

**North Barents, Assessment Unit 10500103
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
			F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean				
Oil Fields	20	0.95	21	121	287	135	44	300	739	338	2	18	46	20	29	57	178	74
Gas Fields	120						2,560	54,525	126,926	59,482	44	1,074	2,838	1,230	2,817	9,695	29,716	11,967
Total		0.95	21	121	287	135	2,604	54,825	127,665	59,820	46	1,092	2,884	1,250				

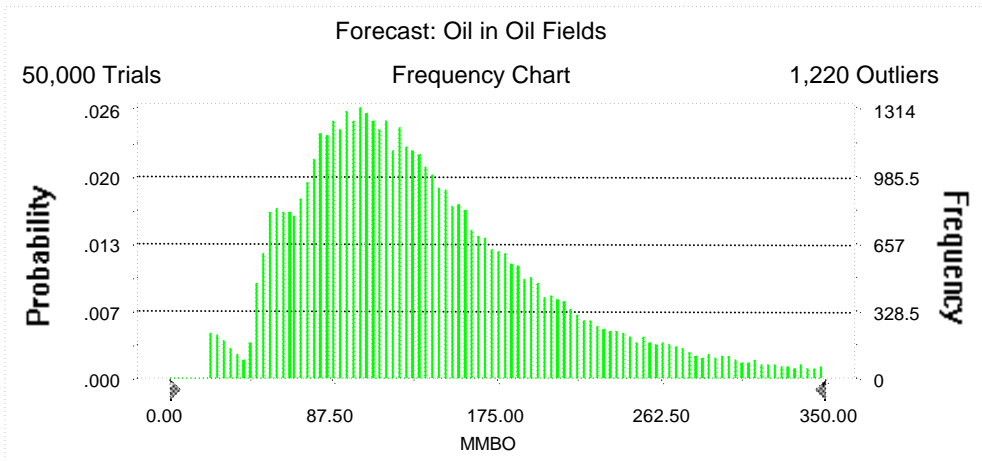
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Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 350.00 MMBO
Entire range is from 20.39 to 796.96 MMBO
After 50,000 trials, the standard error of the mean is 0.35

Statistics:	Value
Trials	50000
Mean	142.18
Median	125.33
Mode	---
Standard Deviation	77.96
Variance	6,077.19
Skewness	1.77
Kurtosis	8.08
Coefficient of Variability	0.55
Range Minimum	20.39
Range Maximum	796.96
Range Width	776.57
Mean Standard Error	0.35



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	20.39
95%	53.61
90%	64.19
85%	74.79
80%	82.85
75%	90.12
70%	97.04
65%	103.91
60%	110.75
55%	117.83
50%	125.33
45%	133.07
40%	141.34
35%	150.77
30%	161.30
25%	174.03
20%	188.95
15%	208.70
10%	238.33
5%	290.94
0%	796.96

End of Forecast

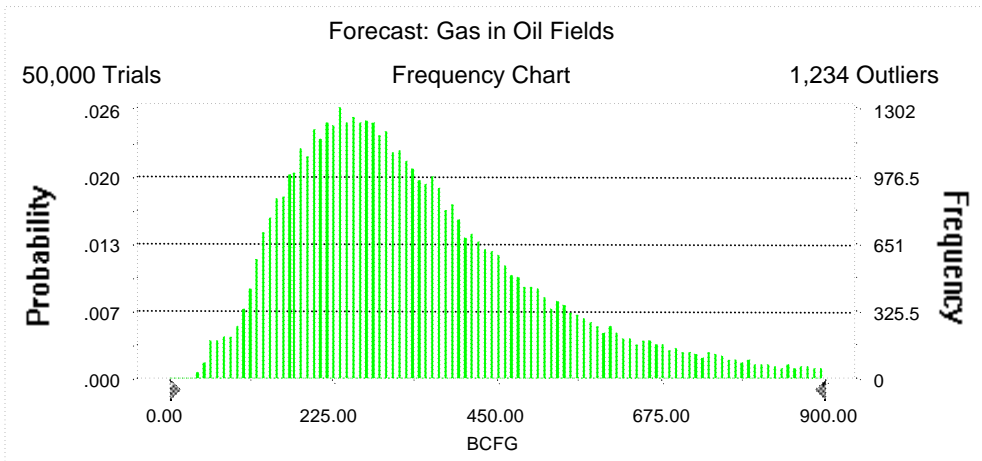
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Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 900.00 BCFG
Entire range is from 35.58 to 2,268.38 BCFG
After 50,000 trials, the standard error of the mean is 0.93

Statistics:	Value
Trials	50000
Mean	355.99
Median	309.69
Mode	---
Standard Deviation	206.86
Variance	42,788.99
Skewness	1.92
Kurtosis	9.32
Coefficient of Variability	0.58
Range Minimum	35.58
Range Maximum	2,268.38
Range Width	2,232.81
Mean Standard Error	0.93



