

Ene, Assessment Unit 60410201
Assessment Results Summary

[MMBO, million barrels of oil. BCFG, billion cubic feet of gas. MMBNGL, million barrels of natural gas liquids. MFS, minimum field size assessed (MMBO or BCFG). Prob., probability (including both geologic and accessibility probabilities) of at least one field equal to or greater than the MFS. Results shown are fully risked estimates. For gas fields, all liquids are included under the NGL (natural gas liquids) category. F95 represents a 95 percent chance of at least the amount tabulated. Other fractiles are defined similarly. Fractiles are additive under the assumption of perfect positive correlation. Shading indicates not applicable]

Field Type	MFS	Prob. (0-1)	Undiscovered Resources												Largest Undiscovered Field (MMBO or BCFG)			
			Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)				F95	F50	F5	Mean
Oil Fields	5	0.50	0	7	262	74	0	14	598	164	0	1	37	10	13	30	83	37
Gas Fields	30						0	59	2,462	677	0	2	112	30	151	394	1,059	469
Total		0.50	0	7	262	74	0	73	3,060	841	0	3	149	40				

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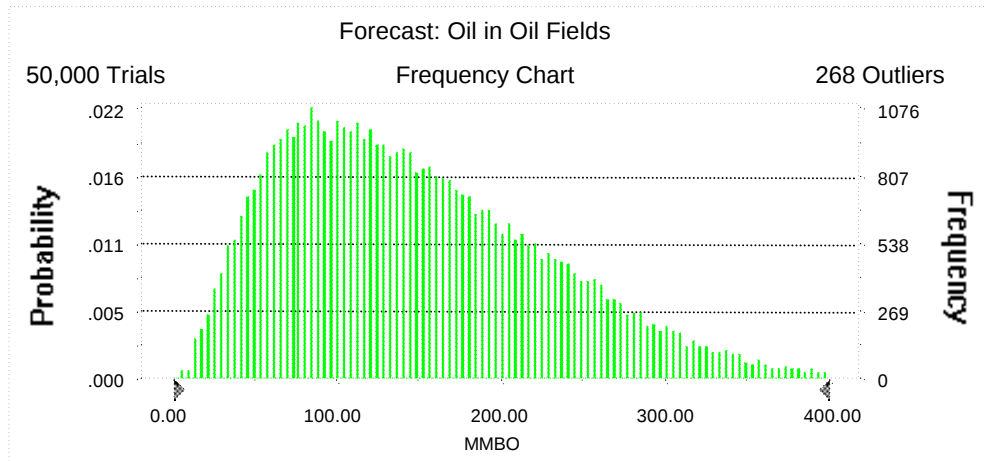
Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 400.00 MMBO
Entire range is from 5.22 to 570.03 MMBO
After 50,000 trials, the standard error of the mean is 0.37

Statistics:

	<u>Value</u>
Trials	50000
Mean	148.86
Median	136.05
Mode	---
Standard Deviation	81.68
Variance	6,672.41
Skewness	0.74
Kurtosis	3.30
Coefficient of Variability	0.55
Range Minimum	5.22
Range Maximum	570.03
Range Width	564.81
Mean Standard Error	0.37



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	5.22
95%	39.70
90%	53.70
85%	64.76
80%	75.07
75%	84.96
70%	94.59
65%	104.74
60%	114.85
55%	125.07
50%	136.05
45%	147.03
40%	159.02
35%	171.46
30%	185.14
25%	200.53
20%	217.92
15%	238.15
10%	262.42
5%	300.35
0%	570.03

End of Forecast

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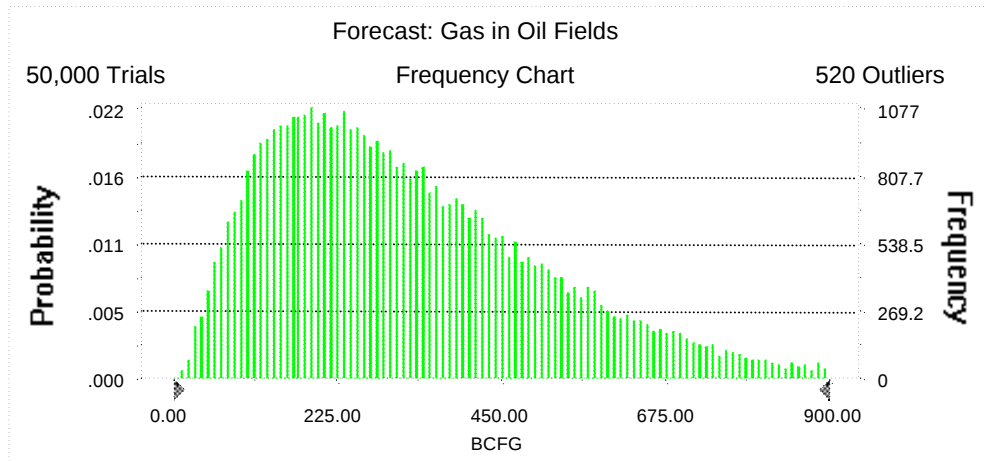
Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 900.00 BCFG
Entire range is from 9.61 to 1,668.78 BCFG
After 50,000 trials, the standard error of the mean is 0.87

