

**Offshore Prikumsk Zone, Assessment Unit 11090301
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	0.90	0	794	1,419	789	0	1,545	3,048	1,580	0	92	184	95	59	146	440	182
Gas Fields	60						0	2,215	4,708	2,330	0	43	100	47	195	403	971	465
Total		0.90	0	794	1,419	789	0	3,760	7,755	3,910	0	135	284	141				

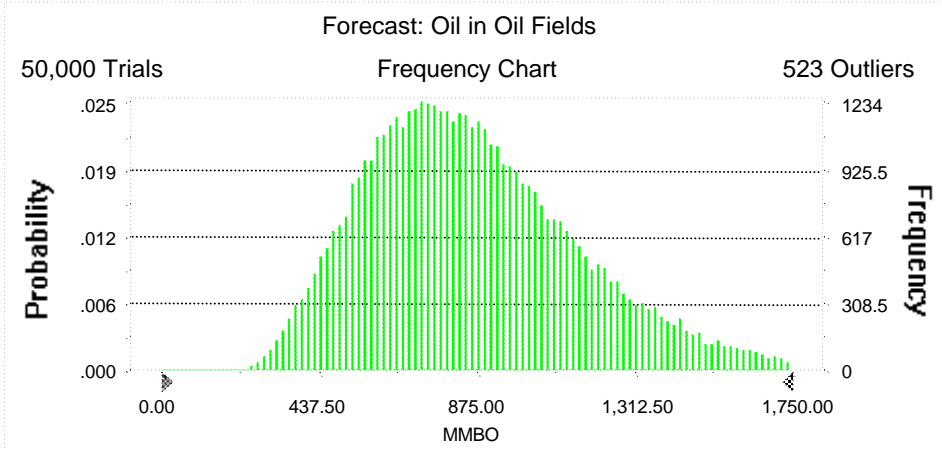
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Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 1,750.00 MMBO
Entire range is from 199.97 to 3,064.86 MMBO
After 50,000 trials, the standard error of the mean is 1.38

Statistics:	Value
Trials	50000
Mean	873.49
Median	833.71
Mode	---
Standard Deviation	307.57
Variance	94,600.11
Skewness	0.80
Kurtosis	3.98
Coefficient of Variability	0.35
Range Minimum	199.97
Range Maximum	3,064.86
Range Width	2,864.89
Mean Standard Error	1.38



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	199.97
95%	445.09
90%	515.54
85%	566.57
80%	610.01
75%	649.96
70%	687.91
65%	724.17
60%	759.50
55%	796.05
50%	833.71
45%	871.13
40%	910.11
35%	952.59
30%	1,000.12
25%	1,052.47
20%	1,113.48
15%	1,186.08
10%	1,284.15
5%	1,440.69
0%	3,064.86

End of Forecast

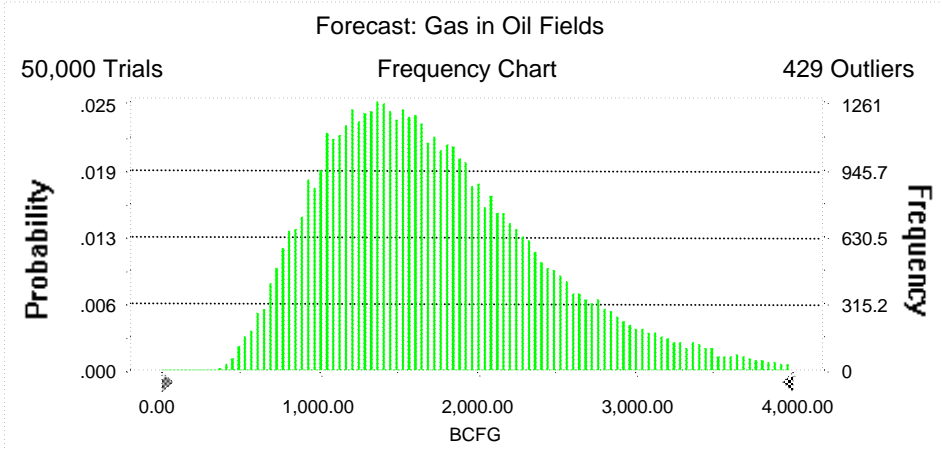
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Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 4,000.00 BCFG
Entire range is from 282.27 to 7,028.30 BCFG
After 50,000 trials, the standard error of the mean is 3.22

Statistics:	Value
Trials	50000
Mean	1,748.11
Median	1,633.05
Mode	---
Standard Deviation	720.98
Variance	519,808.60
Skewness	1.00
Kurtosis	4.59
Coefficient of Variability	0.41
Range Minimum	282.27
Range Maximum	7,028.30
Range Width	6,746.02
Mean Standard Error	3.22