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	35.58
95%	126.01
90%	154.56
85%	178.29
80%	198.83
75%	217.98
70%	236.07
65%	253.92
60%	272.20
55%	290.46
50%	309.69
45%	330.31
40%	353.26
35%	377.02
30%	404.89
25%	438.39
20%	478.32
15%	531.48
10%	607.57
5%	747.06
0%	2,268.38

End of Forecast

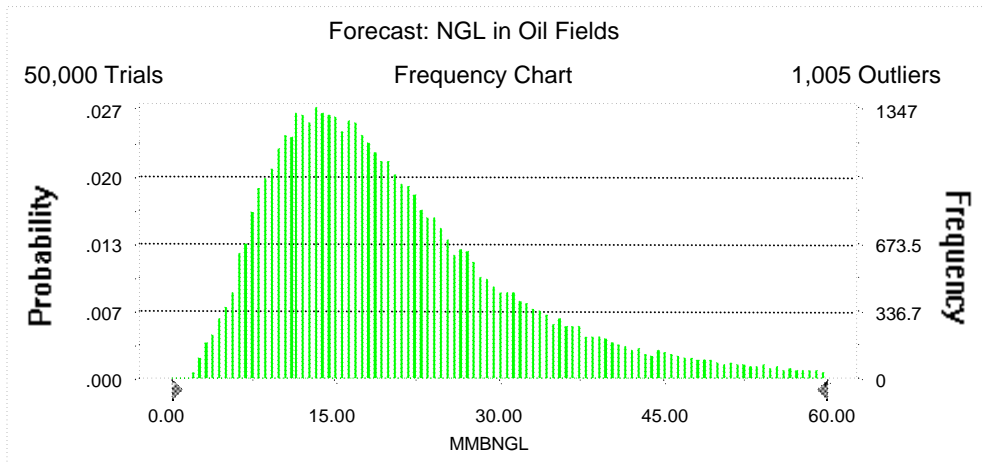
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Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 60.00 MMBNGL
Entire range is from 1.41 to 169.78 MMBNGL
After 50,000 trials, the standard error of the mean is 0.06

Statistics:	<u>Value</u>
Trials	50000
Mean	21.39
Median	18.25
Mode	---
Standard Deviation	13.47
Variance	181.34
Skewness	2.08
Kurtosis	10.61
Coefficient of Variability	0.63
Range Minimum	1.41
Range Maximum	169.78
Range Width	168.37
Mean Standard Error	0.06



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	1.41
95%	6.83
90%	8.58
85%	10.00
80%	11.26
75%	12.40
70%	13.56
65%	14.68
60%	15.83
55%	17.02
50%	18.25
45%	19.58
40%	21.00
35%	22.58
30%	24.39
25%	26.54
20%	29.16
15%	32.65
10%	37.60
5%	46.91
0%	169.78

End of Forecast

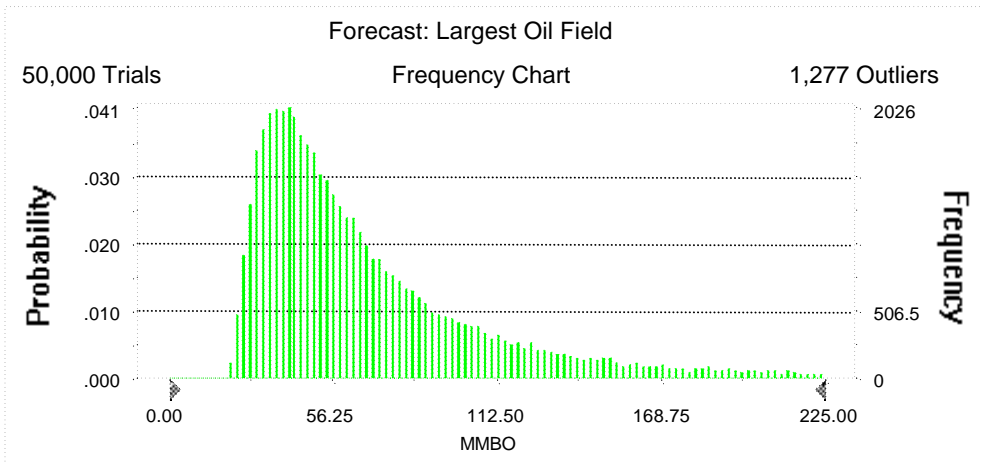
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Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 225.00 MMBO
 Entire range is from 20.39 to 499.28 MMBO
 After 50,000 trials, the standard error of the mean is 0.24

Statistics:	<u>Value</u>
Trials	50000
Mean	73.65
Median	56.71
Mode	---
Standard Deviation	54.13
Variance	2,929.80
Skewness	2.83
Kurtosis	14.32
Coefficient of Variability	0.73
Range Minimum	20.39
Range Maximum	499.28
Range Width	478.89
Mean Standard Error	0.24



