

**Red Sea Salt Basin, Assessment Unit 20710202**  
**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	0.73	0	451	1,061	443	0	854	2,253	888	0	25	69	27	32	92	306	118
Gas Fields	60						0	5,274	11,524	4,987	0	208	469	199	271	685	1,785	804
Total		0.73	0	451	1,061	443	0	6,128	13,777	5,875	0	233	538	226				

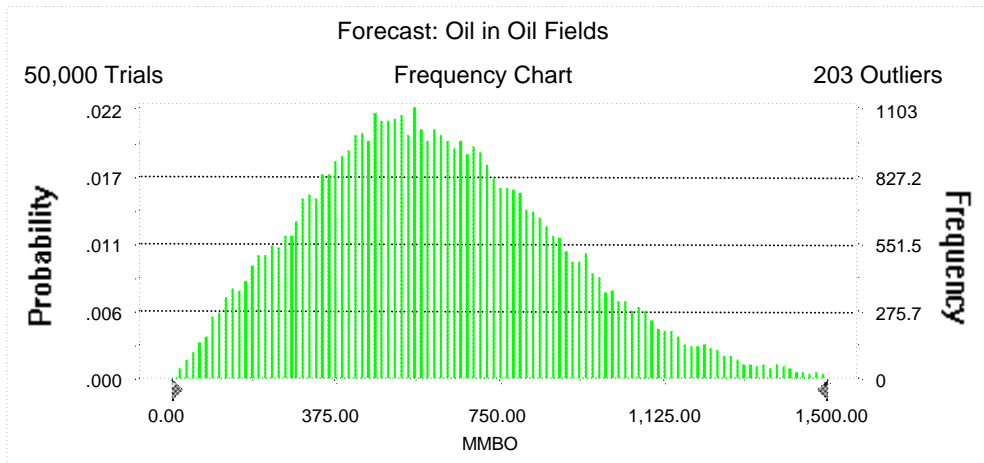
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**Forecast: Oil in Oil Fields**

Summary:

Display range is from 0.00 to 1,500.00 MMBO  
Entire range is from 10.30 to 2,187.65 MMBO  
After 50,000 trials, the standard error of the mean is 1.28

Statistics:	Value
Trials	50000
Mean	610.92
Median	586.60
Mode	---
Standard Deviation	286.02
Variance	81,807.21
Skewness	0.50
Kurtosis	3.18
Coefficient of Variability	0.47
Range Minimum	10.30
Range Maximum	2,187.65
Range Width	2,177.35
Mean Standard Error	1.28



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

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	10.30
95%	178.74
90%	253.31
85%	312.51
80%	361.12
75%	403.74
70%	442.56
65%	479.16
60%	514.70
55%	550.50
50%	586.60
45%	624.05
40%	663.10
35%	702.61
30%	745.33
25%	793.68
20%	847.35
15%	909.96
10%	991.26
5%	1,116.02
0%	2,187.65

End of Forecast

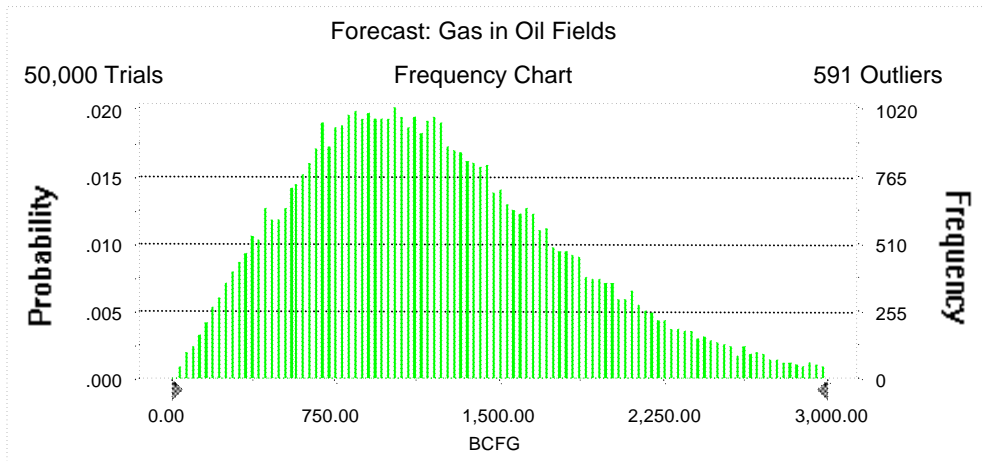
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**Forecast: Gas in Oil Fields**

Summary:

Display range is from 0.00 to 3,000.00 BCFG  
Entire range is from 22.41 to 4,732.35 BCFG  
After 50,000 trials, the standard error of the mean is 2.84

Statistics:	Value
Trials	50000
Mean	1,223.15
Median	1,140.53
Mode	---
Standard Deviation	636.01
Variance	404,505.90
Skewness	0.80
Kurtosis	3.86
Coefficient of Variability	0.52
Range Minimum	22.41
Range Maximum	4,732.35
Range Width	4,709.94
Mean Standard Error	2.84