Statistics:

	<u>Value</u>
Trials	50000
Mean	327.84
Median	290.46
Mode	---
Standard Deviation	195.07
Variance	38,050.45
Skewness	0.99
Kurtosis	4.10
Coefficient of Variability	0.60
Range Minimum	9.61
Range Maximum	1,668.78
Range Width	1,659.17
Mean Standard Error	0.87



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	9.61
95%	80.66
90%	110.85
85%	134.77
80%	156.76
75%	178.64
70%	200.31
65%	221.87
60%	243.72
55%	266.36
50%	290.46
45%	315.74
40%	343.08
35%	371.98
30%	404.19
25%	439.40
20%	481.93
15%	531.84
10%	597.09
5%	699.53
0%	1,668.78

End of Forecast

60410201
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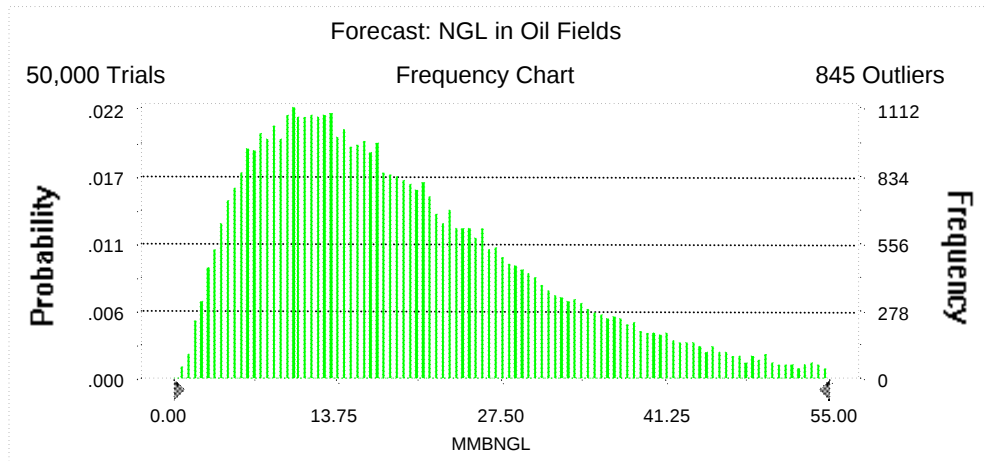
Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 55.00 MMBNGL
Entire range is from 0.55 to 115.07 MMBNGL
After 50,000 trials, the standard error of the mean is 0.06

Statistics:

	<u>Value</u>
Trials	50000
Mean	19.69
Median	16.96
Mode	---
Standard Deviation	12.64
Variance	159.72
Skewness	1.24
Kurtosis	5.08
Coefficient of Variability	0.64
Range Minimum	0.55
Range Maximum	115.07
Range Width	114.52
Mean Standard Error	0.06



60410201
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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.55
95%	4.52
90%	6.21
85%	7.64
80%	8.99
75%	10.30
70%	11.56
65%	12.84
60%	14.12
55%	15.52
50%	16.96
45%	18.48
40%	20.17
35%	21.93
30%	24.00
25%	26.26
20%	28.95
15%	32.32
10%	36.94
5%	44.07
0%	115.07

End of Forecast

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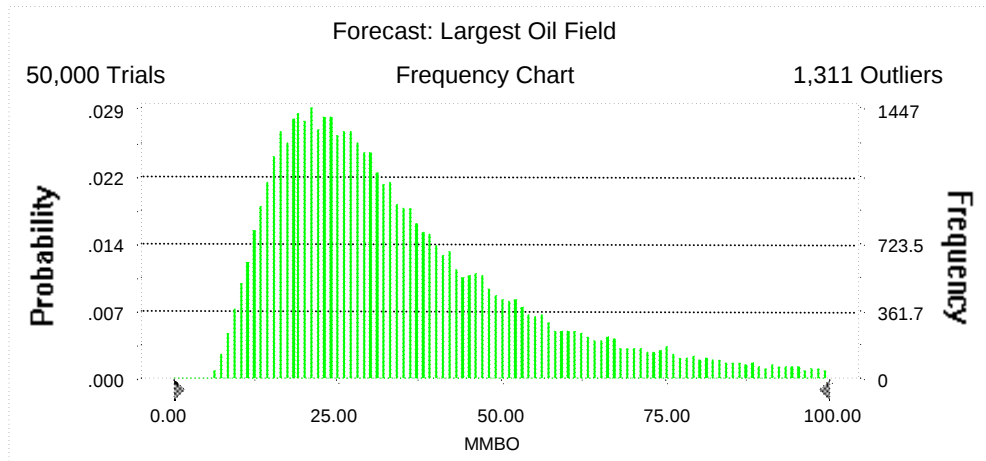
Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 100.00 MMBO
Entire range is from 5.22 to 149.92 MMBO
After 50,000 trials, the standard error of the mean is 0.10

