

**Mannville Gas, Assessment Unit 52430501**  
**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	1	1.00	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA
Gas Fields	3					2,297	4,402	7,472	4,597	41	86	162	92	74	137	192	136	
Total		1.00	0	0	0	2,297	4,402	7,472	4,597	41	86	162	92					

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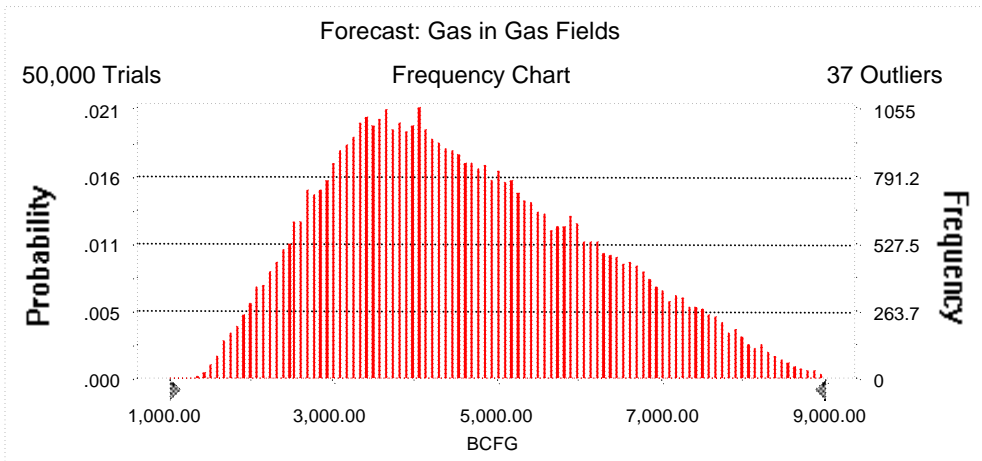
**Forecast: Gas in Gas Fields**

Summary:

Display range is from 1,000.00 to 9,000.00 BCFG  
 Entire range is from 1,219.93 to 10,289.82 BCFG  
 After 50,000 trials, the standard error of the mean is 7.05

Statistics:

	<u>Value</u>
Trials	50000
Mean	4,596.65
Median	4,401.94
Mode	---
Standard Deviation	1,575.40
Variance	2,481,874.80
Skewness	0.41
Kurtosis	2.48
Coefficient of Variability	0.34
Range Minimum	1,219.93
Range Maximum	10,289.82
Range Width	9,069.89
Mean Standard Error	7.05



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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	1,219.93
95%	2,297.29
90%	2,666.58
85%	2,937.83
80%	3,176.53
75%	3,385.38
70%	3,585.74
65%	3,780.83
60%	3,986.68
55%	4,182.16
50%	4,401.94
45%	4,625.95
40%	4,868.11
35%	5,118.84
30%	5,386.17
25%	5,696.56
20%	6,025.97
15%	6,411.85
10%	6,855.99
5%	7,472.17
0%	10,289.82

End of Forecast

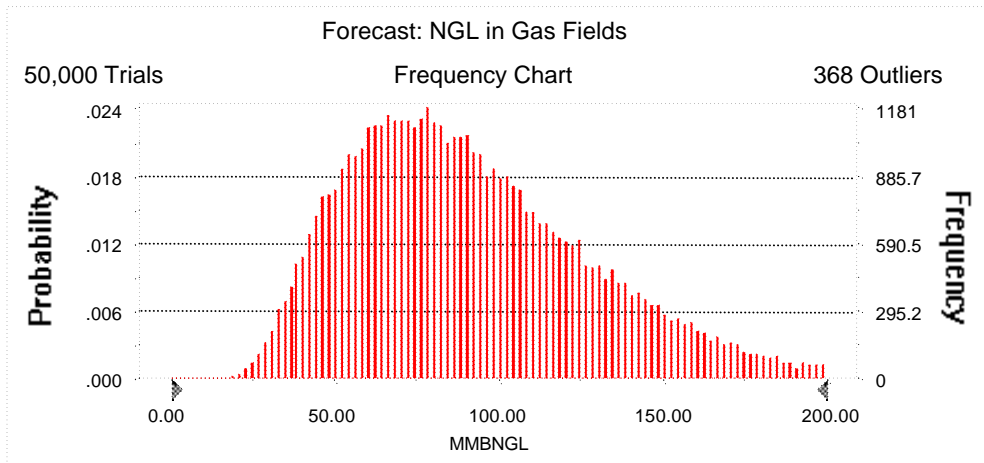
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**Forecast: NGL in Gas Fields**

