

**Eastern, Assessment Unit 60900103  
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	4	1.00	25	88	207	99	140	515	1,307	591	8	30	82	35	11	27	76	33
Gas Fields	24						626	1,951	4,328	2,145	16	56	142	64	197	562	1,798	718
Total		1.00	25	88	207	99	767	2,466	5,635	2,735	24	86	224	100				

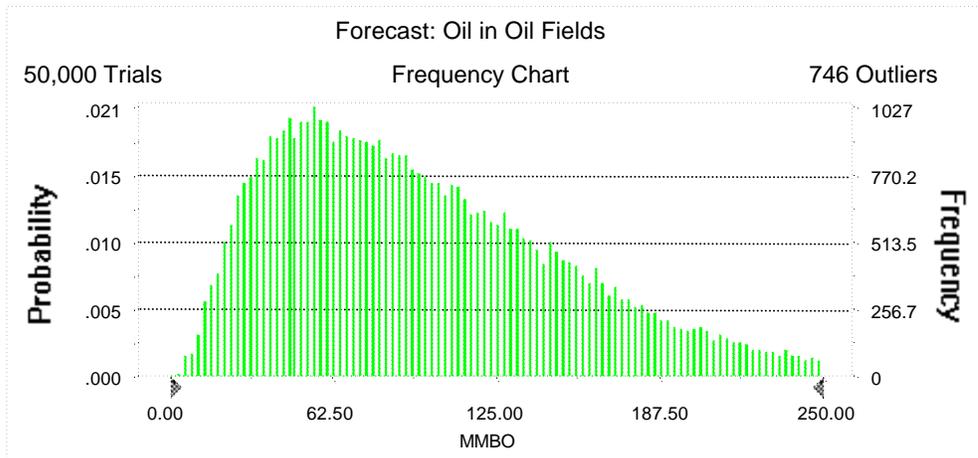
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**Monte Carlo Results**

**Forecast: Oil in Oil Fields**

Summary:

Display range is from 0.00 to 250.00 MMBO  
Entire range is from 4.34 to 459.99 MMBO  
After 50,000 trials, the standard error of the mean is 0.26

Statistics:	Value
Trials	50000
Mean	98.53
Median	87.99
Mode	---
Standard Deviation	57.47
Variance	3,302.24
Skewness	0.91
Kurtosis	3.79
Coefficient of Variability	0.58
Range Minimum	4.34
Range Maximum	459.99
Range Width	455.65
Mean Standard Error	0.26



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

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	4.34
95%	25.21
90%	33.55
85%	40.74
80%	47.32
75%	53.92
70%	60.20
65%	66.87
60%	73.70
55%	80.72
50%	87.99
45%	95.56
40%	103.88
35%	112.59
30%	122.42
25%	133.05
20%	145.50
15%	159.46
10%	178.00
5%	207.46
0%	459.99

End of Forecast

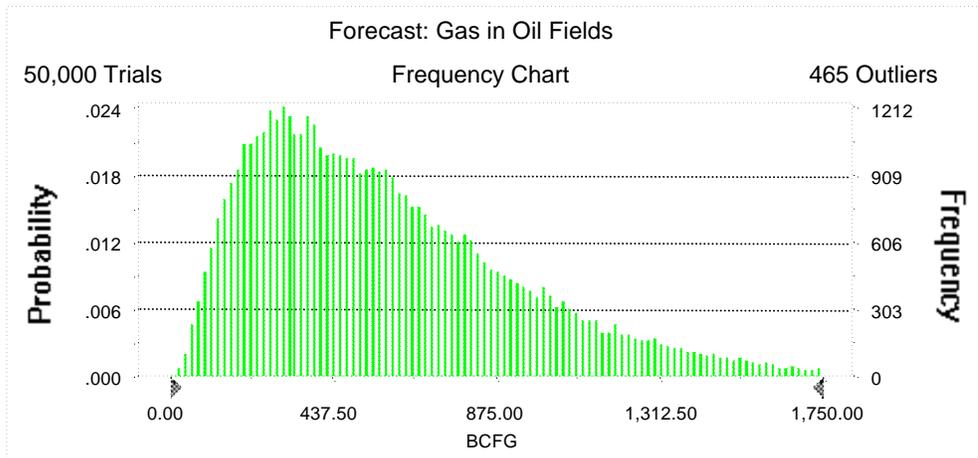
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**Forecast: Gas in Oil Fields**