Statistics:

	<u>Value</u>
Trials	50000
Mean	36.50
Median	30.21
Mode	---
Standard Deviation	22.89
Variance	523.79
Skewness	1.77
Kurtosis	6.89
Coefficient of Variability	0.63
Range Minimum	5.22
Range Maximum	149.92
Range Width	144.70
Mean Standard Error	0.10



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Monte Carlo Results

Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	5.22
95%	12.69
90%	15.22
85%	17.19
80%	19.06
75%	20.83
70%	22.63
65%	24.42
60%	26.29
55%	28.19
50%	30.21
45%	32.41
40%	34.94
35%	37.75
30%	41.01
25%	45.03
20%	49.83
15%	56.29
10%	66.08
5%	83.30
0%	149.92

End of Forecast

60410201
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Monte Carlo Results

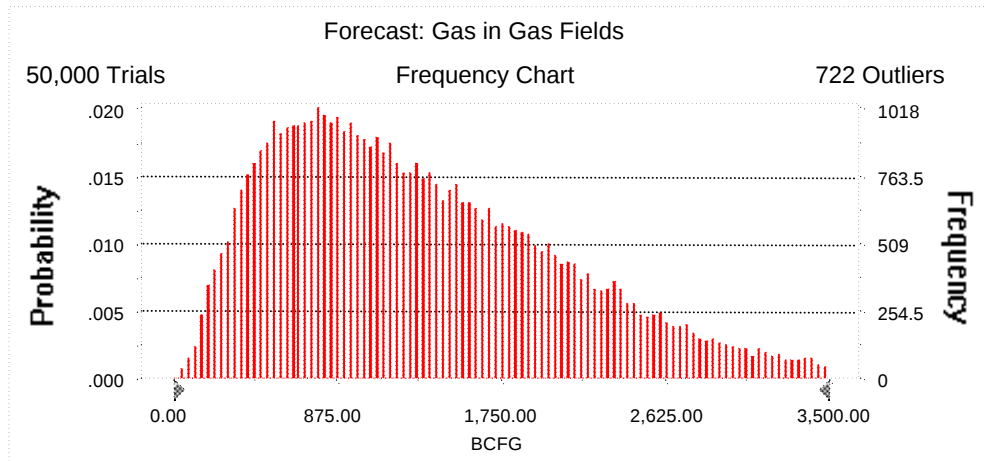
Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 3,500.00 BCFG
Entire range is from 43.01 to 6,098.23 BCFG
After 50,000 trials, the standard error of the mean is 3.57

Statistics:

	<u>Value</u>
Trials	50000
Mean	1,349.16
Median	1,198.49
Mode	---
Standard Deviation	798.96
Variance	638,343.56
Skewness	0.91
Kurtosis	3.78
Coefficient of Variability	0.59
Range Minimum	43.01
Range Maximum	6,098.23
Range Width	6,055.22
Mean Standard Error	3.57



60410201
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Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	43.01
95%	328.82
90%	447.25
85%	545.90
80%	638.63
75%	730.33
70%	817.56
65%	907.49
60%	1,000.90
55%	1,098.43
50%	1,198.49
45%	1,309.48
40%	1,422.92
35%	1,546.58
30%	1,684.03
25%	1,829.95
20%	1,997.85
15%	2,195.37
10%	2,450.57
5%	2,859.45
0%	6,098.23

End of Forecast

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Monte Carlo Results

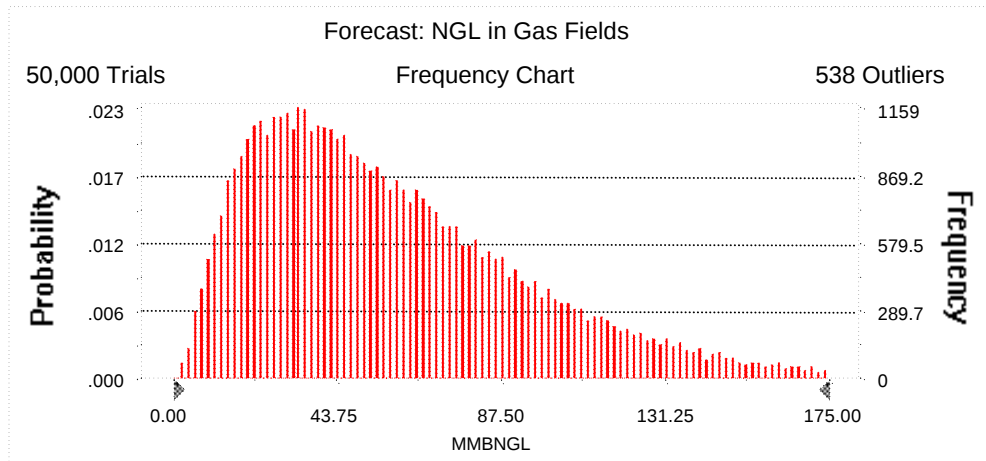
Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 175.00 MMBNGL
Entire range is from 1.29 to 315.57 MMBNGL
After 50,000 trials, the standard error of the mean is 0.17