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	282.27
95%	794.44
90%	936.61
85%	1,045.82
80%	1,135.03
75%	1,222.87
70%	1,306.00
65%	1,386.37
60%	1,466.19
55%	1,550.13
50%	1,633.05
45%	1,721.66
40%	1,815.67
35%	1,912.49
30%	2,019.98
25%	2,146.41
20%	2,289.33
15%	2,466.73
10%	2,712.68
5%	3,107.08
0%	7,028.30

End of Forecast

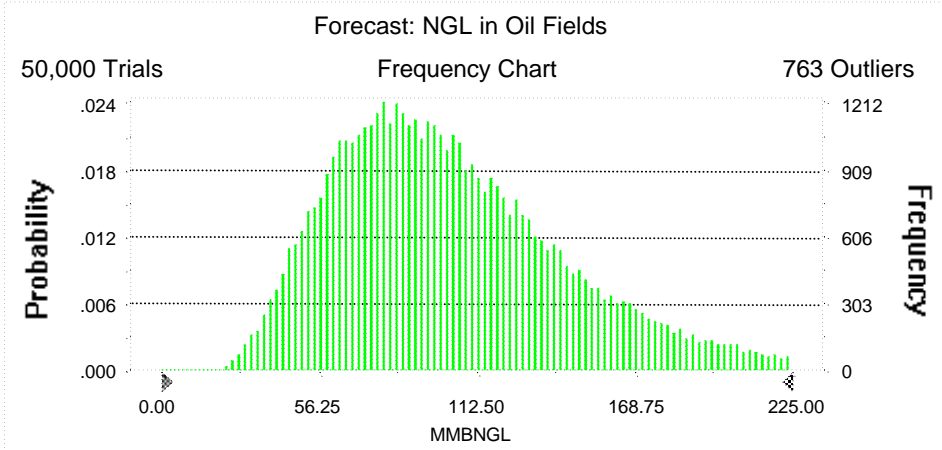
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Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 225.00 MMBNGL
Entire range is from 15.30 to 440.02 MMBNGL
After 50,000 trials, the standard error of the mean is 0.20

Statistics:	Value
Trials	50000
Mean	104.91
Median	97.77
Mode	---
Standard Deviation	43.94
Variance	1,930.64
Skewness	1.03
Kurtosis	4.71
Coefficient of Variability	0.42
Range Minimum	15.30
Range Maximum	440.02
Range Width	424.72
Mean Standard Error	0.20



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	15.30
95%	47.10
90%	55.59
85%	62.17
80%	67.64
75%	72.98
70%	77.98
65%	82.79
60%	87.56
55%	92.60
50%	97.77
45%	103.03
40%	108.50
35%	114.71
30%	121.43
25%	128.95
20%	137.75
15%	148.72
10%	163.94
5%	187.31
0%	440.02

End of Forecast

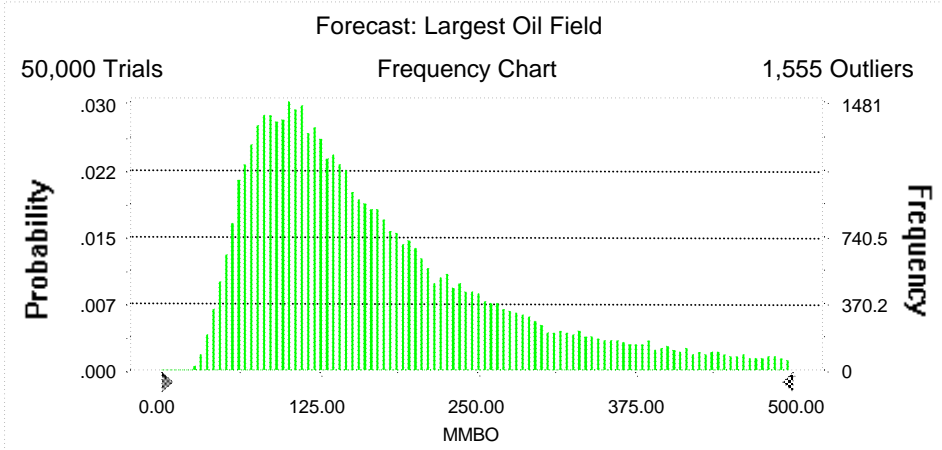
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Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 500.00 MMBO
 Entire range is from 22.59 to 699.98 MMBO
 After 50,000 trials, the standard error of the mean is 0.54

Statistics:	<u>Value</u>
Trials	50000
Mean	181.80
Median	145.58
Mode	---
Standard Deviation	120.21
Variance	14,450.80
Skewness	1.63
Kurtosis	5.79
Coefficient of Variability	0.66
Range Minimum	22.59
Range Maximum	699.98
Range Width	677.39
Mean Standard Error	0.54