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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	22.41
95%	333.46
90%	469.03
85%	582.90
80%	677.23
75%	759.51
70%	836.55
65%	911.80
60%	987.96
55%	1,063.54
50%	1,140.53
45%	1,218.90
40%	1,299.91
35%	1,389.02
30%	1,483.43
25%	1,595.95
20%	1,719.39
15%	1,872.00
10%	2,077.24
5%	2,396.47
0%	4,732.35

End of Forecast

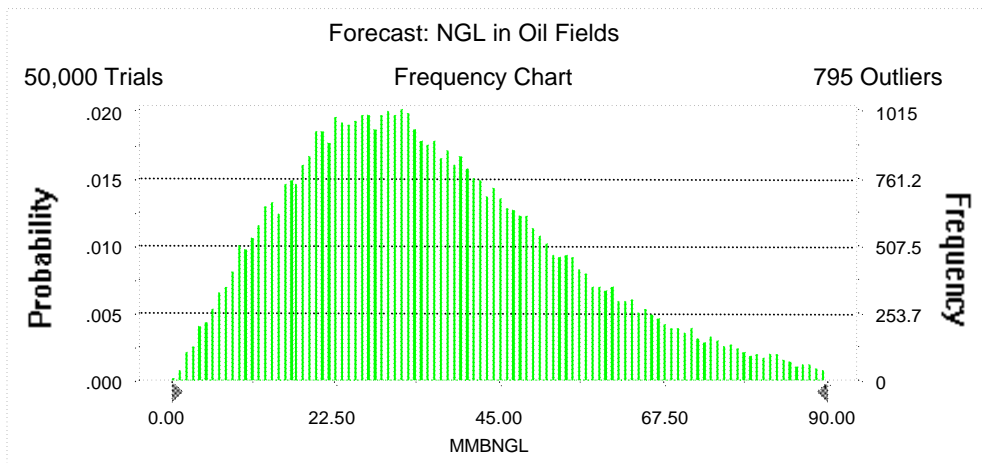
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**Forecast: NGL in Oil Fields**

Summary:

Display range is from 0.00 to 90.00 MMBNGL  
Entire range is from 0.61 to 172.94 MMBNGL  
After 50,000 trials, the standard error of the mean is 0.09

Statistics:	<u>Value</u>
Trials	50000
Mean	36.69
Median	33.62
Mode	---
Standard Deviation	19.85
Variance	394.11
Skewness	0.91
Kurtosis	4.16
Coefficient of Variability	0.54
Range Minimum	0.61
Range Maximum	172.94
Range Width	172.33
Mean Standard Error	0.09



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

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.61
95%	9.74
90%	13.71
85%	16.94
80%	19.76
75%	22.20
70%	24.53
65%	26.81
60%	29.09
55%	31.36
50%	33.62
45%	36.14
40%	38.72
35%	41.52
30%	44.55
25%	47.96
20%	51.88
15%	56.73
10%	63.31
5%	73.87
0%	172.94

End of Forecast

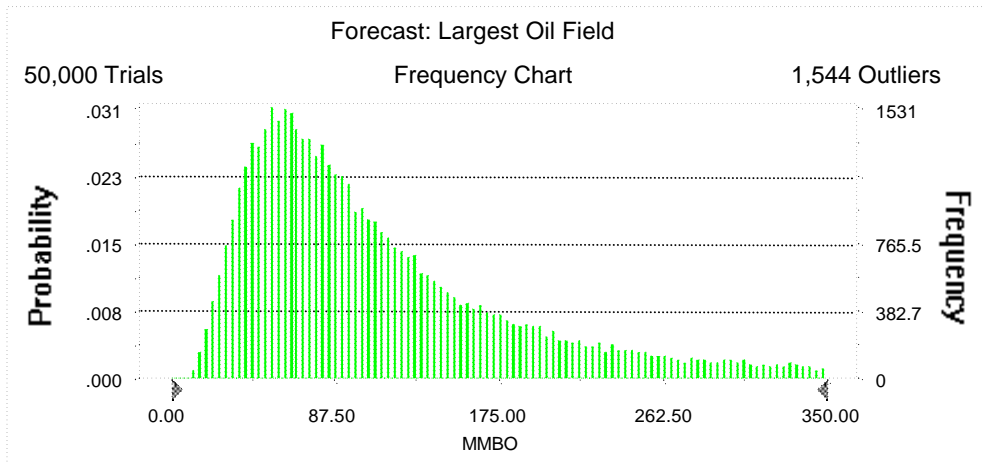
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**Forecast: Largest Oil Field**

Summary:

Display range is from 0.00 to 350.00 MMBO  
Entire range is from 10.30 to 499.83 MMBO  
After 50,000 trials, the standard error of the mean is 0.38

Statistics:	Value
Trials	50000
Mean	118.46
Median	92.07
Mode	---
Standard Deviation	85.98
Variance	7,392.02
Skewness	1.70
Kurtosis	6.05
Coefficient of Variability	0.73
Range Minimum	10.30
Range Maximum	499.83
Range Width	489.53
Mean Standard Error	0.38