Summary:

Display range is from 0.00 to 1,750.00 BCFG  
Entire range is from 18.16 to 3,727.91 BCFG  
After 50,000 trials, the standard error of the mean is 1.66

Statistics:	Value
Trials	50000
Mean	590.61
Median	514.91
Mode	---
Standard Deviation	370.96
Variance	137,608.33
Skewness	1.17
Kurtosis	4.90
Coefficient of Variability	0.63
Range Minimum	18.16
Range Maximum	3,727.91
Range Width	3,709.76
Mean Standard Error	1.66



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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	18.16
95%	140.33
90%	190.83
85%	232.71
80%	271.65
75%	308.25
70%	346.48
65%	385.53
60%	426.16
55%	469.92
50%	514.91
45%	561.71
40%	609.30
35%	663.25
30%	723.57
25%	791.66
20%	869.56
15%	969.94
10%	1,095.88
5%	1,306.79
0%	3,727.91

End of Forecast

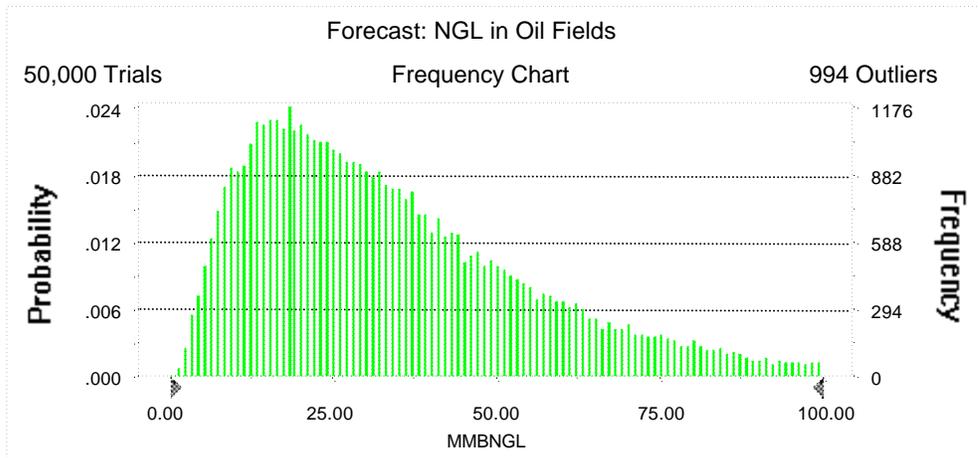
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**Forecast: NGL in Oil Fields**

Summary:

Display range is from 0.00 to 100.00 MMBNGL  
Entire range is from 0.69 to 304.34 MMBNGL  
After 50,000 trials, the standard error of the mean is 0.11

Statistics:	Value
Trials	50000
Mean	35.45
Median	30.01
Mode	---
Standard Deviation	23.86
Variance	569.20
Skewness	1.42
Kurtosis	6.28
Coefficient of Variability	0.67
Range Minimum	0.69
Range Maximum	304.34
Range Width	303.65
Mean Standard Error	0.11



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

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.69
95%	7.85
90%	10.73
85%	13.30
80%	15.54
75%	17.82
70%	20.02
65%	22.38
60%	24.80
55%	27.35
50%	30.01
45%	32.81
40%	35.84
35%	39.11
30%	42.89
25%	47.34
20%	52.39
15%	58.83
10%	67.57
5%	81.77
0%	304.34