Summary:

Display range is from 0.00 to 200.00 MMBNGL  
Entire range is from 15.50 to 259.89 MMBNGL  
After 50,000 trials, the standard error of the mean is 0.17

Statistics:	Value
Trials	50000
Mean	91.89
Median	86.31
Mode	---
Standard Deviation	37.16
Variance	1,381.07
Skewness	0.73
Kurtosis	3.31
Coefficient of Variability	0.40
Range Minimum	15.50
Range Maximum	259.89
Range Width	244.39
Mean Standard Error	0.17



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

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	15.50
95%	41.16
90%	48.38
85%	54.20
80%	59.32
75%	63.92
70%	68.35
65%	72.76
60%	77.20
55%	81.60
50%	86.31
45%	91.02
40%	96.03
35%	101.64
30%	107.54
25%	114.48
20%	122.43
15%	131.76
10%	143.76
5%	161.67
0%	259.89

End of Forecast

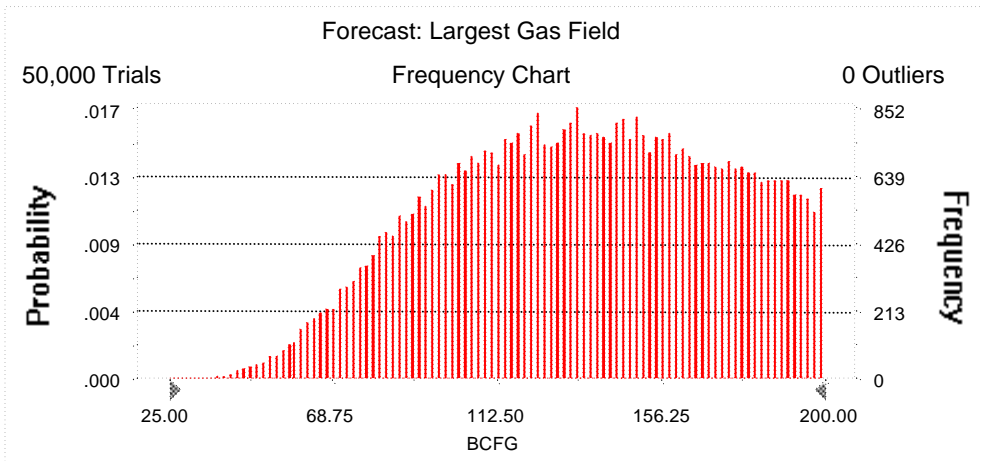
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**Forecast: Largest Gas Field**

Summary:

Display range is from 25.00 to 200.00 BCFG  
 Entire range is from 31.17 to 200.00 BCFG  
 After 50,000 trials, the standard error of the mean is 0.16

Statistics:	<u>Value</u>
Trials	50000
Mean	135.58
Median	136.54
Mode	---
Standard Deviation	36.65
Variance	1,343.27
Skewness	-0.17
Kurtosis	2.15
Coefficient of Variability	0.27
Range Minimum	31.17
Range Maximum	200.00
Range Width	168.83
Mean Standard Error	0.16



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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	31.17
95%	74.30
90%	85.42
85%	93.85
80%	100.93
75%	107.54
70%	113.81
65%	119.63
60%	125.30
55%	131.10
50%	136.54
45%	142.22
40%	147.82
35%	153.45
30%	159.26
25%	165.36
20%	171.86
15%	178.39
10%	185.28
5%	192.28
0%	200.00