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	20.39
95%	28.70
90%	32.06
85%	35.00
80%	37.73
75%	40.57
70%	43.38
65%	46.32
60%	49.48
55%	52.89
50%	56.71
45%	60.97
40%	65.71
35%	71.23
30%	77.95
25%	86.15
20%	96.91
15%	111.22
10%	133.35
5%	178.03
0%	499.28

End of Forecast

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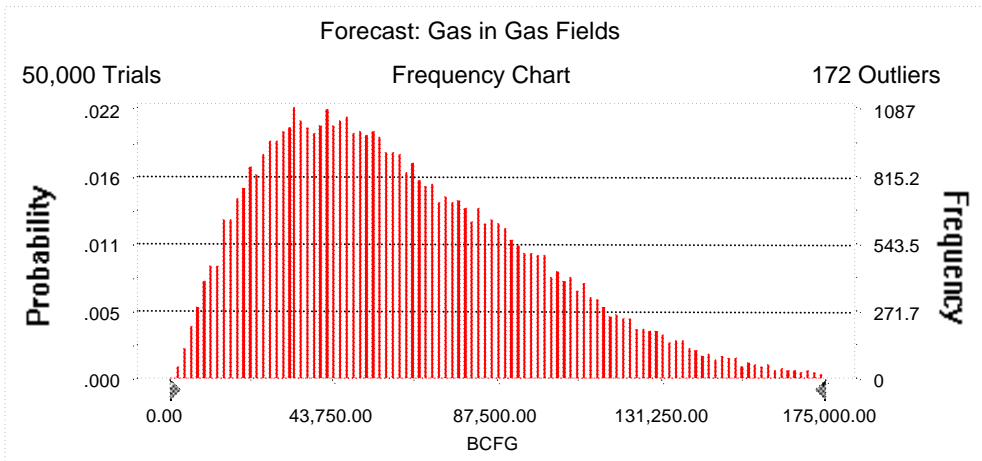
Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 175,000.00 BCFG
 Entire range is from 1,200.96 to 263,196.14 BCFG
 After 50,000 trials, the standard error of the mean is 156.52

Statistics:

	<u>Value</u>
Trials	50000
Mean	62,555.64
Median	56,881.46
Mode	---
Standard Deviation	34,997.87
Variance	1,224,850,983.71
Skewness	0.73
Kurtosis	3.21
Coefficient of Variability	0.56
Range Minimum	1,200.96
Range Maximum	263,196.14
Range Width	261,995.19
Mean Standard Error	156.52



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Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	1,200.96
95%	15,452.41
90%	21,544.80
85%	26,567.35
80%	31,120.76
75%	35,283.97
70%	39,562.36
65%	43,804.31
60%	48,050.75
55%	52,400.30
50%	56,881.46
45%	61,596.70
40%	66,673.44
35%	72,243.82
30%	78,339.91
25%	84,961.60
20%	92,077.35
15%	100,572.96
10%	111,324.18
5%	128,017.02
0%	263,196.14

End of Forecast

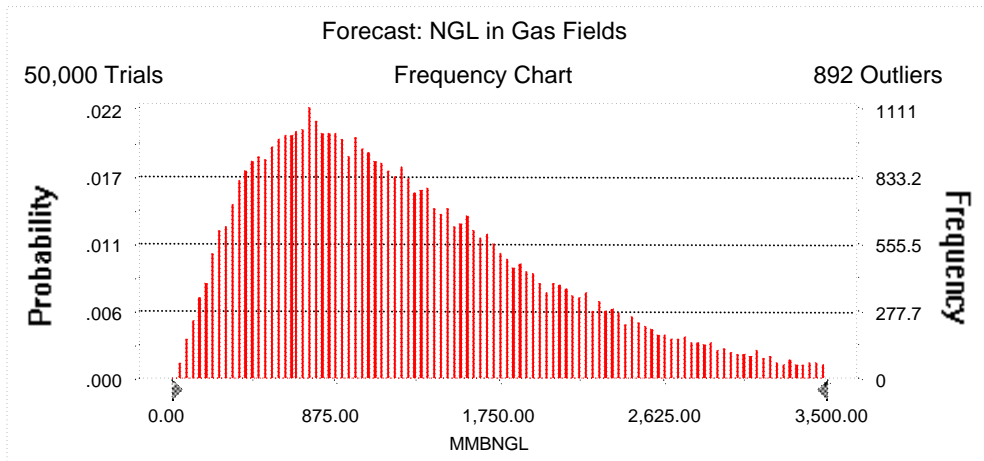
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Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 3,500.00 MMBNGL
Entire range is from 16.90 to 7,138.17 MMBNGL
After 50,000 trials, the standard error of the mean is 3.66

Statistics:	Value
Trials	50000
Mean	1,293.10
Median	1,122.81
Mode	---
Standard Deviation	819.52
Variance	671,605.54
Skewness	1.16
Kurtosis	4.74
Coefficient of Variability	0.63
Range Minimum	16.90
Range Maximum	7,138.17
Range Width	7,121.28
Mean Standard Error	3.66