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**Forecast: Largest Oil Field (cont'd)**

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	10.30
95%	32.40
90%	40.72
85%	47.33
80%	53.53
75%	59.47
70%	65.30
65%	71.40
60%	77.97
55%	84.73
50%	92.07
45%	100.29
40%	109.77
35%	120.43
30%	132.78
25%	148.49
20%	168.81
15%	195.62
10%	235.72
5%	306.20
0%	499.83

End of Forecast

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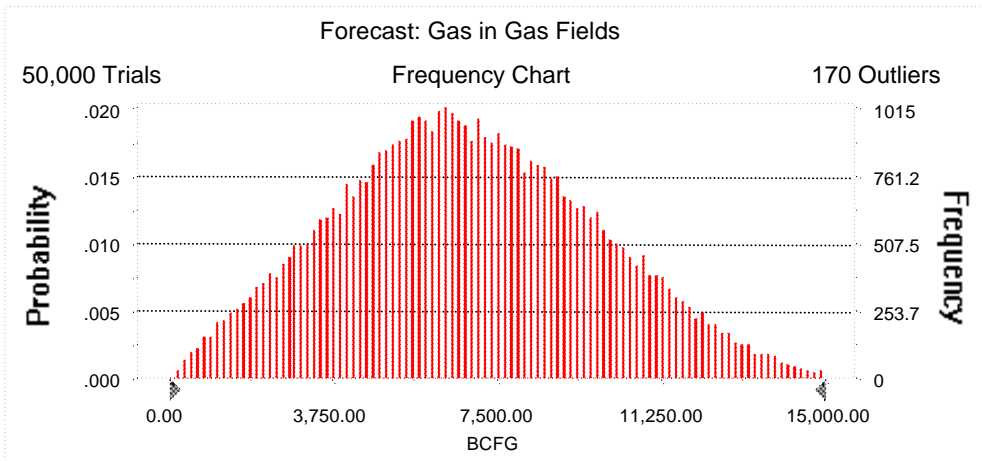
**Forecast: Gas in Gas Fields**

Summary:

Display range is from 0.00 to 15,000.00 BCFG  
 Entire range is from 80.30 to 19,060.66 BCFG  
 After 50,000 trials, the standard error of the mean is 13.35

Statistics:

	<u>Value</u>
Trials	50000
Mean	6,882.41
Median	6,748.17
Mode	---
Standard Deviation	2,984.81
Variance	8,909,120.00
Skewness	0.21
Kurtosis	2.66
Coefficient of Variability	0.43
Range Minimum	80.30
Range Maximum	19,060.66
Range Width	18,980.37
Mean Standard Error	13.35



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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	80.30
95%	2,082.28
90%	2,980.62
85%	3,666.69
80%	4,234.78
75%	4,751.59
70%	5,188.04
65%	5,599.56
60%	5,986.38
55%	6,370.54
50%	6,748.17
45%	7,145.51
40%	7,559.34
35%	7,986.12
30%	8,446.87
25%	8,928.48
20%	9,481.55
15%	10,104.47
10%	10,898.14
5%	11,982.15
0%	19,060.66

End of Forecast

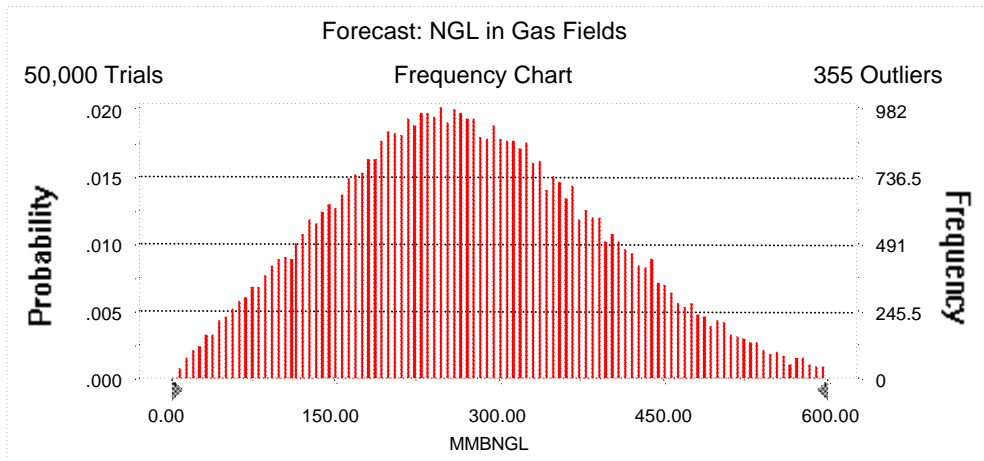
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**Forecast: NGL in Gas Fields**

Summary:

Display range is from 0.00 to 600.00 MMBNGL  
Entire range is from 3.13 to 817.05 MMBNGL  
After 50,000 trials, the standard error of the mean is 0.55

