

Central Caspian Offshore, Assessment Unit 11090303
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	10	0.72	0	360	711	331	0	693	1,523	661	0	41	92	40	33	55	108	61
Gas Fields	60						0	4,451	7,969	3,911	0	28	73	29	322	490	810	517
Total		0.72	0	360	711	331	0	5,144	9,492	4,572	0	69	165	69				

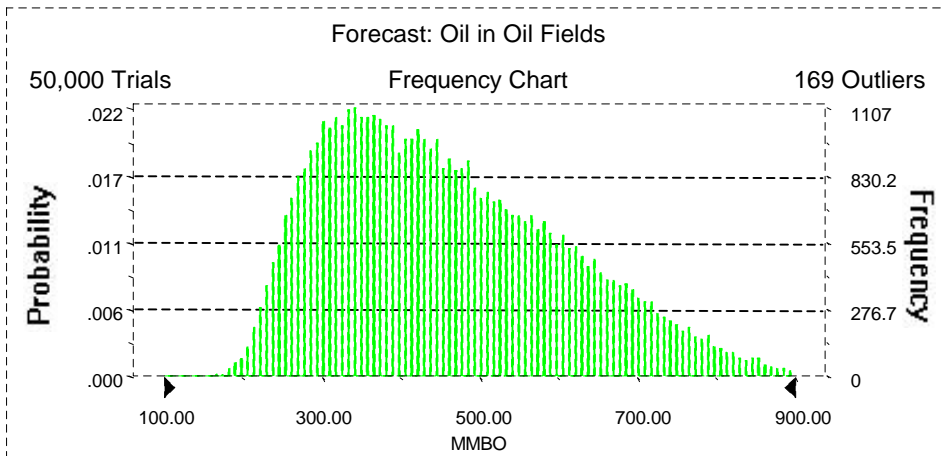
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Forecast: Oil in Oil Fields

Summary:

Display range is from 100.00 to 900.00 MMBO
Entire range is from 161.12 to 1,149.07 MMBO
After 50,000 trials, the standard error of the mean is 0.68

Statistics:	Value
Trials	50000
Mean	460.43
Median	437.25
Mode	---
Standard Deviation	150.99
Variance	22,798.51
Skewness	0.59
Kurtosis	2.74
Coefficient of Variability	0.33
Range Minimum	161.12
Range Maximum	1,149.07
Range Width	987.95
Mean Standard Error	0.68



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	161.12
95%	255.49
90%	281.25
85%	302.34
80%	321.56
75%	340.04
70%	358.41
65%	377.18
60%	396.34
55%	416.96
50%	437.25
45%	458.76
40%	481.57
35%	506.33
30%	533.21
25%	563.32
20%	594.96
15%	631.88
10%	677.12
5%	739.22
0%	1,149.07

End of Forecast

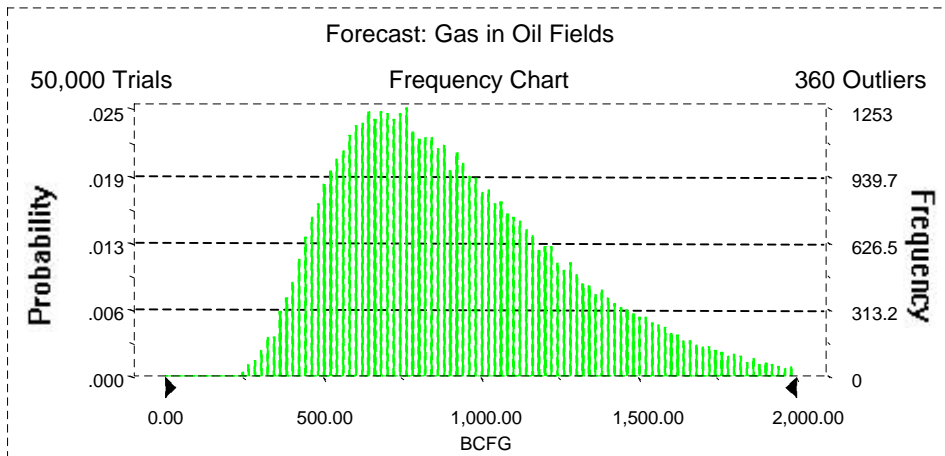
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Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 2,000.00 BCFG
Entire range is from 190.10 to 2,953.81 BCFG
After 50,000 trials, the standard error of the mean is 1.61

Statistics:	Value
Trials	50000
Mean	920.74
Median	858.86
Mode	---
Standard Deviation	360.12
Variance	129,687.96
Skewness	0.82
Kurtosis	3.56
Coefficient of Variability	0.39
Range Minimum	190.10
Range Maximum	2,953.81
Range Width	2,763.71
Mean Standard Error	1.61