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	22.59
95%	59.37
90%	70.78
85%	80.27
80%	89.16
75%	98.23
70%	106.80
65%	115.37
60%	124.80
55%	134.98
50%	145.58
45%	157.99
40%	171.73
35%	186.98
30%	204.56
25%	227.28
20%	254.55
15%	290.45
10%	346.14
5%	440.49
0%	699.98

End of Forecast

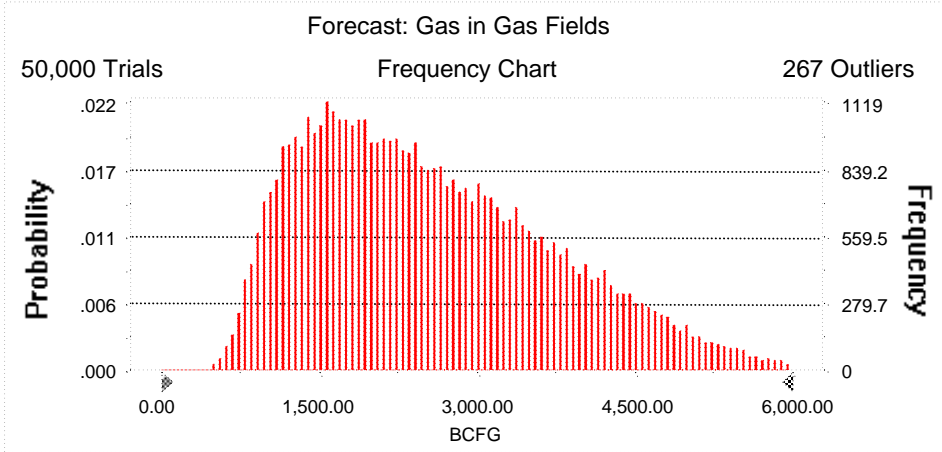
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Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 6,000.00 BCFG
 Entire range is from 416.73 to 8,544.30 BCFG
 After 50,000 trials, the standard error of the mean is 5.29

Statistics:	<u>Value</u>
Trials	50000
Mean	2,579.49
Median	2,388.64
Mode	---
Standard Deviation	1,181.96
Variance	1,397,039.64
Skewness	0.67
Kurtosis	2.94
Coefficient of Variability	0.46
Range Minimum	416.73
Range Maximum	8,544.30
Range Width	8,127.57
Mean Standard Error	5.29



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Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	416.73
95%	1,005.00
90%	1,188.30
85%	1,346.31
80%	1,495.31
75%	1,635.24
70%	1,775.99
65%	1,920.32
60%	2,070.34
55%	2,227.08
50%	2,388.64
45%	2,555.61
40%	2,735.90
35%	2,932.40
30%	3,134.69
25%	3,361.72
20%	3,611.79
15%	3,899.65
10%	4,265.34
5%	4,773.98
0%	8,544.30

End of Forecast

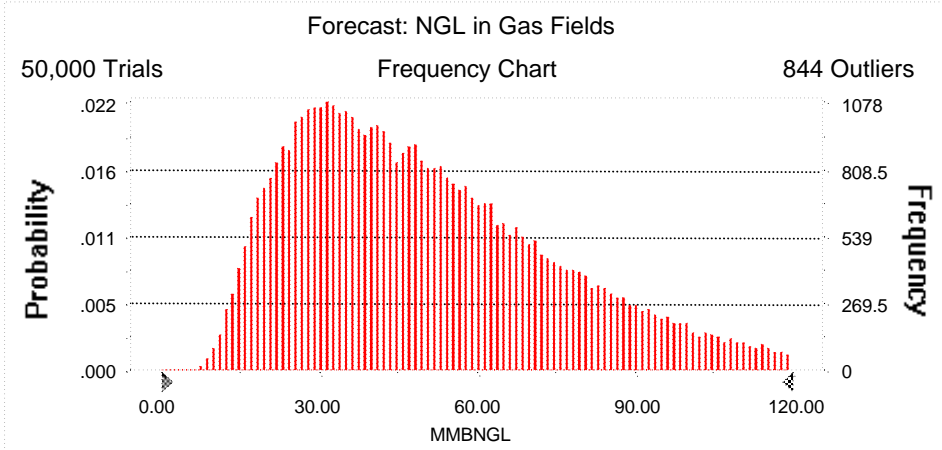
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Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 120.00 MMBNGL
 Entire range is from 5.39 to 193.38 MMBNGL
 After 50,000 trials, the standard error of the mean is 0.12