Statistics:	Value
Trials	50000
Mean	275.13
Median	267.83
Mode	---
Standard Deviation	123.06
Variance	15,143.57
Skewness	0.33
Kurtosis	2.87
Coefficient of Variability	0.45
Range Minimum	3.13
Range Maximum	817.05
Range Width	813.92
Mean Standard Error	0.55



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**Forecast: NGL in Gas Fields (cont'd)**

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	3.13
95%	81.98
90%	117.75
85%	144.33
80%	167.13
75%	186.62
70%	204.23
65%	220.75
60%	236.83
55%	252.17
50%	267.83
45%	283.81
40%	300.69
35%	318.00
30%	336.21
25%	356.75
20%	379.63
15%	406.46
10%	439.40
5%	489.45
0%	817.05

End of Forecast

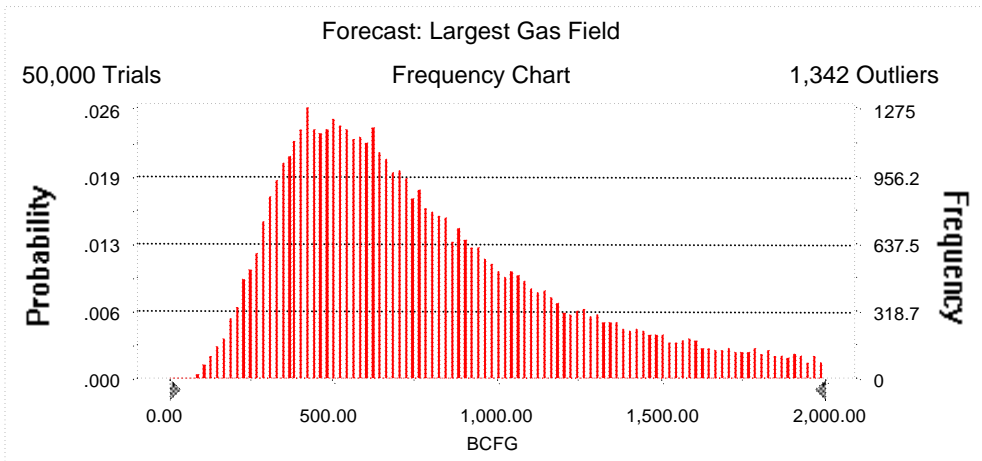
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**Forecast: Largest Gas Field**

Summary:

Display range is from 0.00 to 2,000.00 BCFG  
 Entire range is from 65.67 to 2,399.93 BCFG  
 After 50,000 trials, the standard error of the mean is 2.05

Statistics:	<u>Value</u>
Trials	50000
Mean	804.18
Median	685.45
Mode	---
Standard Deviation	459.42
Variance	211,064.46
Skewness	1.16
Kurtosis	4.00
Coefficient of Variability	0.57
Range Minimum	65.67
Range Maximum	2,399.93
Range Width	2,334.26
Mean Standard Error	2.05



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**Forecast: Largest Gas Field (cont'd)**

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	65.67
95%	271.17
90%	333.47
85%	382.66
80%	425.76
75%	466.59
70%	508.94
65%	550.11
60%	593.82
55%	637.93
50%	685.45
45%	737.58
40%	795.59
35%	860.39
30%	936.00
25%	1,026.13
20%	1,134.57
15%	1,277.22
10%	1,473.70
5%	1,785.21
0%	2,399.93

End of Forecast

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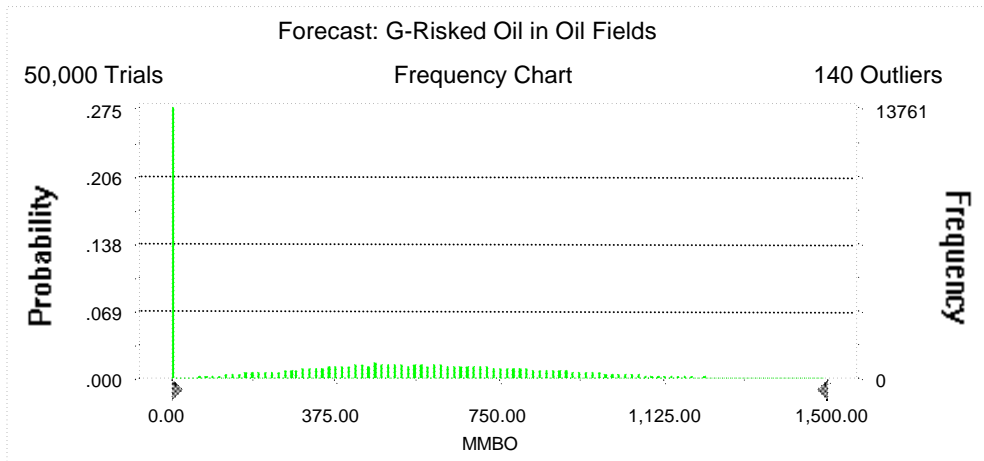
**Forecast: G-Riskied Oil in Oil Fields**