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	190.10
95%	444.72
90%	510.48
85%	561.40
80%	607.32
75%	648.90
70%	689.83
65%	730.21
60%	771.00
55%	814.06
50%	858.86
45%	905.72
40%	955.38
35%	1,009.17
30%	1,068.97
25%	1,134.53
20%	1,211.08
15%	1,303.80
10%	1,425.11
5%	1,603.32
0%	2,953.81

End of Forecast

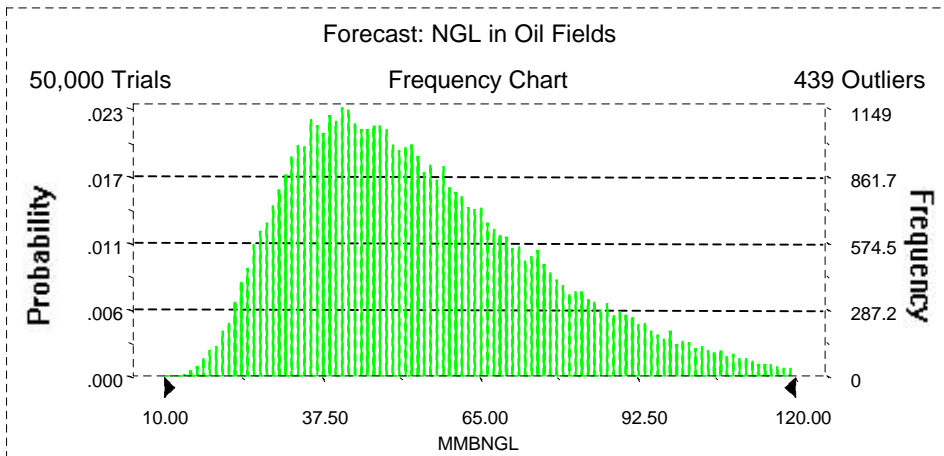
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Forecast: NGL in Oil Fields

Summary:

Display range is from 10.00 to 120.00 MMBNGL
 Entire range is from 11.30 to 194.66 MMBNGL
 After 50,000 trials, the standard error of the mean is 0.10

Statistics:	<u>Value</u>
Trials	50000
Mean	55.24
Median	51.41
Mode	---
Standard Deviation	22.00
Variance	483.81
Skewness	0.86
Kurtosis	3.69
Coefficient of Variability	0.40
Range Minimum	11.30
Range Maximum	194.66
Range Width	183.36
Mean Standard Error	0.10



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	11.30
95%	26.30
90%	30.33
85%	33.40
80%	36.07
75%	38.68
70%	41.12
65%	43.59
60%	46.14
55%	48.71
50%	51.41
45%	54.22
40%	57.27
35%	60.51
30%	64.11
25%	68.11
20%	72.85
15%	78.44
10%	85.98
5%	97.12
0%	194.66

End of Forecast

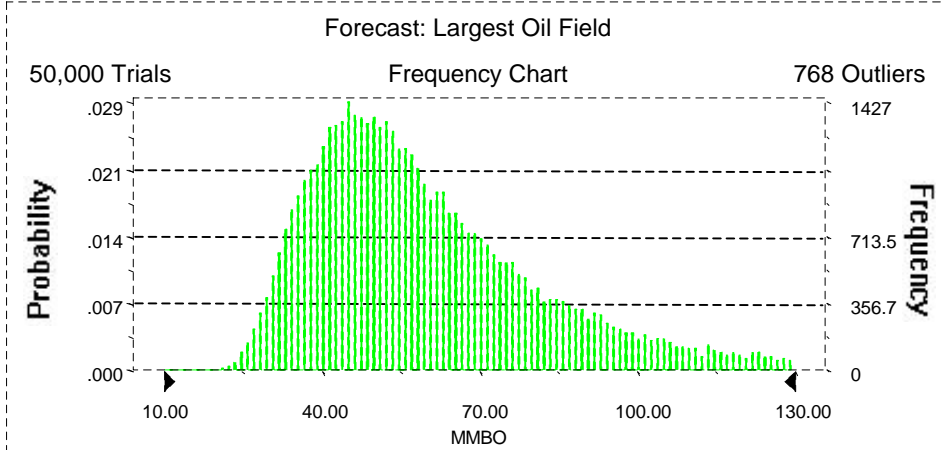
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Forecast: Largest Oil Field

Summary:

Display range is from 10.00 to 130.00 MMBO
 Entire range is from 19.97 to 149.97 MMBO
 After 50,000 trials, the standard error of the mean is 0.10

