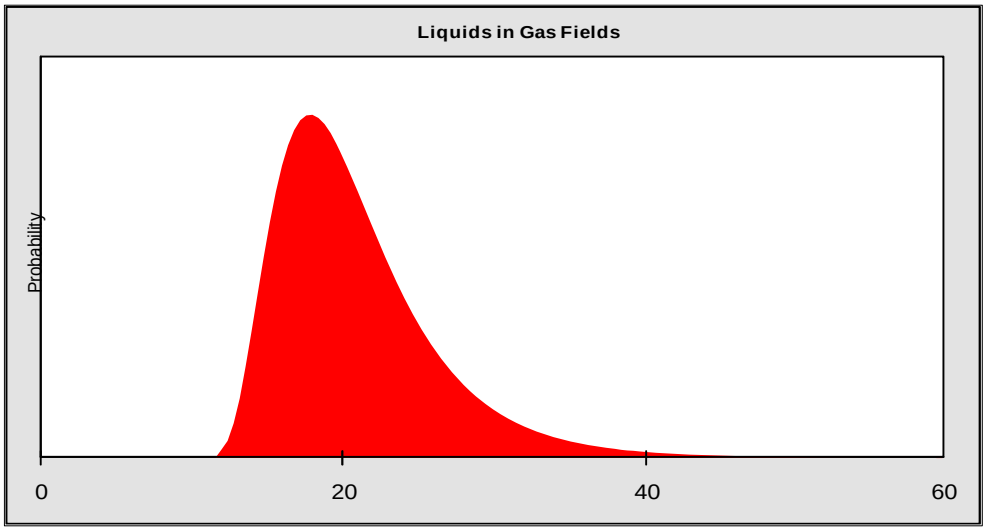
Percentiles:	Simulated values	Theoretical values
P100	300.62	300.00
P95	325.96	325.97
P90	344.39	344.57
P85	363.38	364.17
P80	384.70	385.73
P75	408.57	409.90
P70	436.52	437.37
P65	468.24	468.91
P60	504.61	505.51
P55	547.99	548.44
P50	599.43	599.44
P45	660.24	660.89
P40	737.18	736.25
P35	831.79	830.69
P30	949.96	952.38
P25	1,116.07	1,115.09
P20	1,348.45	1,344.30
P15	1,683.21	1,693.59
P10	2,320.03	2,302.12
P5	3,765.89	3,716.01
P0	29,791.67	30,000.00

Assumption: Liquids in Gas Fields

Lognormal distribution with parameters:

Mean	21.14
Standard Deviation	5.47

Selected range is from 10.00 to 52.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	21.12	21.10
Median	20.04	19.99
Mode	---	---
Standard Deviation	5.33	5.34
Variance	28.40	28.48
Skewness	1.34	1.36
Kurtosis	5.61	5.74
Coefficient of Variability	0.2524	0.2529
Minimum	11.46	10.00
Maximum	51.81	52.00
Range Width	40.35	42.00
Mean Standard Error	0.02	---

Assumption: Liquids in Gas Fields (cont'd)

Percentiles:	Simulated values	Theoretical values
P100	11.46	10.00
P95	14.63	14.66
P90	15.51	15.51
P85	16.18	16.18
P80	16.78	16.76
P75	17.32	17.31
P70	17.86	17.84
P65	18.38	18.36
P60	18.90	18.89
P55	19.46	19.43
P50	20.04	19.99
P45	20.64	20.59
P40	21.28	21.24
P35	22.00	21.95
P30	22.79	22.75
P25	23.68	23.66
P20	24.76	24.76
P15	26.12	26.16
P10	28.08	28.09
P5	31.38	31.38
P0	51.81	52.00

End of Assumptions

Simulation started on 1/2/2008 at 13:05:14
Simulation stopped on 1/2/2008 at 14:00:14