Summary:

Display range is from 0.00 to 1,500.00 MMBO  
Entire range is from 0.00 to 2,187.65 MMBO  
After 50,000 trials, the standard error of the mean is 1.64

Statistics:

	<u>Value</u>
Trials	50000
Mean	443.41
Median	451.16
Mode	0.00
Standard Deviation	365.89
Variance	133,875.14
Skewness	0.36
Kurtosis	2.36
Coefficient of Variability	0.83
Range Minimum	0.00
Range Maximum	2,187.65
Range Width	2,187.65
Mean Standard Error	1.64





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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%	148.61
65%	257.51
60%	335.42
55%	396.89
50%	451.16
45%	500.46
40%	549.85
35%	601.69
30%	654.18
25%	708.83
20%	771.16
15%	840.44
10%	927.83
5%	1,060.76
0%	2,187.65

End of Forecast

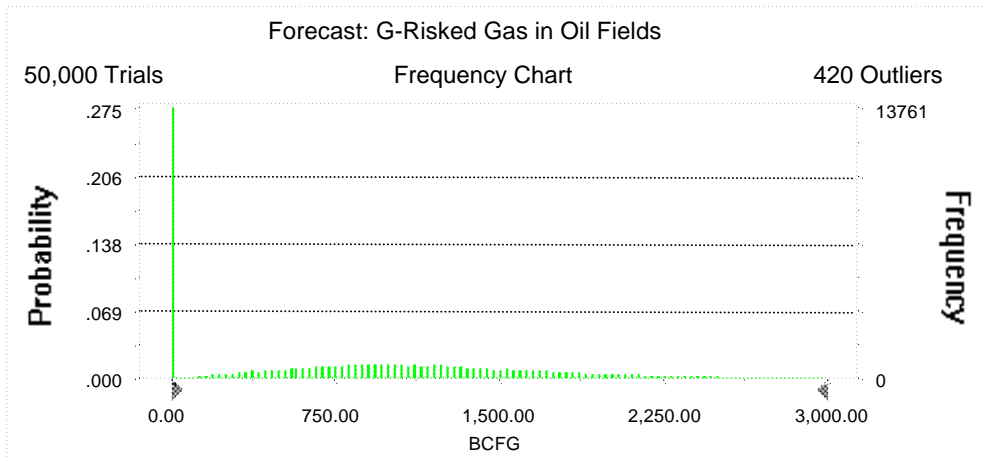
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**Forecast: G-Risk Gas in Oil Fields**

Summary:

Display range is from 0.00 to 3,000.00 BCFG  
 Entire range is from 0.00 to 4,732.35 BCFG  
 After 50,000 trials, the standard error of the mean is 3.44

Statistics:	<u>Value</u>
Trials	50000
Mean	887.96
Median	854.28
Mode	0.00
Standard Deviation	770.13
Variance	593,107.09
Skewness	0.62
Kurtosis	2.96
Coefficient of Variability	0.87
Range Minimum	0.00
Range Maximum	4,732.35
Range Width	4,732.35
Mean Standard Error	3.44



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**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%	281.08
65%	476.06
60%	626.99
55%	746.21
50%	854.28
45%	956.93
40%	1,062.84
35%	1,170.51
30%	1,277.47
25%	1,401.82
20%	1,540.43
15%	1,704.79
10%	1,917.92
5%	2,253.08
0%	4,732.35

End of Forecast

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**Forecast: G-Riskd NGL in Oil Fields**

Summary:

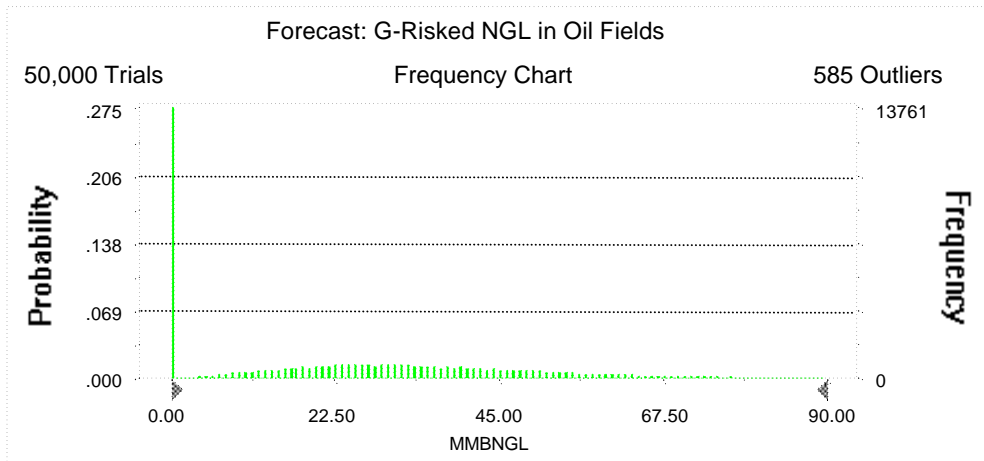
Display range is from 0.00 to 90.00 MMBNGL