Statistics:	<u>Value</u>
Trials	50000
Mean	60.80
Median	55.46
Mode	---
Standard Deviation	23.13
Variance	534.80
Skewness	1.17
Kurtosis	4.35
Coefficient of Variability	0.38
Range Minimum	19.97
Range Maximum	149.97
Range Width	130.00
Mean Standard Error	0.10



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	19.97
95%	32.99
90%	36.47
85%	39.32
80%	41.83
75%	44.15
70%	46.30
65%	48.53
60%	50.77
55%	53.05
50%	55.46
45%	58.04
40%	61.00
35%	64.22
30%	67.91
25%	72.10
20%	77.16
15%	83.88
10%	92.79
5%	107.85
0%	149.97

End of Forecast

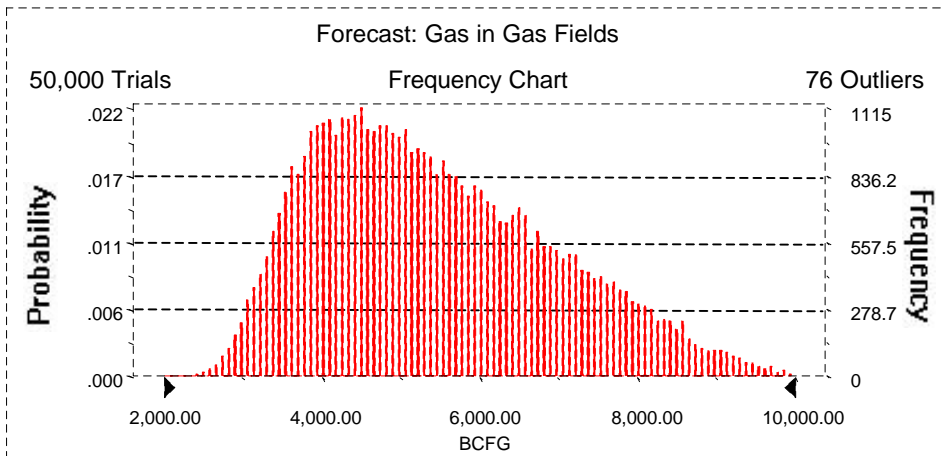
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Forecast: Gas in Gas Fields

Summary:

Display range is from 2,000.00 to 10,000.00 BCFG
 Entire range is from 2,222.50 to 11,539.96 BCFG
 After 50,000 trials, the standard error of the mean is 6.76

Statistics:	<u>Value</u>
Trials	50000
Mean	5,453.45
Median	5,222.96
Mode	---
Standard Deviation	1,511.93
Variance	2,285,923.72
Skewness	0.55
Kurtosis	2.65
Coefficient of Variability	0.28
Range Minimum	2,222.50
Range Maximum	11,539.96
Range Width	9,317.46
Mean Standard Error	6.76



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Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	2,222.50
95%	3,381.07
90%	3,654.05
85%	3,875.31
80%	4,067.86
75%	4,259.51
70%	4,444.65
65%	4,629.91
60%	4,823.07
55%	5,018.85
50%	5,222.96
45%	5,438.89
40%	5,669.75
35%	5,921.52
30%	6,183.18
25%	6,485.18
20%	6,806.87
15%	7,187.54
10%	7,639.17
5%	8,243.02
0%	11,539.96

End of Forecast

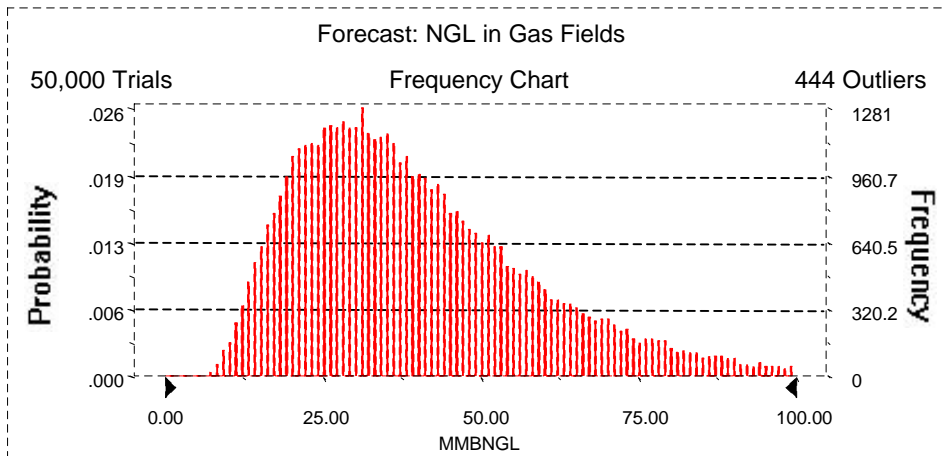
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Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 100.00 MMBNGL
 Entire range is from 5.84 to 142.43 MMBNGL
 After 50,000 trials, the standard error of the mean is 0.09