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	16.90
95%	290.47
90%	405.81
85%	502.46
80%	594.91
75%	682.44
70%	764.76
65%	849.28
60%	935.82
55%	1,026.89
50%	1,122.81
45%	1,225.36
40%	1,331.77
35%	1,450.82
30%	1,582.59
25%	1,727.17
20%	1,904.52
15%	2,126.35
10%	2,407.68
5%	2,872.13
0%	7,138.17

End of Forecast

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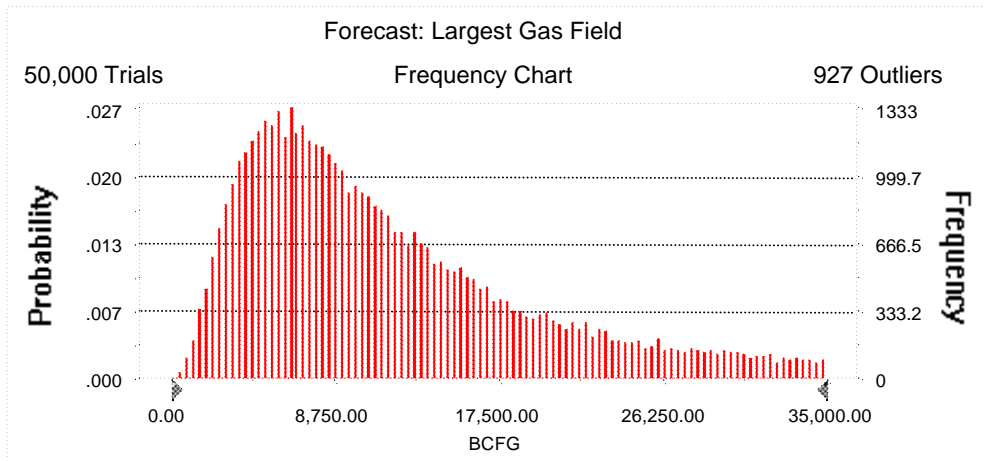
Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 35,000.00 BCFG
 Entire range is from 342.91 to 39,997.51 BCFG
 After 50,000 trials, the standard error of the mean is 36.56

Statistics:

	<u>Value</u>
Trials	50000
Mean	11,967.27
Median	9,695.09
Mode	---
Standard Deviation	8,176.11
Variance	66,848,811.26
Skewness	1.20
Kurtosis	4.01
Coefficient of Variability	0.68
Range Minimum	342.91
Range Maximum	39,997.51
Range Width	39,654.60
Mean Standard Error	36.56



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Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	342.91
95%	2,817.11
90%	3,739.60
85%	4,504.43
80%	5,216.34
75%	5,894.43
70%	6,592.97
65%	7,297.11
60%	8,045.97
55%	8,831.42
50%	9,695.09
45%	10,629.72
40%	11,674.27
35%	12,885.63
30%	14,203.97
25%	15,804.78
20%	17,792.44
15%	20,454.32
10%	24,080.53
5%	29,715.99
0%	39,997.51

End of Forecast

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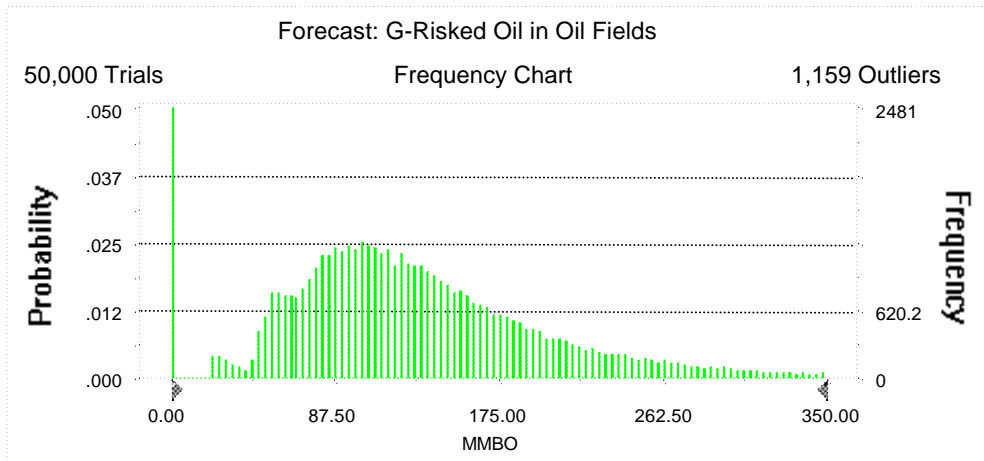
Forecast: G-Riskd Oil in Oil Fields

Summary:

Display range is from 0.00 to 350.00 MMBO
 Entire range is from 0.00 to 796.96 MMBO
 After 50,000 trials, the standard error of the mean is 0.37

Statistics:

	<u>Value</u>
Trials	50000
Mean	135.15
Median	121.36
Mode	0.00
Standard Deviation	82.10
Variance	6,740.34
Skewness	1.45
Kurtosis	7.20
Coefficient of Variability	0.61
Range Minimum	0.00
Range Maximum	796.96
Range Width	796.96
Mean Standard Error	0.37



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

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	0.00
95%	21.37
90%	54.23
85%	65.39
80%	76.27
75%	84.54
70%	92.05
65%	99.29
60%	106.43
55%	113.75
50%	121.36
45%	129.37
40%	137.78
35%	147.19
30%	157.94
25%	170.47
20%	185.69
15%	205.38
10%	234.66
5%	287.07
0%	796.96

End of Forecast

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Monte Carlo Results

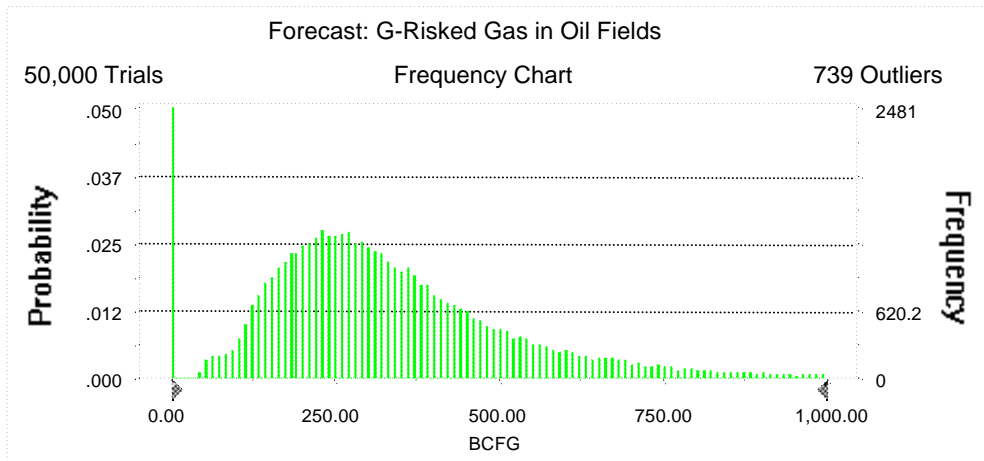
Forecast: G-Risk Gas in Oil Fields

Summary:

Display range is from 0.00 to 1,000.00 BCFG
 Entire range is from 0.00 to 2,268.38 BCFG
 After 50,000 trials, the standard error of the mean is 0.97

Statistics:

	<u>Value</u>
Trials	50000
Mean	338.44
Median	299.50
Mode	0.00
Standard Deviation	216.19
Variance	46,736.99
Skewness	1.63
Kurtosis	8.33
Coefficient of Variability	0.64
Range Minimum	0.00
Range Maximum	2,268.38
Range Width	2,268.38
Mean Standard Error	0.97



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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	0.00
95%	43.81
90%	128.05
85%	157.25
80%	181.54
75%	202.93
70%	222.84
65%	241.83
60%	260.72
55%	279.60
50%	299.50
45%	320.55
40%	343.19
35%	368.01
30%	395.52
25%	429.49
20%	469.21
15%	522.00
10%	599.14
5%	738.74
0%	2,268.38

End of Forecast

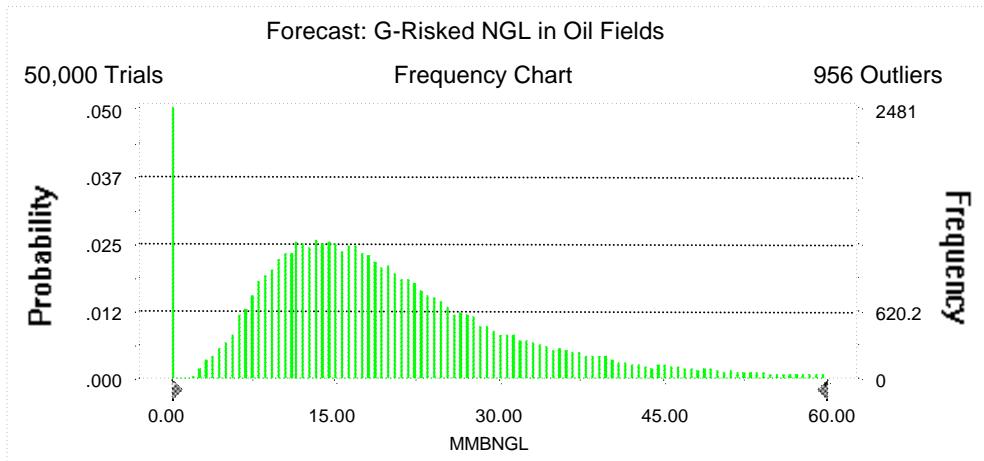
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Forecast: G-Riskd NGL in Oil Fields