Statistics:	<u>Value</u>
Trials	50000
Mean	51.52
Median	46.61
Mode	---
Standard Deviation	26.28
Variance	690.54
Skewness	0.94
Kurtosis	3.79
Coefficient of Variability	0.51
Range Minimum	5.39
Range Maximum	193.38
Range Width	187.99
Mean Standard Error	0.12



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	5.39
95%	18.15
90%	22.19
85%	25.53
80%	28.48
75%	31.29
70%	34.09
65%	37.02
60%	40.10
55%	43.18
50%	46.61
45%	49.97
40%	53.62
35%	57.58
30%	61.85
25%	66.81
20%	72.40
15%	79.41
10%	88.34
5%	101.93
0%	193.38

End of Forecast

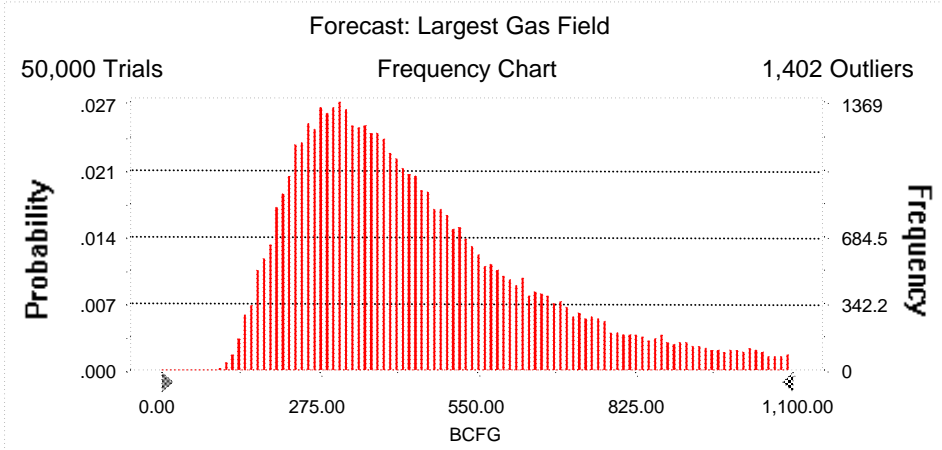
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Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 1,100.00 BCFG
 Entire range is from 90.76 to 1,499.71 BCFG
 After 50,000 trials, the standard error of the mean is 1.08

Statistics:	<u>Value</u>
Trials	50000
Mean	464.84
Median	402.93
Mode	---
Standard Deviation	241.12
Variance	58,139.49
Skewness	1.43
Kurtosis	5.21
Coefficient of Variability	0.52
Range Minimum	90.76
Range Maximum	1,499.71
Range Width	1,408.95
Mean Standard Error	1.08



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Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	90.76
95%	195.32
90%	226.64
85%	251.20
80%	272.89
75%	294.06
70%	314.10
65%	335.05
60%	356.72
55%	379.26
50%	402.93
45%	428.72
40%	456.22
35%	488.26
30%	524.13
25%	567.24
20%	623.81
15%	691.71
10%	790.64
5%	971.23
0%	1,499.71

End of Forecast

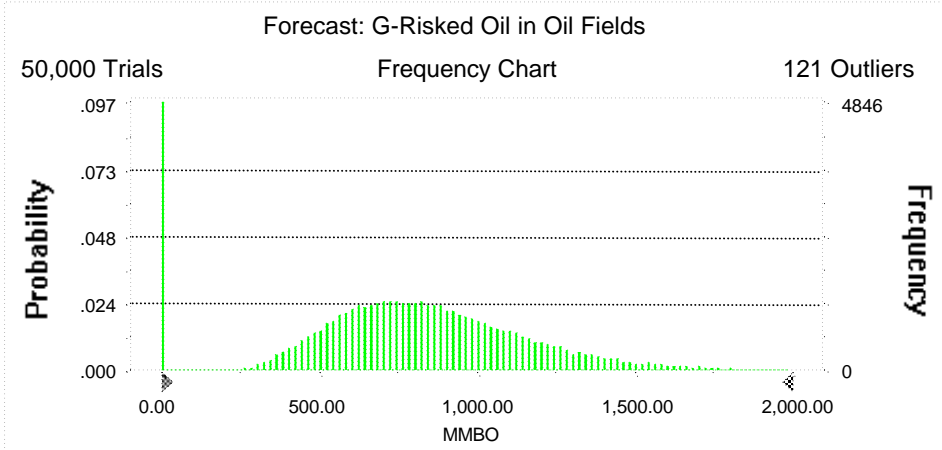
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Forecast: G-Riskd Oil in Oil Fields

Summary:

Display range is from 0.00 to 2,000.00 MMBO
Entire range is from 0.00 to 3,064.86 MMBO
After 50,000 trials, the standard error of the mean is 1.74