Statistics:	<u>Value</u>
Trials	50000
Mean	40.24
Median	36.45
Mode	---
Standard Deviation	19.25
Variance	370.37
Skewness	1.00
Kurtosis	4.02
Coefficient of Variability	0.48
Range Minimum	5.84
Range Maximum	142.43
Range Width	136.58
Mean Standard Error	0.09



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	5.84
95%	15.84
90%	19.01
85%	21.47
80%	23.71
75%	25.91
70%	28.01
65%	30.06
60%	32.09
55%	34.27
50%	36.45
45%	38.83
40%	41.39
35%	44.12
30%	47.24
25%	50.83
20%	54.90
15%	59.99
10%	66.96
5%	77.84
0%	142.43

End of Forecast

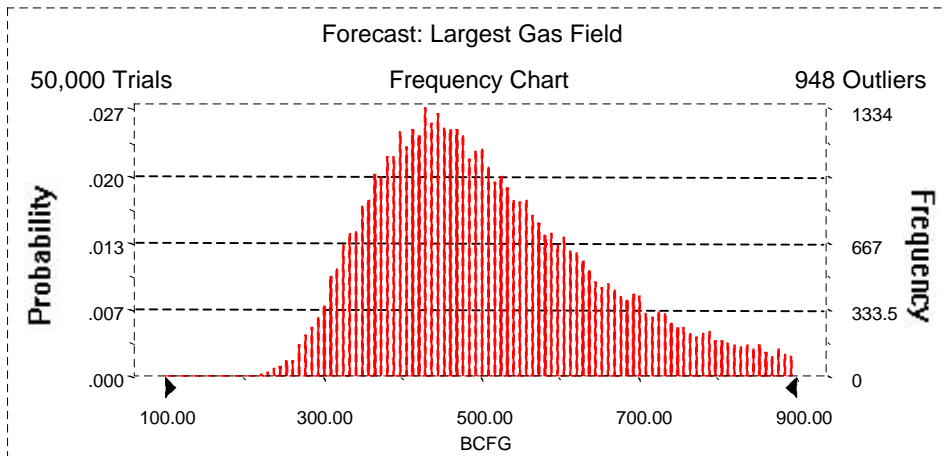
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Forecast: Largest Gas Field

Summary:

Display range is from 100.00 to 900.00 BCFG
Entire range is from 181.41 to 999.32 BCFG
After 50,000 trials, the standard error of the mean is 0.66

Statistics:	Value
Trials	50000
Mean	516.66
Median	489.55
Mode	---
Standard Deviation	147.33
Variance	21,706.21
Skewness	0.82
Kurtosis	3.37
Coefficient of Variability	0.29
Range Minimum	181.41
Range Maximum	999.32
Range Width	817.90
Mean Standard Error	0.66



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Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	181.41
95%	322.15
90%	350.78
85%	372.30
80%	391.24
75%	408.77
70%	425.03
65%	440.61
60%	456.04
55%	472.37
50%	489.55
45%	507.34
40%	526.94
35%	548.57
30%	572.12
25%	600.09
20%	631.22
15%	672.69
10%	725.97
5%	810.49
0%	999.32

End of Forecast

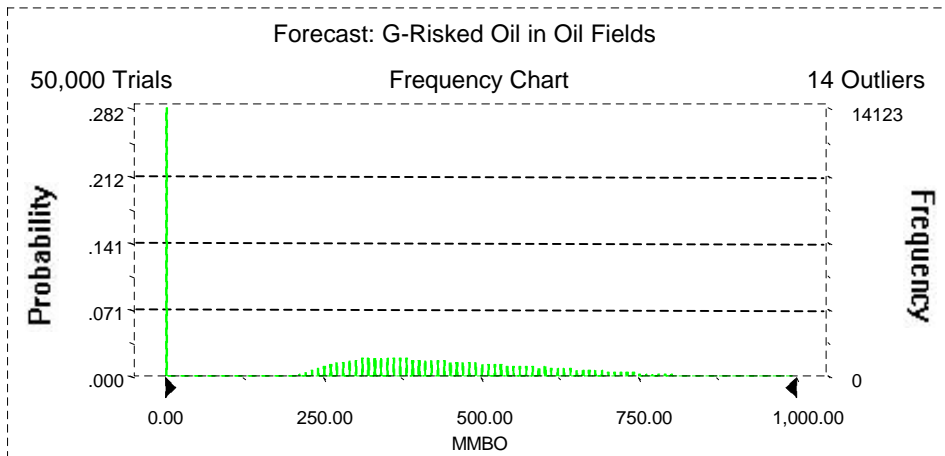
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Forecast: G-Riskd Oil in Oil Fields