End of Forecast

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**Assumptions**

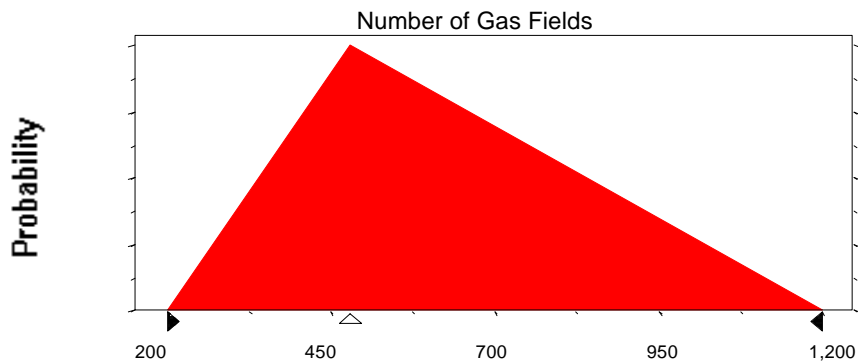
**Assumption: Number of Gas Fields**

Triangular distribution with parameters:

Minimum	200
Likeliest	480
Maximum	1,200

Selected range is from 200 to 1,200

Mean value in simulation was 626



**Assumption: Sizes of Gas Fields**

Lognormal distribution with parameters:

Mean	4.69
Standard Deviation	17.70

Shifted parameters

7.69
17.7

Selected range is from 0.00 to 197.00

Mean value in simulation was 4.30

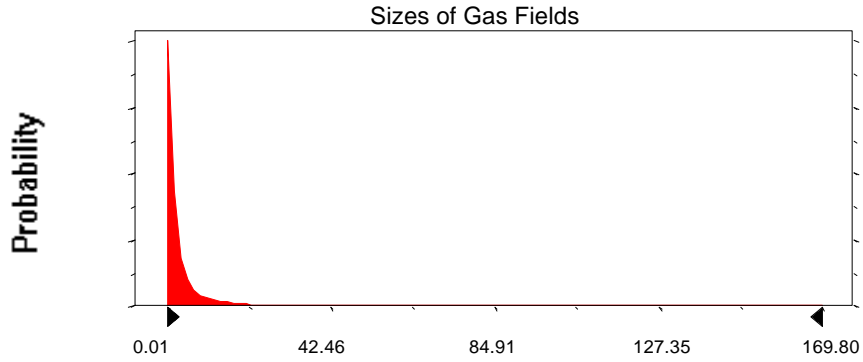
3.00 to 200.00

7.3



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Assumption: Sizes of Gas Fields (cont'd)



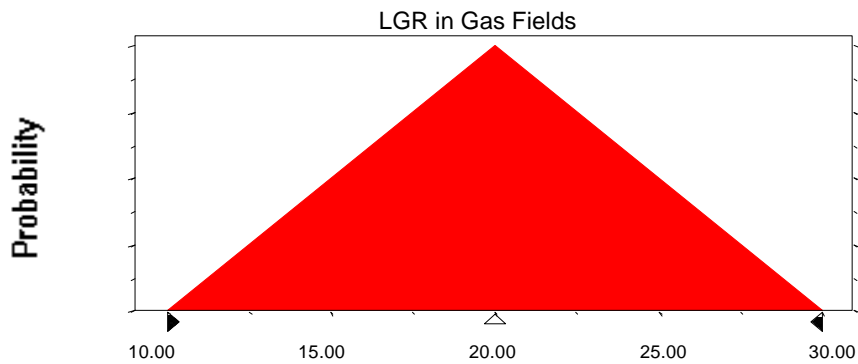
Assumption: LGR in Gas Fields

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 20.00



End of Assumptions

Simulation started on 7/19/99 at 14:54:33  
Simulation stopped on 7/19/99 at 19:35:30