Statistics:	<u>Value</u>
Trials	50000
Mean	789.07
Median	794.23
Mode	0.00
Standard Deviation	389.86
Variance	151,994.17
Skewness	-0.08
Kurtosis	3.47
Coefficient of Variability	0.49
Range Minimum	0.00
Range Maximum	3,064.86
Range Width	3,064.86
Mean Standard Error	1.74



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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%	303.57
85%	460.37
80%	532.96
75%	584.70
70%	630.32
65%	672.84
60%	713.94
55%	754.04
50%	794.23
45%	835.43
40%	877.06
35%	920.93
30%	969.94
25%	1,023.95
20%	1,086.75
15%	1,160.45
10%	1,260.18
5%	1,418.50
0%	3,064.86

End of Forecast

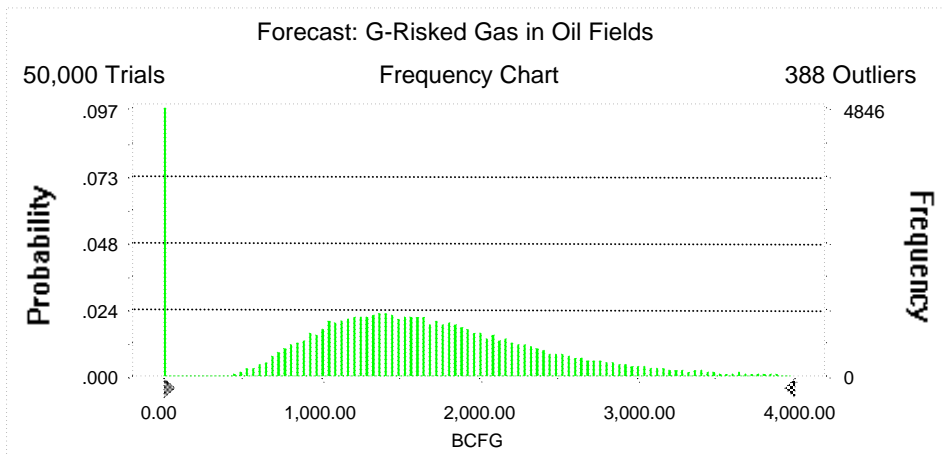
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Forecast: G-Riskd Gas in Oil Fields

Summary:

Display range is from 0.00 to 4,000.00 BCFG
 Entire range is from 0.00 to 7,028.30 BCFG
 After 50,000 trials, the standard error of the mean is 3.84

Statistics:	<u>Value</u>
Trials	50000
Mean	1,579.63
Median	1,544.57
Mode	0.00
Standard Deviation	858.59
Variance	737,168.52
Skewness	0.32
Kurtosis	3.74
Coefficient of Variability	0.54
Range Minimum	0.00
Range Maximum	7,028.30
Range Width	7,028.30
Mean Standard Error	3.84



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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%	502.78
85%	822.43
80%	968.74
75%	1,081.32
70%	1,180.58
65%	1,273.94
60%	1,364.94
55%	1,451.68
50%	1,544.57
45%	1,637.00
40%	1,735.96
35%	1,840.37
30%	1,950.17
25%	2,079.22
20%	2,225.91
15%	2,404.88
10%	2,653.58
5%	3,047.82
0%	7,028.30

End of Forecast

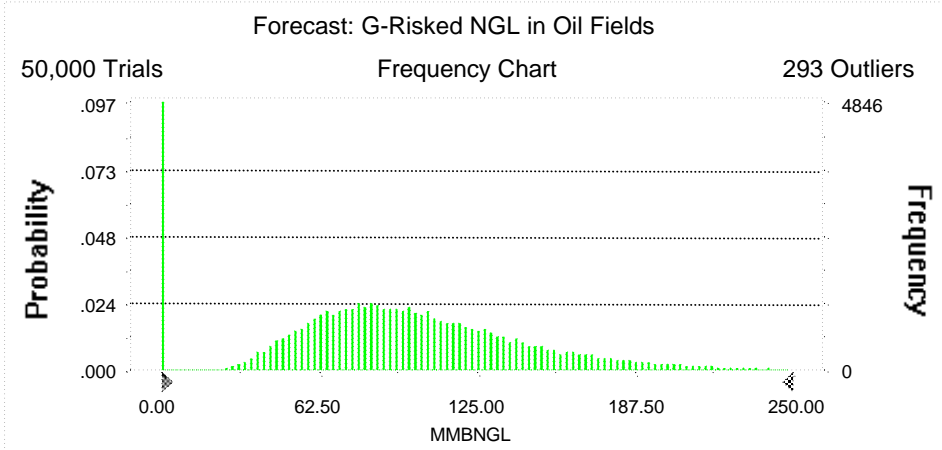
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Forecast: G-Risked NGL in Oil Fields