Statistics:

	<u>Value</u>
Trials	50000
Mean	59.39
Median	51.31
Mode	---
Standard Deviation	37.86
Variance	1,433.59
Skewness	1.13
Kurtosis	4.54
Coefficient of Variability	0.64
Range Minimum	1.29
Range Maximum	315.57
Range Width	314.28
Mean Standard Error	0.17



60410201
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Monte Carlo Results

Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	1.29
95%	13.51
90%	18.51
85%	22.71
80%	26.80
75%	30.64
70%	34.60
65%	38.52
60%	42.54
55%	46.76
50%	51.31
45%	56.13
40%	61.38
35%	66.91
30%	73.01
25%	79.99
20%	88.14
15%	98.10
10%	111.63
5%	132.62
0%	315.57

End of Forecast

60410201
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Monte Carlo Results

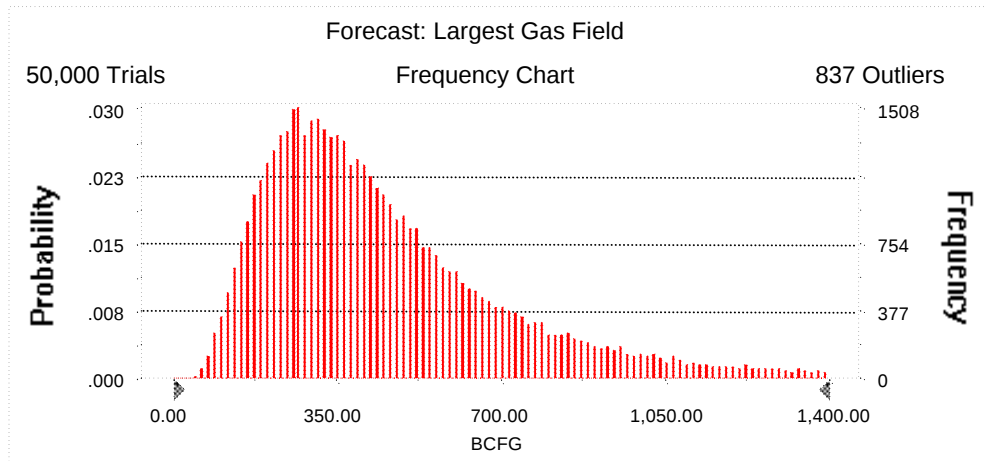
Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 1,400.00 BCFG
Entire range is from 43.01 to 1,999.48 BCFG
After 50,000 trials, the standard error of the mean is 1.32

Statistics:

	<u>Value</u>
Trials	50000
Mean	469.29
Median	394.27
Mode	---
Standard Deviation	294.29
Variance	86,609.07
Skewness	1.71
Kurtosis	6.87
Coefficient of Variability	0.63
Range Minimum	43.01
Range Maximum	1,999.48
Range Width	1,956.47
Mean Standard Error	1.32



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Monte Carlo Results

Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	43.01
95%	150.95
90%	187.26
85%	216.75
80%	242.86
75%	266.74
70%	291.00
65%	315.18
60%	340.44
55%	366.56
50%	394.27
45%	423.57
40%	456.37
35%	493.25
30%	534.03
25%	584.43
20%	646.58
15%	729.11
10%	846.84
5%	1,058.82
0%	1,999.48

End of Forecast

60410201
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Monte Carlo Results

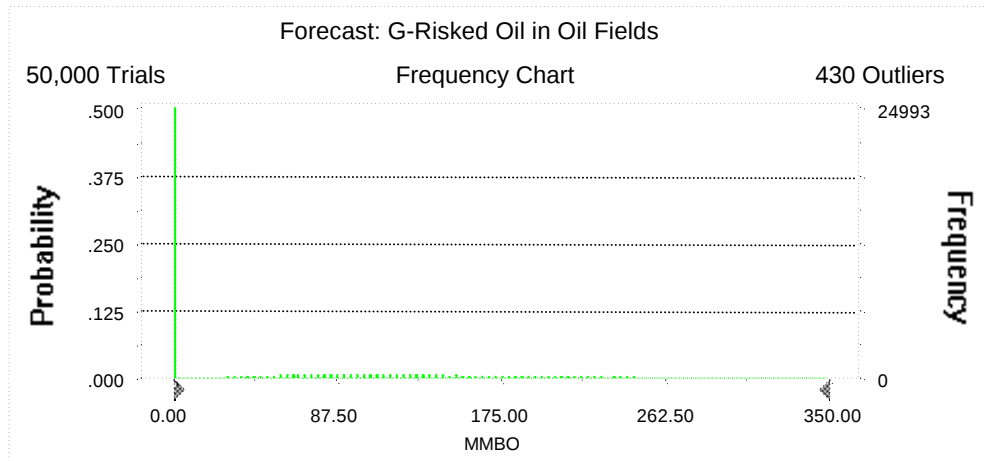
Forecast: G-Riskd Oil in Oil Fields

Summary:

Display range is from 0.00 to 350.00 MMBO
Entire range is from 0.00 to 567.02 MMBO
After 50,000 trials, the standard error of the mean is 0.42

Statistics:

	<u>Value</u>
Trials	50000
Mean	74.31
Median	6.79
Mode	0.00
Standard Deviation	94.14
Variance	8,862.91
Skewness	1.13
Kurtosis	3.48
Coefficient of Variability	1.27
Range Minimum	0.00
Range Maximum	567.02
Range Width	567.02
Mean Standard Error	0.42



60410201
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Monte Carlo Results

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

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	0.00
95%	0.00
90%	0.00
85%	0.00
80%	0.00
75%	0.00
70%	0.00
65%	0.00
60%	0.00
55%	0.00
50%	6.79
45%	53.34
40%	74.93
35%	94.23
30%	114.55
25%	135.61
20%	158.82
15%	185.07
10%	217.94
5%	262.37
0%	567.02

End of Forecast

60410201
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Monte Carlo Results

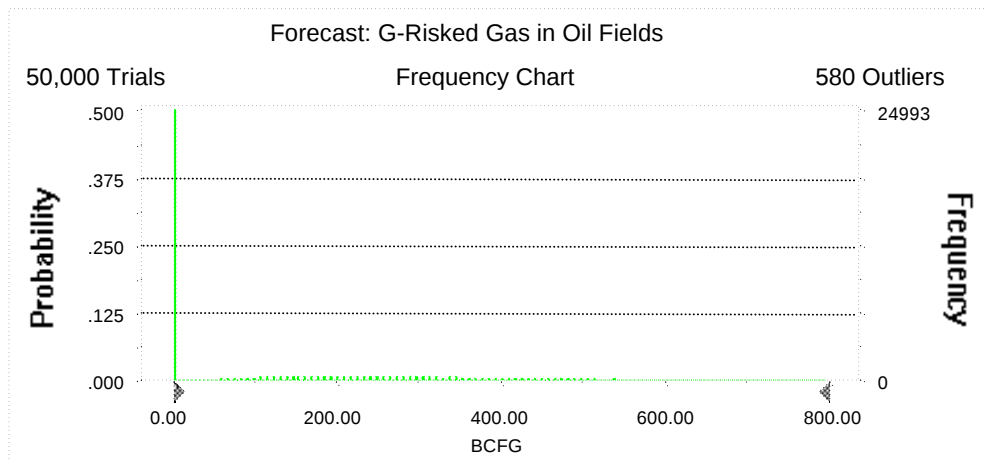
Forecast: G-Riskd Gas in Oil Fields

Summary:

Display range is from 0.00 to 800.00 BCFG
Entire range is from 0.00 to 1,469.92 BCFG
After 50,000 trials, the standard error of the mean is 0.96

Statistics:

	<u>Value</u>
Trials	50000
Mean	163.86
Median	14.05
Mode	0.00
Standard Deviation	214.40
Variance	45,967.54
Skewness	1.33
Kurtosis	4.35
Coefficient of Variability	1.31
Range Minimum	0.00
Range Maximum	1,469.92
Range Width	1,469.92
Mean Standard Error	0.96



60410201
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Monte Carlo Results

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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	0.00
95%	0.00
90%	0.00
85%	0.00
80%	0.00
75%	0.00
70%	0.00
65%	0.00
60%	0.00
55%	0.00
50%	14.05
45%	110.13
40%	157.42
35%	200.04
30%	242.50
25%	289.83
20%	341.95
15%	404.60
10%	483.81
5%	598.18
0%	1,469.92

End of Forecast

60410201
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Monte Carlo Results

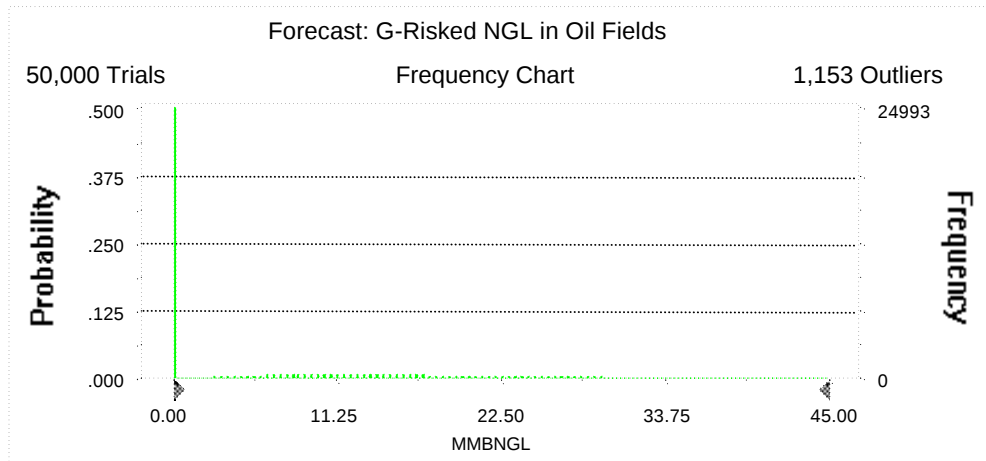
Forecast: G-Riskd NGL in Oil Fields

Summary:

Display range is from 0.00 to 45.00 MMBNGL
Entire range is from 0.00 to 115.07 MMBNGL
After 50,000 trials, the standard error of the mean is 0.06

Statistics:

	<u>Value</u>
Trials	50000
Mean	9.83
Median	0.75
Mode	0.00
Standard Deviation	13.29
Variance	176.55
Skewness	1.54
Kurtosis	5.44
Coefficient of Variability	1.35
Range Minimum	0.00
Range Maximum	115.07
Range Width	115.07
Mean Standard Error	0.06



60410201
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Monte Carlo Results

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

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.00
95%	0.00
90%	0.00
85%	0.00
80%	0.00
75%	0.00
70%	0.00
65%	0.00
60%	0.00
55%	0.00
50%	0.75
45%	6.18
40%	8.97
35%	11.54
30%	14.08
25%	16.88
20%	20.13
15%	23.95
10%	28.86
5%	37.11
0%	115.07

End of Forecast

60410201
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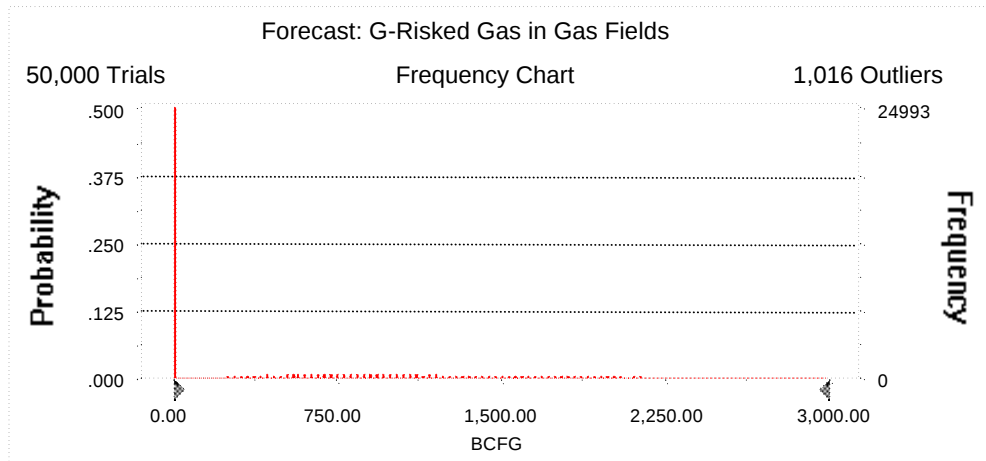
Forecast: G-Riskd Gas in Gas Fields

Summary:

Display range is from 0.00 to 3,000.00 BCFG
Entire range is from 0.00 to 6,098.23 BCFG
After 50,000 trials, the standard error of the mean is 3.95

Statistics:

	<u>Value</u>
Trials	50000
Mean	676.69
Median	58.68
Mode	0.00
Standard Deviation	882.20
Variance	778,282.56
Skewness	1.29
Kurtosis	4.11
Coefficient of Variability	1.30
Range Minimum	0.00
Range Maximum	6,098.23
Range Width	6,098.23
Mean Standard Error	3.95



60410201
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Monte Carlo Results

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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	0.00
95%	0.00
90%	0.00
85%	0.00
80%	0.00
75%	0.00
70%	0.00
65%	0.00
60%	0.00
55%	0.00
50%	58.68
45%	451.52
40%	642.03
35%	820.13
30%	1,003.51
25%	1,202.49
20%	1,424.79
15%	1,684.63
10%	2,002.30
5%	2,462.32
0%	6,098.23

End of Forecast

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Monte Carlo Results

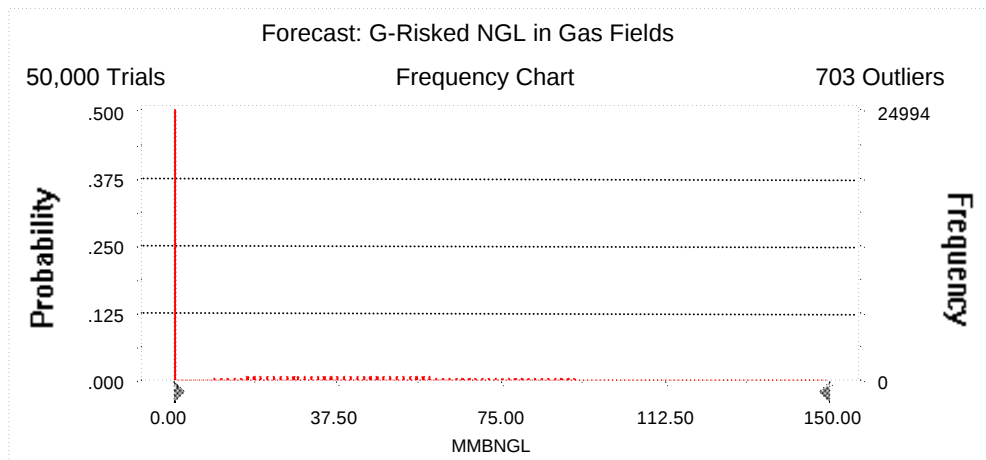
Forecast: G-Riskd NGL in Gas Fields

Summary:

Display range is from 0.00 to 150.00 MMBNGL
Entire range is from 0.00 to 306.99 MMBNGL
After 50,000 trials, the standard error of the mean is 0.18

Statistics:

	<u>Value</u>
Trials	50000
Mean	29.79
Median	2.19
Mode	0.00
Standard Deviation	40.10
Variance	1,608.15
Skewness	1.48
Kurtosis	5.05
Coefficient of Variability	1.35
Range Minimum	0.00
Range Maximum	306.99
Range Width	306.99
Mean Standard Error	0.18



60410201
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Monte Carlo Results

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

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.00
95%	0.00
90%	0.00
85%	0.00
80%	0.00
75%	0.00
70%	0.00
65%	0.00
60%	0.00
55%	0.00
50%	2.19
45%	18.78
40%	26.82
35%	34.61
30%	42.69
25%	51.49
20%	61.38
15%	72.99
10%	88.26
5%	112.08
0%	306.99

End of Forecast

60410201
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Monte Carlo Results

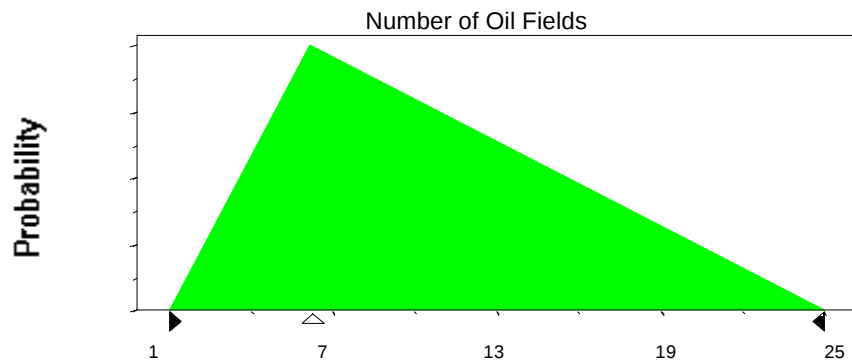
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	1
Likeliest	6
Maximum	25

Selected range is from 1 to 25
Mean value in simulation was 11



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	9.05
Standard Deviation	13.67

Shifted parameters

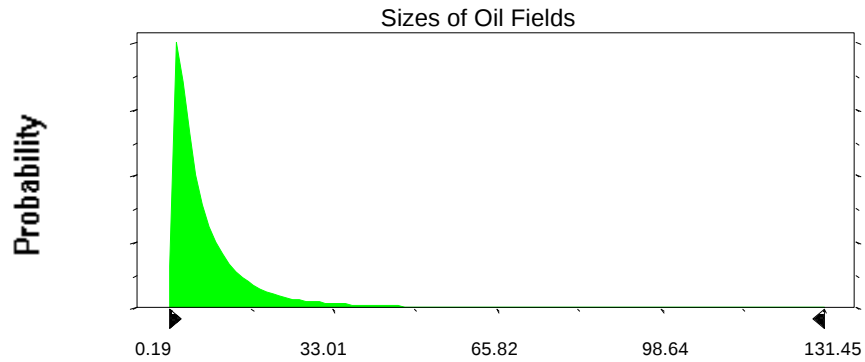
14.05
13.67

Selected range is from 0.00 to 145.00
Mean value in simulation was 8.74

5.00 to 150.00
13.74

60410201
Ene
Monte Carlo Results

Assumption: Sizes of Oil Fields (cont'd)



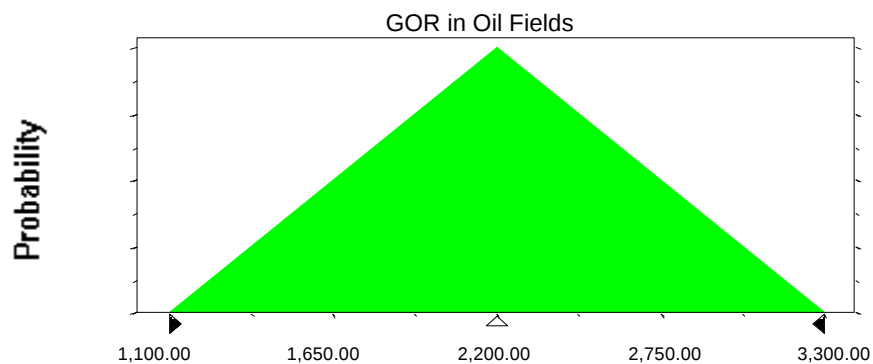
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	1,100.00
Likeliest	2,200.00
Maximum	3,300.00