Summary:

Display range is from 0.00 to 1,000.00 MMBO
 Entire range is from 0.00 to 1,149.07 MMBO
 After 50,000 trials, the standard error of the mean is 1.09

Statistics:	<u>Value</u>
Trials	50000
Mean	330.62
Median	359.72
Mode	0.00
Standard Deviation	243.79
Variance	59,432.31
Skewness	-0.05
Kurtosis	1.99
Coefficient of Variability	0.74
Range Minimum	0.00
Range Maximum	1,149.07
Range Width	1,149.07
Mean Standard Error	1.09



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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%	236.36
65%	278.78
60%	307.93
55%	334.23
50%	359.72
45%	385.81
40%	413.82
35%	442.58
30%	473.62
25%	507.22
20%	546.82
15%	589.47
10%	641.30
5%	711.41
0%	1,149.07

End of Forecast

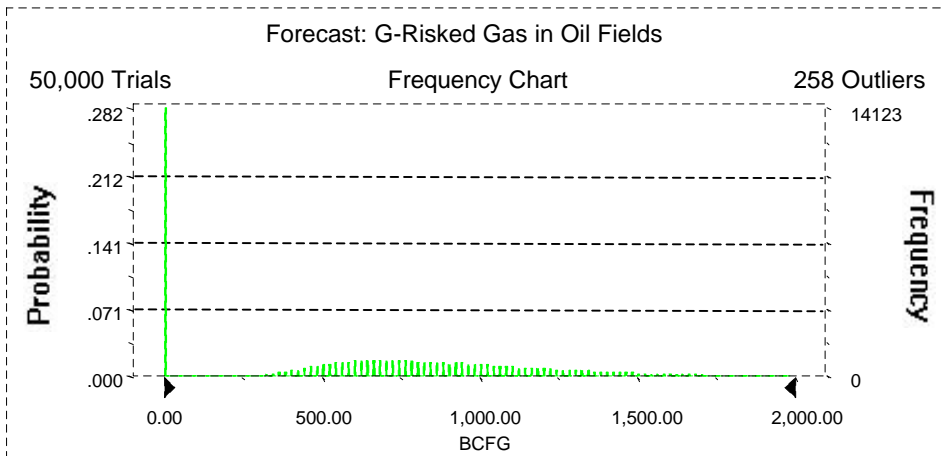
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Forecast: G-Risked Gas in Oil Fields

Summary:

Display range is from 0.00 to 2,000.00 BCFG
 Entire range is from 0.00 to 2,953.81 BCFG
 After 50,000 trials, the standard error of the mean is 2.30

Statistics:	<u>Value</u>
Trials	50000
Mean	660.71
Median	693.02
Mode	0.00
Standard Deviation	514.85
Variance	265,074.43
Skewness	0.23
Kurtosis	2.38
Coefficient of Variability	0.78
Range Minimum	0.00
Range Maximum	2,953.81
Range Width	2,953.81
Mean Standard Error	2.30



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Forecast: G-Risked 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%	393.95
65%	502.81
60%	573.64
55%	635.22
50%	693.02
45%	749.59
40%	806.67
35%	870.62
30%	936.88
25%	1,010.54
20%	1,094.97
15%	1,197.72
10%	1,326.95
5%	1,522.68
0%	2,953.81

End of Forecast

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Forecast: G-Risked NGL in Oil Fields

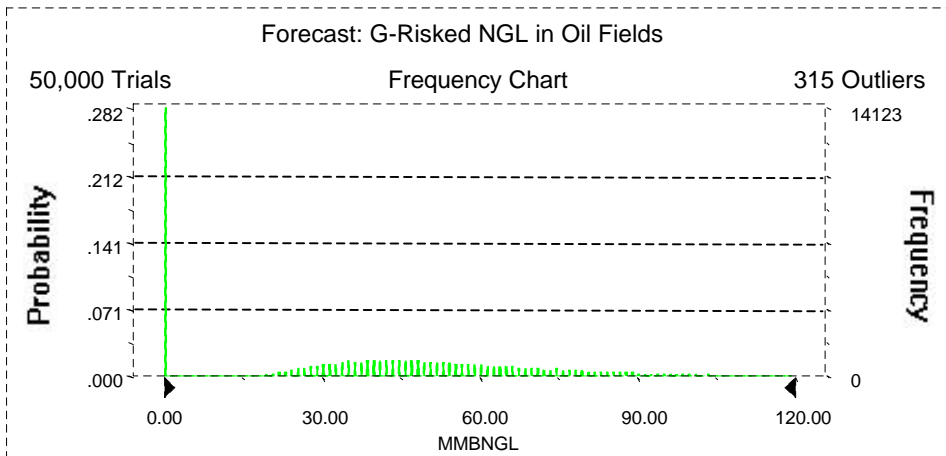
Summary:

Display range is from 0.00 to 120.00 MMBNGL

Entire range is from 0.00 to 194.66 MMBNGL

After 50,000 trials, the standard error of the mean is 0.14

Statistics:	<u>Value</u>
Trials	50000
Mean	39.65
Median	41.35
Mode	0.00
Standard Deviation	31.09
Variance	966.74
Skewness	0.27
Kurtosis	2.45
Coefficient of Variability	0.78
Range Minimum	0.00
Range Maximum	194.66
Range Width	194.66
Mean Standard Error	0.14



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Forecast: G-Riskied 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%	23.41
65%	29.91
60%	34.15
55%	37.81
50%	41.35
45%	44.85
40%	48.36
35%	52.11
30%	56.17
25%	60.58
20%	65.68
15%	71.93
10%	79.89
5%	92.13
0%	194.66

End of Forecast

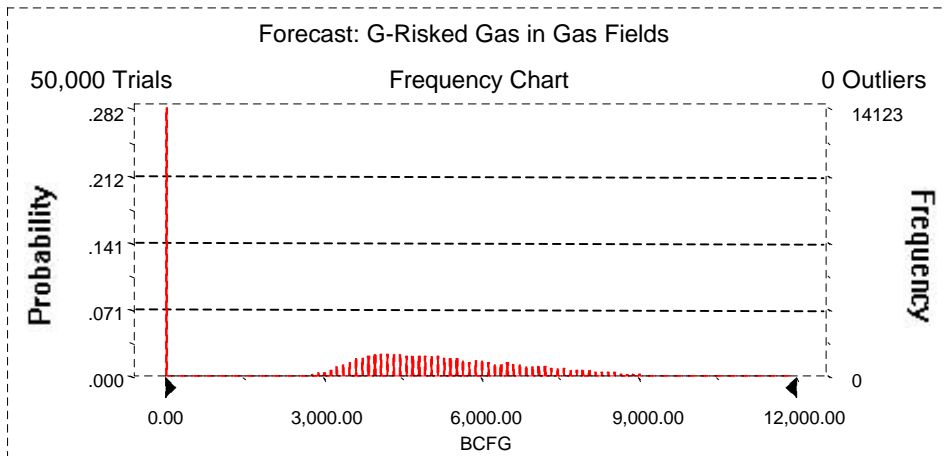
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Forecast: G-Risk Gas in Gas Fields

Summary:

Display range is from 0.00 to 12,000.00 BCFG
Entire range is from 0.00 to 11,539.96 BCFG
After 50,000 trials, the standard error of the mean is 12.38

Statistics:	Value
Trials	50000
Mean	3,910.93
Median	4,450.87
Mode	0.00
Standard Deviation	2,767.49
Variance	7,658,993.20
Skewness	-0.25
Kurtosis	1.90
Coefficient of Variability	0.71
Range Minimum	0.00
Range Maximum	11,539.96
Range Width	11,539.96
Mean Standard Error	12.38



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Forecast: G-Risk 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%	3,153.53
65%	3,625.87
60%	3,927.46
55%	4,188.33
50%	4,450.87
45%	4,716.69
40%	4,990.16
35%	5,275.40
30%	5,589.91
25%	5,933.31
20%	6,304.59
15%	6,740.12
10%	7,259.60
5%	7,969.44
0%	11,539.96

End of Forecast

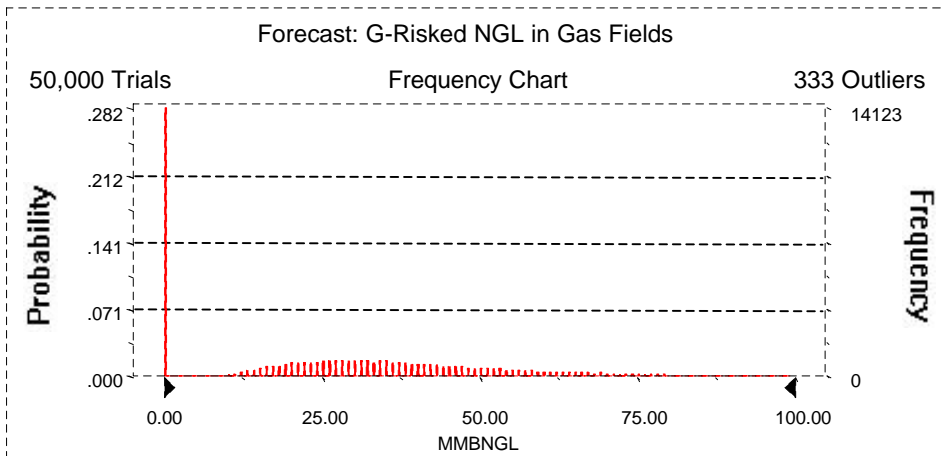
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Forecast: G-Risked NGL in Gas Fields