Summary:

Display range is from 0.00 to 250.00 MMBNGL
 Entire range is from 0.00 to 440.02 MMBNGL
 After 50,000 trials, the standard error of the mean is 0.23

Statistics:	<u>Value</u>
Trials	50000
Mean	94.79
Median	92.24
Mode	0.00
Standard Deviation	52.02
Variance	2,705.85
Skewness	0.35
Kurtosis	3.80
Coefficient of Variability	0.55
Range Minimum	0.00
Range Maximum	440.02
Range Width	440.02
Mean Standard Error	0.23



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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%	29.77
85%	48.92
80%	57.74
75%	64.40
70%	70.45
65%	76.07
60%	81.44
55%	86.69
50%	92.24
45%	97.94
40%	103.90
35%	110.16
30%	117.26
25%	124.93
20%	133.69
15%	144.71
10%	160.47
5%	184.05
0%	440.02

End of Forecast

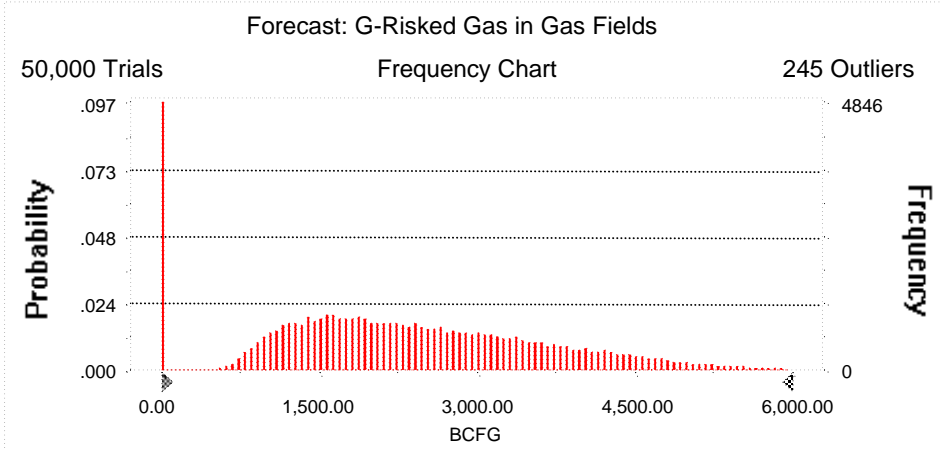
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Forecast: G-Riskd Gas in Gas Fields

Summary:

Display range is from 0.00 to 6,000.00 BCFG
Entire range is from 0.00 to 8,544.30 BCFG
After 50,000 trials, the standard error of the mean is 6.08

Statistics:	<u>Value</u>
Trials	50000
Mean	2,330.18
Median	2,215.35
Mode	0.00
Standard Deviation	1,358.76
Variance	1,846,224.90
Skewness	0.29
Kurtosis	2.80
Coefficient of Variability	0.58
Range Minimum	0.00
Range Maximum	8,544.30
Range Width	8,544.30
Mean Standard Error	6.08



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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%	650.30
85%	1,040.61
80%	1,233.38
75%	1,406.74
70%	1,567.97
65%	1,720.15
60%	1,880.01
55%	2,042.74
50%	2,215.35
45%	2,395.06
40%	2,582.49
35%	2,783.10
30%	3,003.77
25%	3,234.86
20%	3,496.48
15%	3,802.58
10%	4,188.28
5%	4,707.55
0%	8,544.30

End of Forecast

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Forecast: G-Riskd NGL in Gas Fields

Summary:

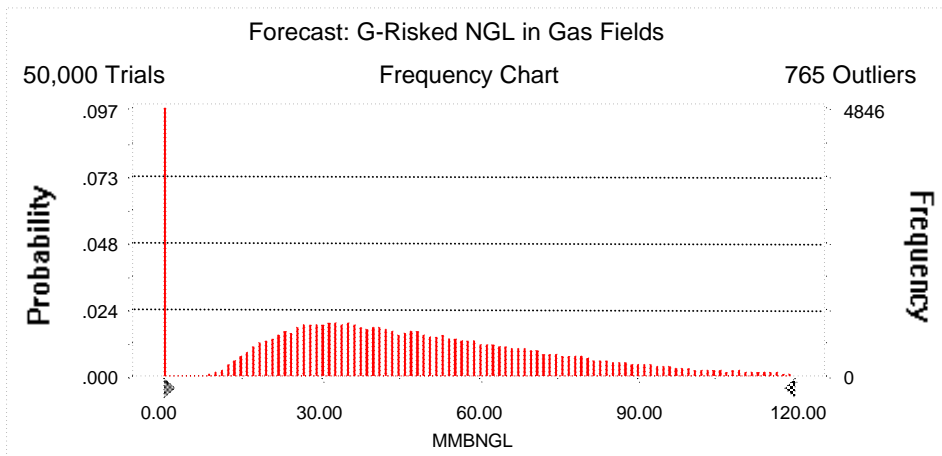
Display range is from 0.00 to 120.00 MMBNGL