Entire range is from 0.00 to 172.94 MMBNGL

After 50,000 trials, the standard error of the mean is 0.11

Statistics:

	<u>Value</u>
Trials	50000
Mean	26.64
Median	25.03
Mode	0.00
Standard Deviation	23.58
Variance	556.07
Skewness	0.72
Kurtosis	3.24
Coefficient of Variability	0.89
Range Minimum	0.00
Range Maximum	172.94
Range Width	172.94
Mean Standard Error	0.11



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**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%	8.21
65%	13.93
60%	18.28
55%	21.80
50%	25.03
45%	28.21
40%	31.29
35%	34.55
30%	38.09
25%	41.90
20%	46.20
15%	51.36
10%	58.21
5%	69.08
0%	172.94

End of Forecast

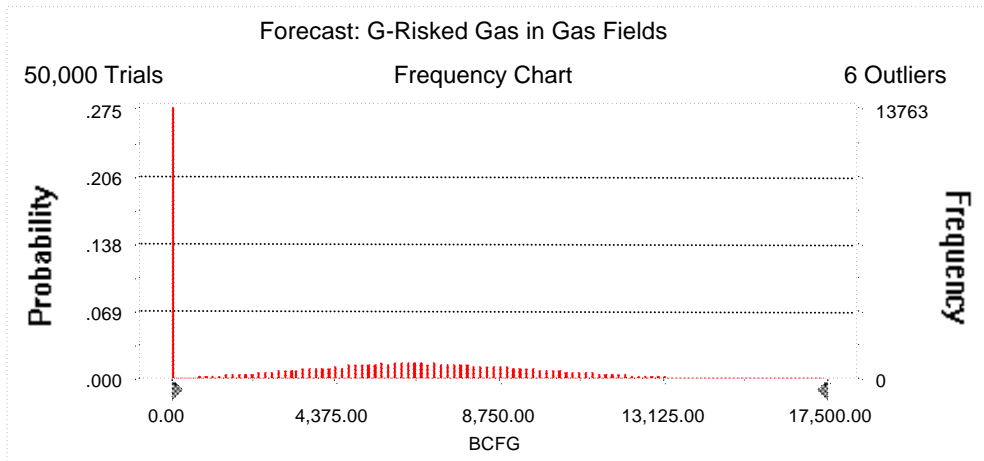
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**Forecast: G-Risk Gas in Gas Fields**

Summary:

Display range is from 0.00 to 17,500.00 BCFG  
Entire range is from 0.00 to 19,060.66 BCFG  
After 50,000 trials, the standard error of the mean is 17.86

Statistics:	Value
Trials	50000
Mean	4,986.59
Median	5,274.21
Mode	0.00
Standard Deviation	3,992.80
Variance	15,942,460.02
Skewness	0.19
Kurtosis	1.99
Coefficient of Variability	0.80
Range Minimum	0.00
Range Maximum	19,060.66
Range Width	19,060.66
Mean Standard Error	17.86



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**Forecast: G-Risked 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%	1,685.90
65%	3,007.87
60%	3,909.07
55%	4,659.25
50%	5,274.21
45%	5,819.72
40%	6,351.44
35%	6,873.23
30%	7,430.90
25%	8,023.99
20%	8,672.03
15%	9,406.14
10%	10,289.29
5%	11,523.81
0%	19,060.66

End of Forecast

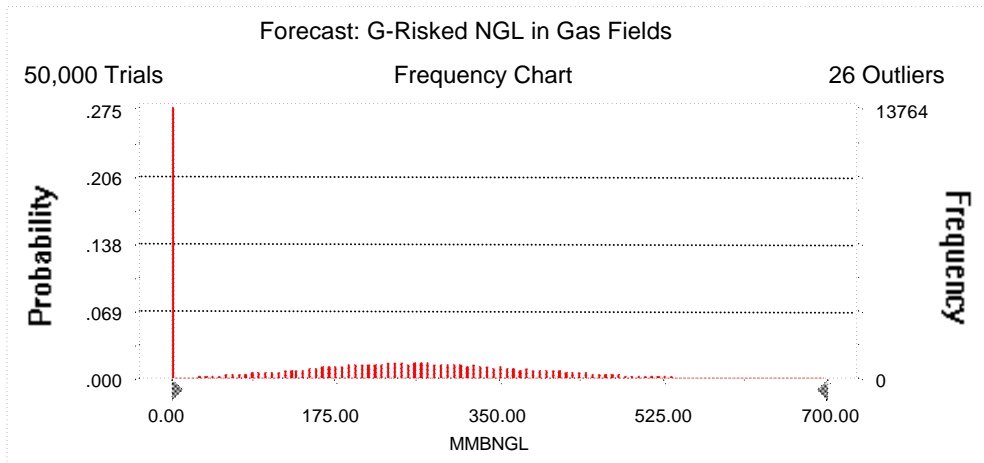
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**Forecast: G-Riskd NGL in Gas Fields**