Summary:

Display range is from 0.00 to 60.00 MMBNGL
Entire range is from 0.00 to 169.78 MMBNGL
After 50,000 trials, the standard error of the mean is 0.06

Statistics:	Value
Trials	50000
Mean	20.34
Median	17.62
Mode	0.00
Standard Deviation	13.92
Variance	193.85
Skewness	1.83
Kurtosis	9.58
Coefficient of Variability	0.68
Range Minimum	0.00
Range Maximum	169.78
Range Width	169.78
Mean Standard Error	0.06



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

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.00
95%	2.07
90%	6.96
85%	8.74
80%	10.20
75%	11.50
70%	12.72
65%	13.91
60%	15.12
55%	16.37
50%	17.62
45%	18.95
40%	20.40
35%	21.98
30%	23.80
25%	25.91
20%	28.53
15%	32.02
10%	37.08
5%	46.23
0%	169.78

End of Forecast

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Monte Carlo Results

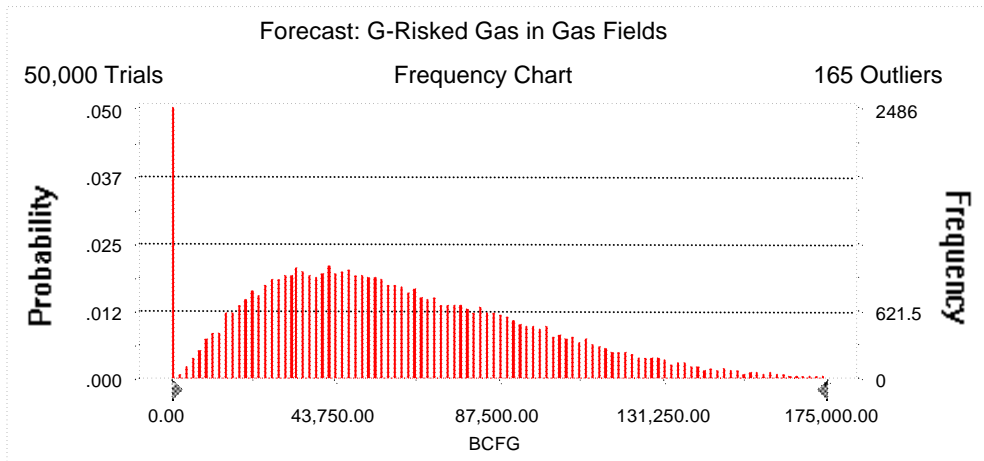
Forecast: G-Risk Gas in Gas Fields

Summary:

Display range is from 0.00 to 175,000.00 BCFG
 Entire range is from 0.00 to 263,196.14 BCFG
 After 50,000 trials, the standard error of the mean is 164.26

Statistics:

	<u>Value</u>
Trials	50000
Mean	59,481.97
Median	54,525.24
Mode	0.00
Standard Deviation	36,728.55
Variance	1,348,986,052.31
Skewness	0.61
Kurtosis	3.10
Coefficient of Variability	0.62
Range Minimum	0.00
Range Maximum	263,196.14
Range Width	263,196.14
Mean Standard Error	164.26



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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	0.00
95%	2,560.27
90%	15,905.19
85%	22,146.51
80%	27,400.68
75%	32,134.00
70%	36,447.51
65%	41,084.79
60%	45,430.77
55%	49,889.54
50%	54,525.24
45%	59,356.15
40%	64,577.96
35%	70,178.34
30%	76,472.79
25%	83,251.39
20%	90,485.75
15%	99,220.79
10%	110,239.46
5%	126,925.86
0%	263,196.14

End of Forecast

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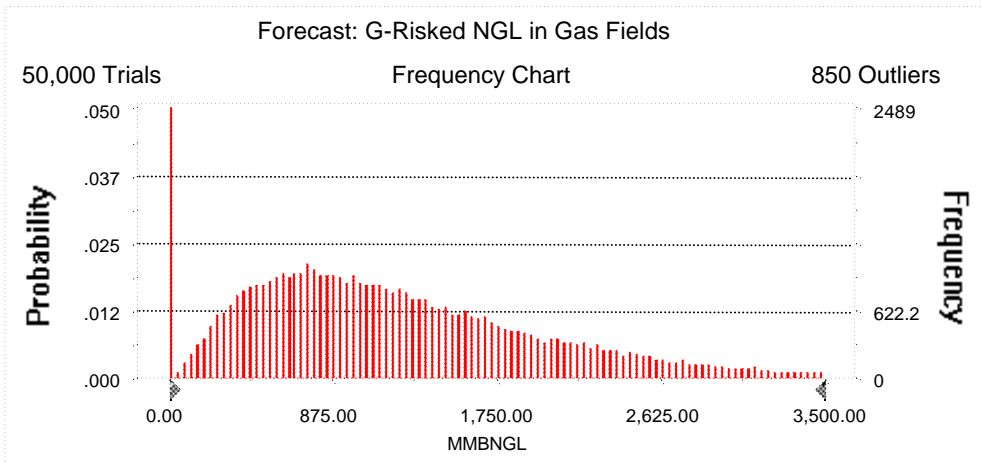
Forecast: G-Riskd NGL in Gas Fields