Entire range is from 0.00 to 193.38 MMBNGL

After 50,000 trials, the standard error of the mean is 0.13

Statistics:

	<u>Value</u>
Trials	50000
Mean	46.55
Median	42.92
Mode	0.00
Standard Deviation	29.28
Variance	857.57
Skewness	0.60
Kurtosis	3.40
Coefficient of Variability	0.63
Range Minimum	0.00
Range Maximum	193.38
Range Width	193.38
Mean Standard Error	0.13



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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%	10.80
85%	18.96
80%	23.16
75%	26.75
70%	29.91
65%	33.01
60%	36.13
55%	39.53
50%	42.92
45%	46.71
40%	50.43
35%	54.51
30%	59.00
25%	64.10
20%	69.96
15%	77.07
10%	86.23
5%	100.17
0%	193.38

End of Forecast

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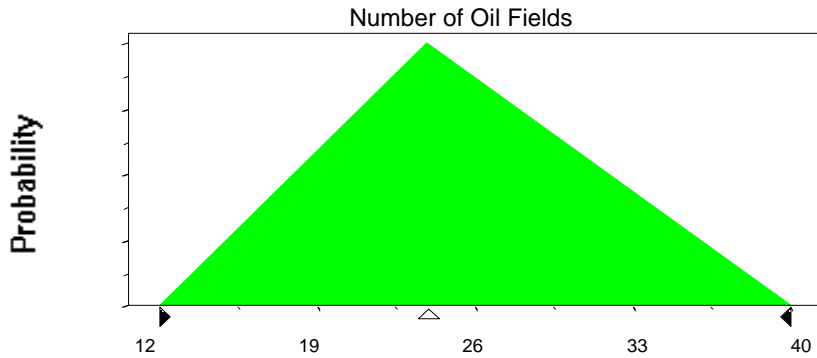
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	12
Likeliest	24
Maximum	40

Selected range is from 12 to 40
Mean value in simulation was 25



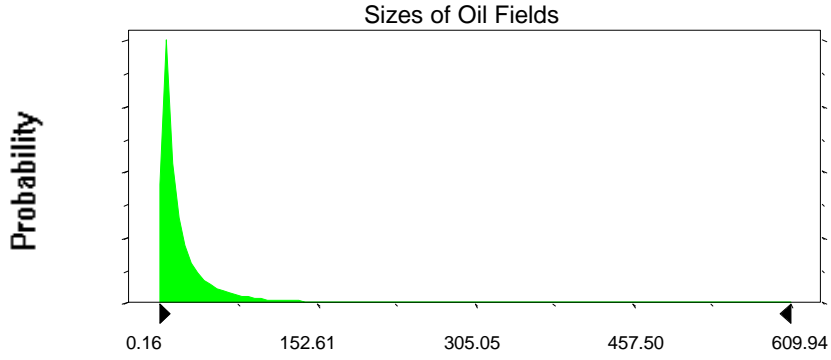
Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	25.57	35.57
Standard Deviation	60.17	60.17

Selected range is from 0.00 to 690.00 10.00 to 700.00
Mean value in simulation was 24.70 34.7

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Assumption: Sizes of Oil Fields (cont'd)