Summary:

Display range is from 0.00 to 700.00 MMBNGL  
Entire range is from 0.00 to 817.05 MMBNGL  
After 50,000 trials, the standard error of the mean is 0.72

Statistics:	Value
Trials	50000
Mean	199.39
Median	207.57
Mode	0.00
Standard Deviation	161.73
Variance	26,155.49
Skewness	0.26
Kurtosis	2.14
Coefficient of Variability	0.81
Range Minimum	0.00
Range Maximum	817.05
Range Width	817.05
Mean Standard Error	0.72





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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%	66.33
65%	119.20
60%	154.61
55%	183.44
50%	207.57
45%	230.26
40%	250.98
35%	272.88
30%	295.58
25%	319.57
20%	345.63
15%	376.24
10%	413.94
5%	468.67
0%	817.05

End of Forecast

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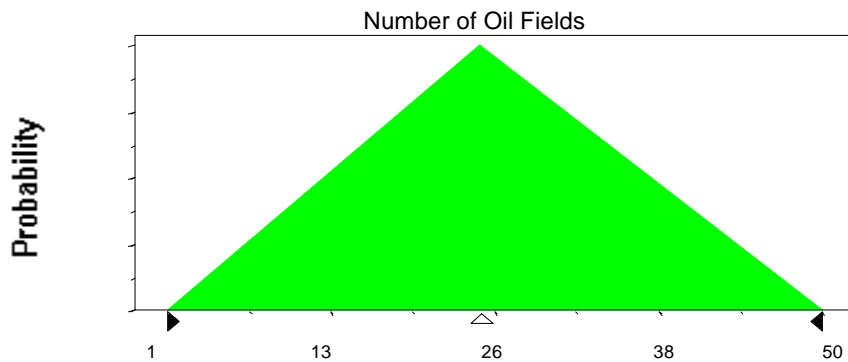
Assumptions

**Assumption: Number of Oil Fields**

Triangular distribution with parameters:

Minimum	1
Likeliest	24
Maximum	50

Selected range is from 1 to 50  
Mean value in simulation was 25



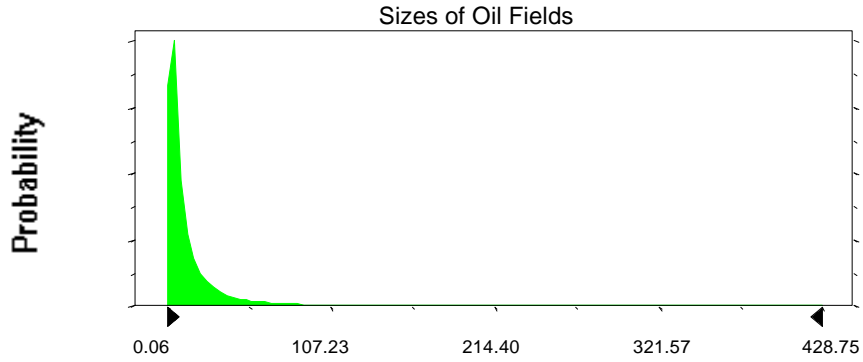
**Assumption: Sizes of Oil Fields**

Lognormal distribution with parameters:		Shifted parameters
Mean	15.03	25.03
Standard Deviation	42.63	42.63

Selected range is from 0.00 to 490.00                      10.00 to 500.00  
Mean value in simulation was 14.56                                      24.56

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Assumption: Sizes of Oil Fields (cont'd)



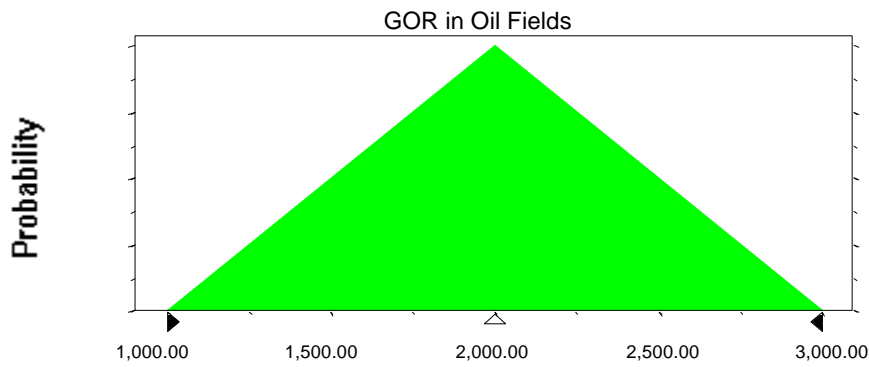
Assumption: GOR in Oil Fields

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 2,002.36



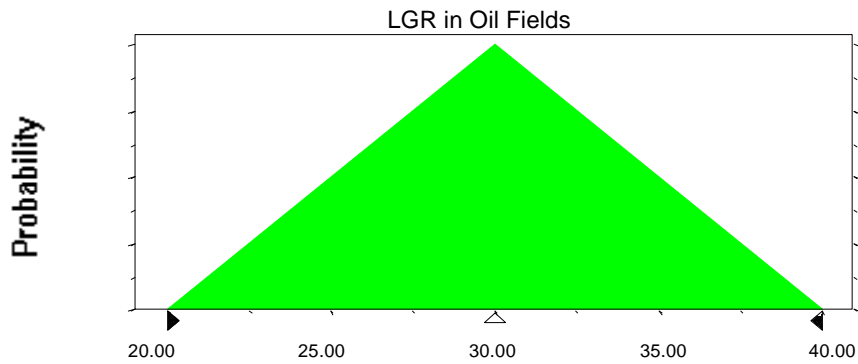
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**Assumption: LGR in Oil Fields**