Selected range is from 1,100.00 to 3,300.00

Mean value in simulation was 2,201.88



60410201
Ene
Monte Carlo Results

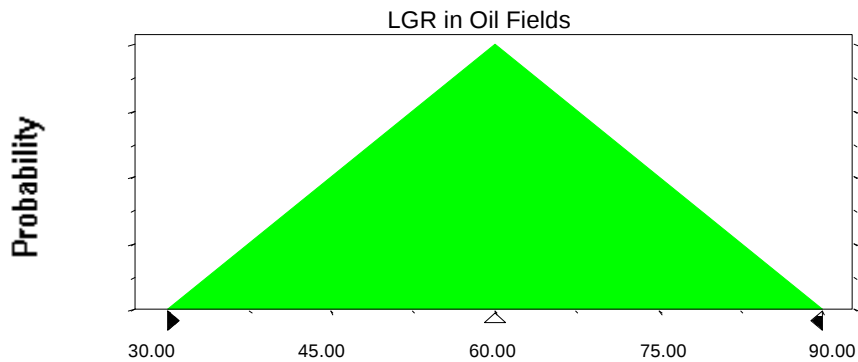
Assumption: LGR in Oil Fields

Triangular distribution with parameters:

Minimum	30.00
Likeliest	60.00
Maximum	90.00

Selected range is from 30.00 to 90.00

Mean value in simulation was 60.07



Assumption: Number of Gas Fields

Triangular distribution with parameters:

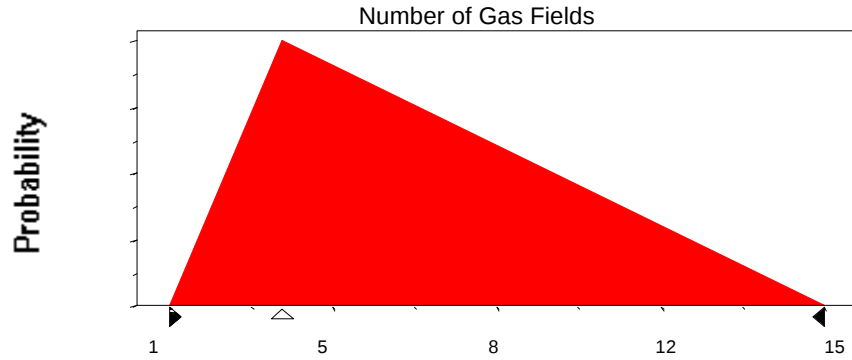
Minimum	1
Likeliest	3
Maximum	15

Selected range is from 1 to 15

Mean value in simulation was 6

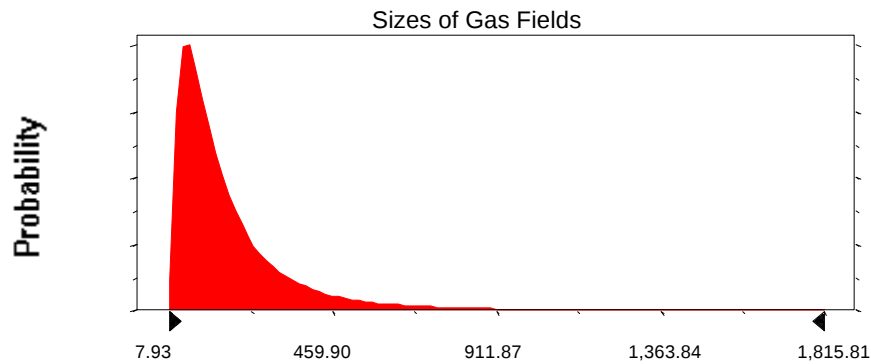
60410201
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Monte Carlo Results

Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	180.83	210.83
Standard Deviation	203.84	203.84
Selected range is from 0.00 to 1,970.00		30.00 to 2,000.00
Mean value in simulation was 179.21		209.21



60410201
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Monte Carlo Results

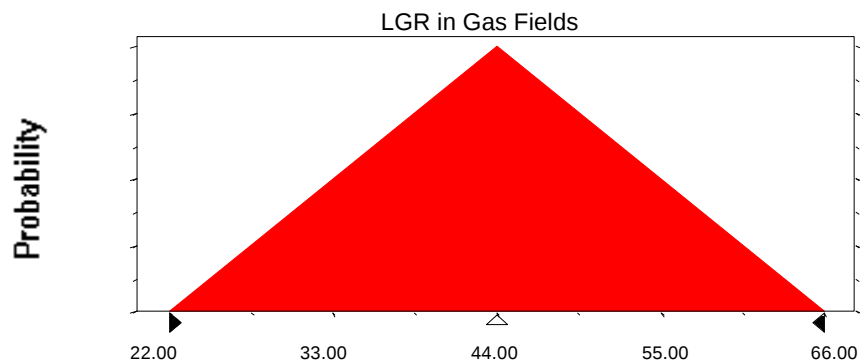
Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	22.00
Likeliest	44.00
Maximum	66.00

Selected range is from 22.00 to 66.00

Mean value in simulation was 44.00



End of Assumptions

Simulation started on 2/24/99 at 17:19:08

Simulation stopped on 2/24/99 at 17:37:10