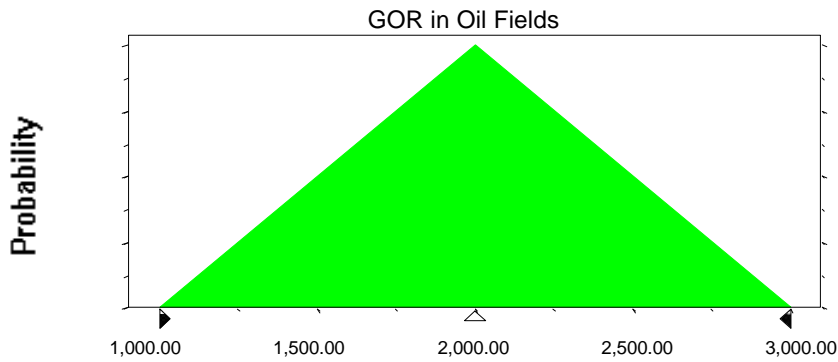
Assumption: GOR in Oil Fields

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 2,001.61



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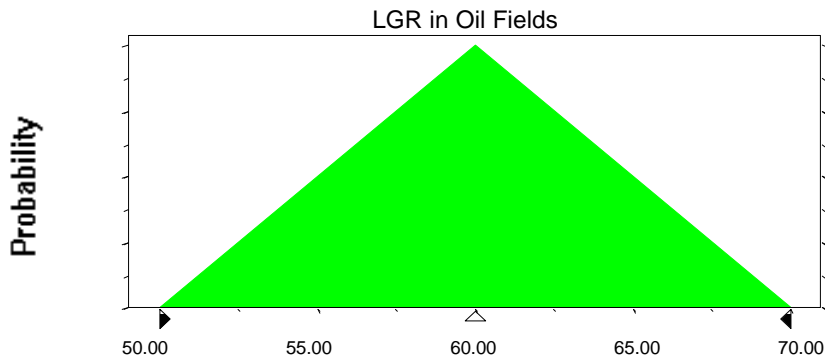
Assumption: LGR in Oil Fields

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 60.01



Assumption: Number of Gas Fields

Triangular distribution with parameters:

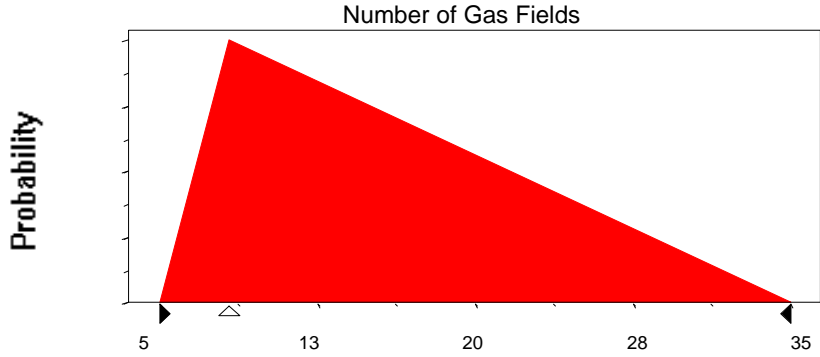
Minimum	5
Likeliest	8
Maximum	35

Selected range is from 5 to 35

Mean value in simulation was 16

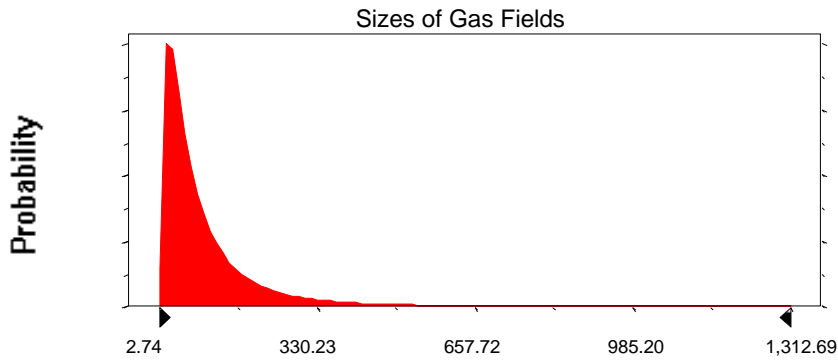
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Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:	Shifted parameters	
Mean	101.82	161.82
Standard Deviation	139.62	139.62
Selected range is from 0.00 to 1,440.00	60.00 to 1,500.00	
Mean value in simulation was 100.30	160.3	



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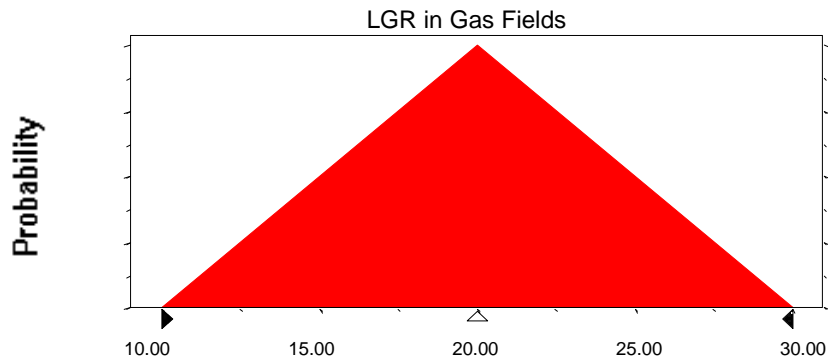
Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	10.00
Likeliest	20.00
Maximum	30.00

Selected range is from 10.00 to 30.00

Mean value in simulation was 19.97



End of Assumptions

Simulation started on 11/30/98 at 17:07:14
Simulation stopped on 11/30/98 at 19:10:03