Summary:

Display range is from 0.00 to 100.00 MMBNGL
Entire range is from 0.00 to 142.43 MMBNGL
After 50,000 trials, the standard error of the mean is 0.11

Statistics:	<u>Value</u>
Trials	50000
Mean	28.86
Median	28.08
Mode	0.00
Standard Deviation	24.39
Variance	594.64
Skewness	0.59
Kurtosis	2.98
Coefficient of Variability	0.84
Range Minimum	0.00
Range Maximum	142.43
Range Width	142.43
Mean Standard Error	0.11



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Forecast: G-Riskied 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%	13.61
65%	18.75
60%	22.11
55%	25.22
50%	28.08
45%	30.96
40%	33.94
35%	36.98
30%	40.35
25%	44.09
20%	48.53
15%	53.96
10%	61.37
5%	72.73
0%	142.43

End of Forecast

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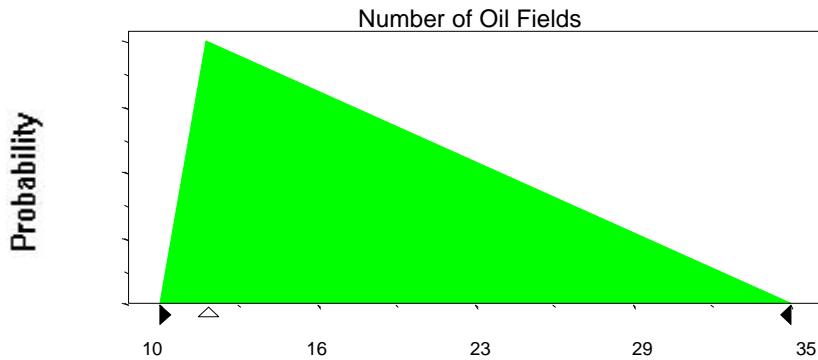
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	10
Likeliest	12
Maximum	35

Selected range is from 10 to 35
Mean value in simulation was 19



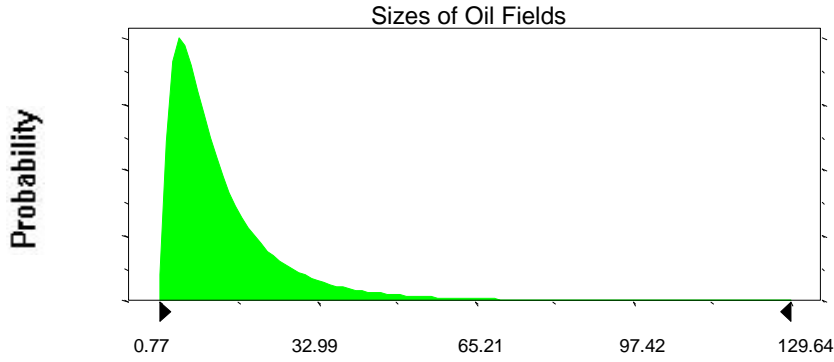
Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	14.40	24.4
Standard Deviation	14.92	14.92

Selected range is from 0.00 to 140.00 10.00 to 150.00
Mean value in simulation was 14.26 24.26

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Assumption: Sizes of Oil Fields (cont'd)



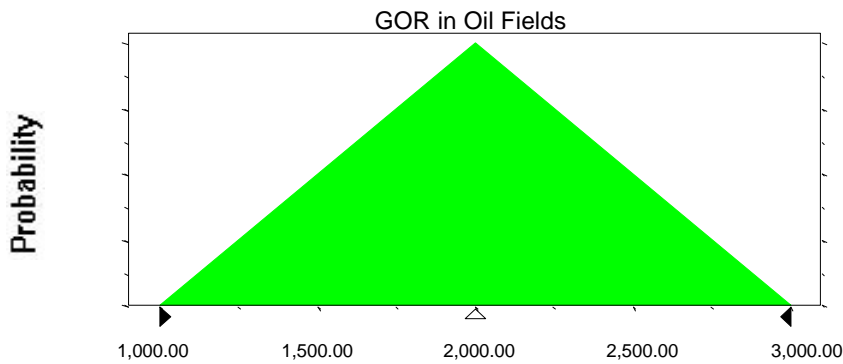
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	1,000.00
Likeliest	2,000.00
Maximum	3,000.00