Summary:

Display range is from 0.00 to 3,500.00 MMBNGL
Entire range is from 0.00 to 7,138.17 MMBNGL
After 50,000 trials, the standard error of the mean is 3.79

Statistics:

	<u>Value</u>
Trials	50000
Mean	1,229.77
Median	1,074.07
Mode	0.00
Standard Deviation	847.02
Variance	717,443.42
Skewness	1.05
Kurtosis	4.51
Coefficient of Variability	0.69
Range Minimum	0.00
Range Maximum	7,138.17
Range Width	7,138.17
Mean Standard Error	3.79



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

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.00
95%	43.92
90%	299.66
85%	417.44
80%	519.84
75%	613.05
70%	705.66
65%	791.68
60%	882.10
55%	977.11
50%	1,074.07
45%	1,176.39
40%	1,285.30
35%	1,403.66
30%	1,540.46
25%	1,689.35
20%	1,867.82
15%	2,091.92
10%	2,377.28
5%	2,838.00
0%	7,138.17

End of Forecast

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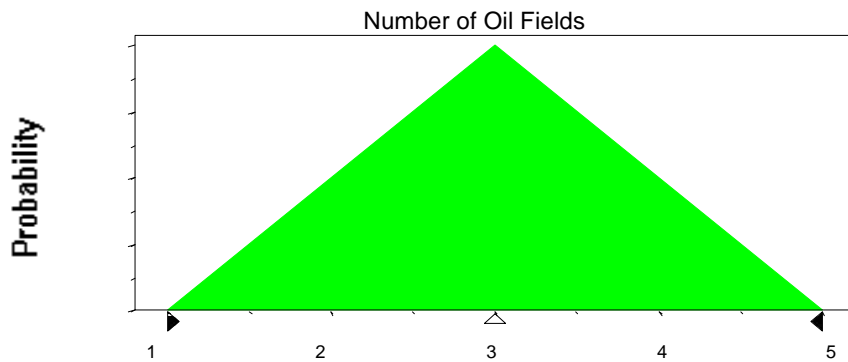
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	1
Likeliest	3
Maximum	5

Selected range is from 1 to 5
Mean value in simulation was 3



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	28.14
Standard Deviation	44.65

Shifted parameters

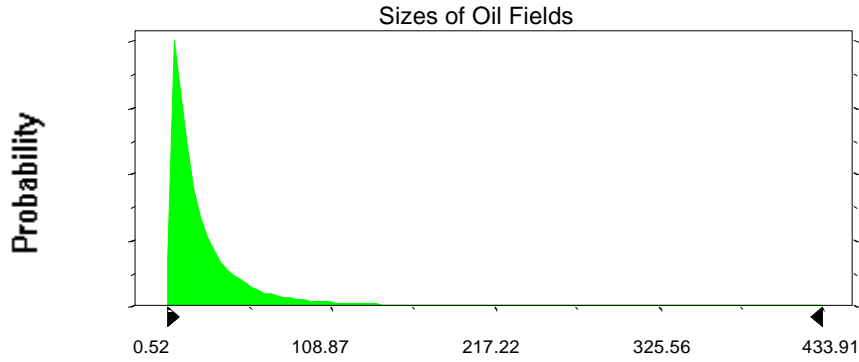
48.14
44.65

Selected range is from 0.00 to 480.00
Mean value in simulation was 27.39

20.00 to 500.00
47.39

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Assumption: Sizes of Oil Fields (cont'd)



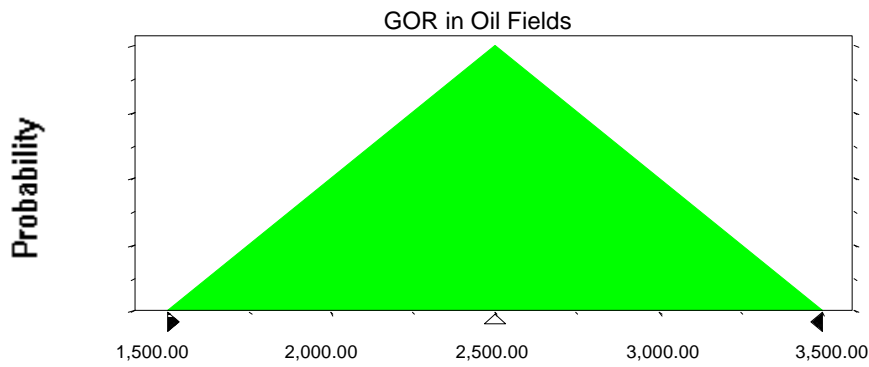
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	1,500.00
Likeliest	2,500.00
Maximum	3,500.00