Triangular distribution with parameters:

Minimum	20.00
Likeliest	30.00
Maximum	40.00

Selected range is from 20.00 to 40.00  
Mean value in simulation was 30.00



**Assumption: Number of Gas Fields**

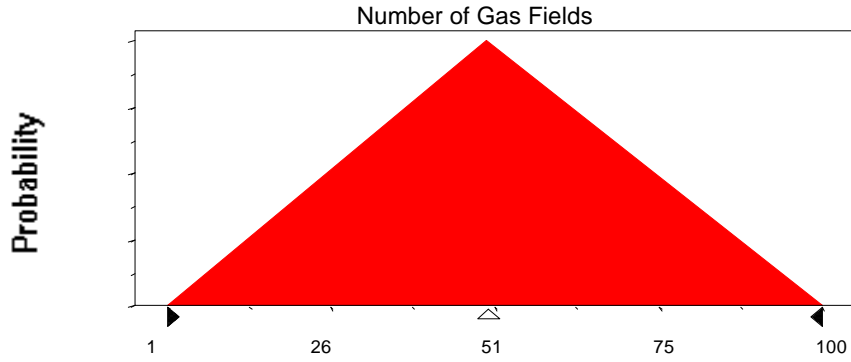
Triangular distribution with parameters:

Minimum	1
Likeliest	49
Maximum	100

Selected range is from 1 to 100  
Mean value in simulation was 50

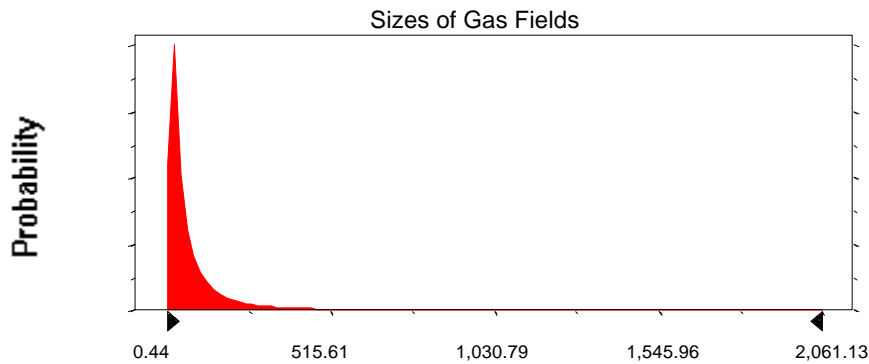
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**Assumption: Number of Gas Fields (cont'd)**



**Assumption: Sizes of Gas Fields**

Lognormal distribution with parameters:		Shifted parameters
Mean	81.06	141.06
Standard Deviation	203.46	203.46
Selected range is from 0.00 to 2,340.00		60.00 to 2,400.00
Mean value in simulation was 77.24		137.24



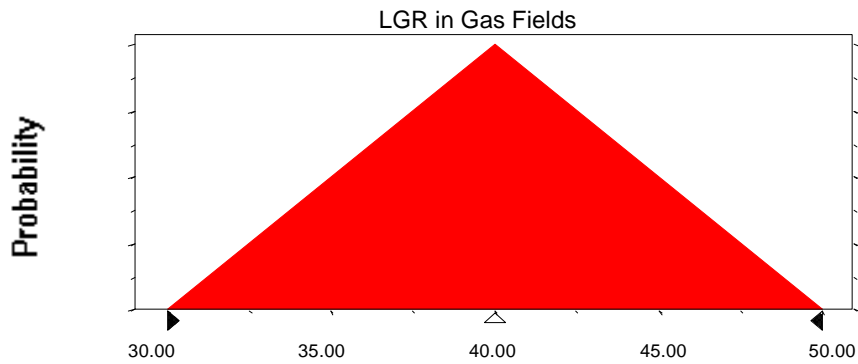
**20710202**  
**Red Sea Salt Basin**  
**Monte Carlo Results**

**Assumption: LGR in Gas Fields**

Triangular distribution with parameters:

Minimum	30.00
Likeliest	40.00
Maximum	50.00

Selected range is from 30.00 to 50.00  
Mean value in simulation was 39.98



End of Assumptions

Simulation started on 12/3/98 at 14:07:58  
Simulation stopped on 12/3/98 at 14:49:18