Selected range is from 1,000.00 to 3,000.00

Mean value in simulation was 1,999.73



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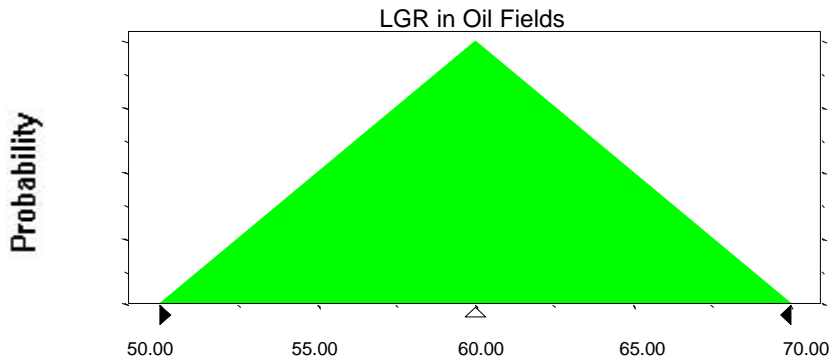
Assumption: LGR in Oil Fields

Triangular distribution with parameters:

Minimum	50.00
Likeliest	60.00
Maximum	70.00

Selected range is from 50.00 to 70.00

Mean value in simulation was 59.99



Assumption: Number of Gas Fields

Triangular distribution with parameters:

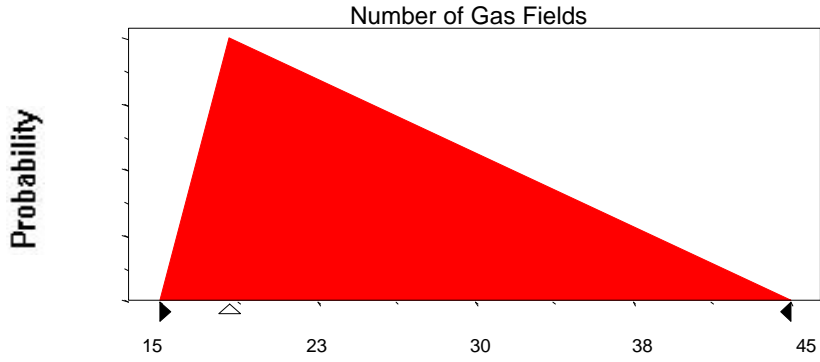
Minimum	15
Likeliest	18
Maximum	45

Selected range is from 15 to 45

Mean value in simulation was 26

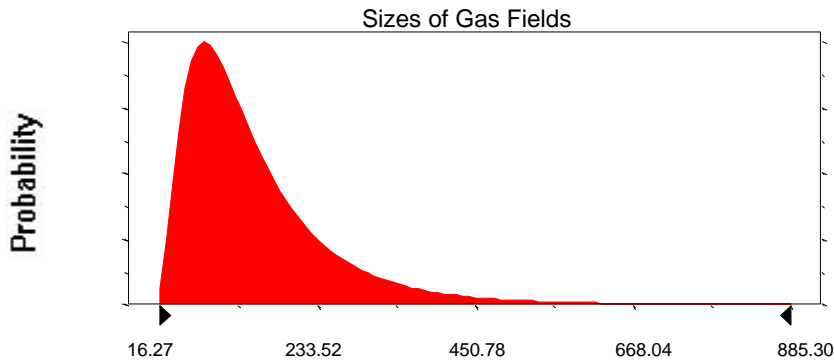
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Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:	Shifted parameters	
Mean	149.81	209.81
Standard Deviation	111.96	111.96
Selected range is from 0.00 to 940.00	60.00 to 1,000.00	
Mean value in simulation was 147.97	207.97	



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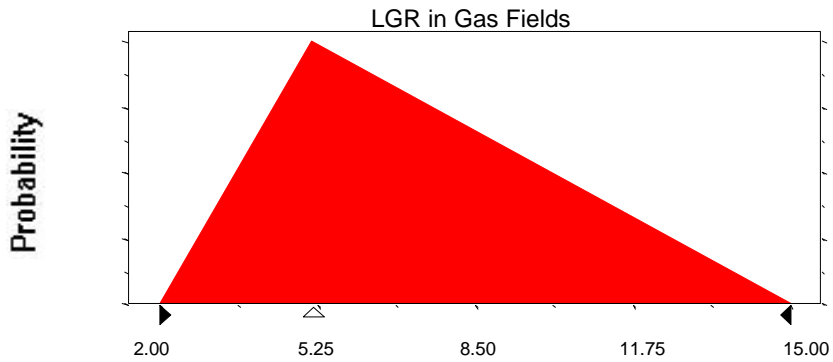
Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	2.00
Likeliest	5.15
Maximum	15.00

Selected range is from 2.00 to 15.00

Mean value in simulation was 7.38



End of Assumptions

Simulation started on 12/1/98 at 13:12:46
Simulation stopped on 12/1/98 at 15:21:00