Selected range is from 1,500.00 to 3,500.00

Mean value in simulation was 2,503.29



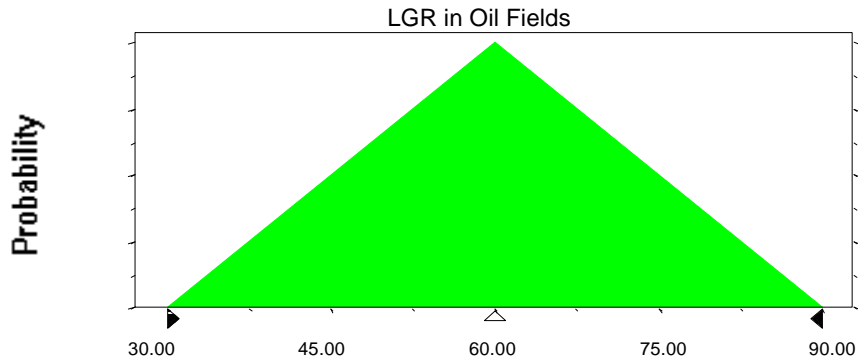
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Assumption: LGR in Oil Fields

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

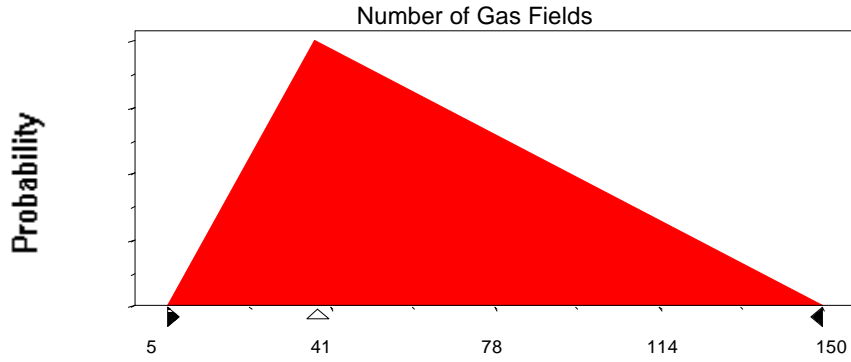
Triangular distribution with parameters:

Minimum	5
Likeliest	38
Maximum	150

Selected range is from 5 to 150
Mean value in simulation was 64

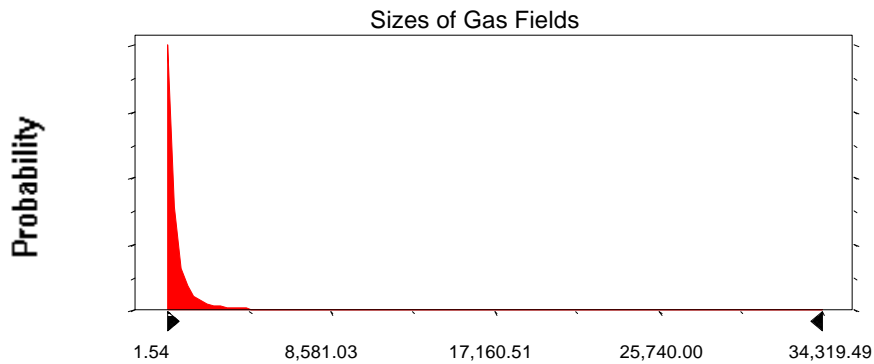
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Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	925.16	1,045.16
Standard Deviation	3,604.54	3,604.54
Selected range is from 0.00 to 39,880.00		120.00 to 40,000.00
Mean value in simulation was 858.90		978.9



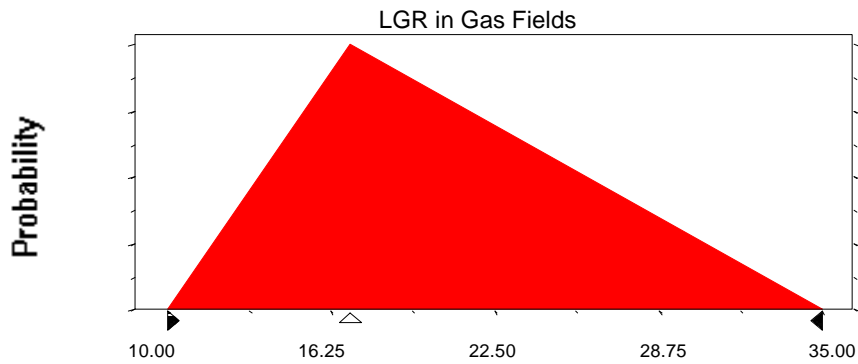
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Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	10.00
Likeliest	17.00
Maximum	35.00

Selected range is from 10.00 to 35.00
Mean value in simulation was 20.66



End of Assumptions

Simulation started on 2/3/00 at 17:27:20
Simulation stopped on 2/3/00 at 18:18:39