End of Forecast

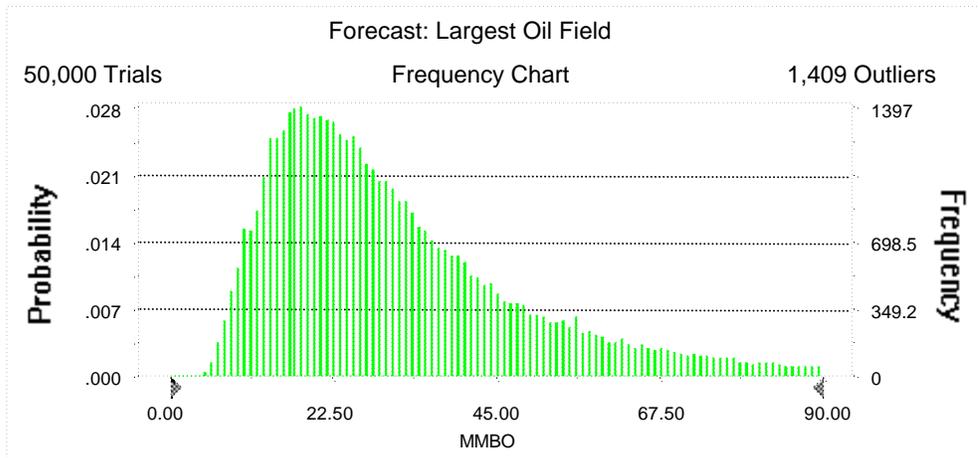
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**Forecast: Largest Oil Field**

Summary:

Display range is from 0.00 to 90.00 MMBO  
Entire range is from 4.34 to 149.97 MMBO  
After 50,000 trials, the standard error of the mean is 0.10

Statistics:	Value
Trials	50000
Mean	33.12
Median	27.37
Mode	---
Standard Deviation	21.25
Variance	451.49
Skewness	1.84
Kurtosis	7.41
Coefficient of Variability	0.64
Range Minimum	4.34
Range Maximum	149.97
Range Width	145.63
Mean Standard Error	0.10



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

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	4.34
95%	10.98
90%	13.49
85%	15.30
80%	17.02
75%	18.61
70%	20.29
65%	21.93
60%	23.66
55%	25.45
50%	27.37
45%	29.46
40%	31.74
35%	34.28
30%	37.36
25%	40.89
20%	45.34
15%	51.41
10%	60.00
5%	76.04
0%	149.97

End of Forecast

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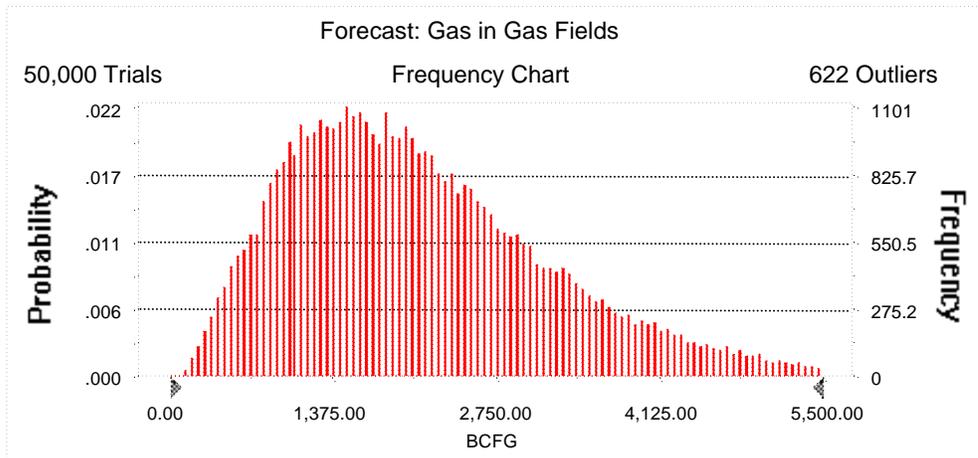
**Forecast: Gas in Gas Fields**

Summary:

Display range is from 0.00 to 5,500.00 BCFG  
 Entire range is from 69.46 to 10,423.16 BCFG  
 After 50,000 trials, the standard error of the mean is 5.19

Statistics:

	<u>Value</u>
Trials	50000
Mean	2,144.56
Median	1,951.05
Mode	---
Standard Deviation	1,159.74
Variance	1,344,991.66
Skewness	1.00
Kurtosis	4.37
Coefficient of Variability	0.54
Range Minimum	69.46
Range Maximum	10,423.16
Range Width	10,353.70
Mean Standard Error	5.19



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**Monte Carlo Results**

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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	69.46
95%	626.32
90%	844.69
85%	1,005.37
80%	1,147.18
75%	1,286.90
70%	1,418.45
65%	1,548.92
60%	1,678.28
55%	1,816.15
50%	1,951.05
45%	2,088.35
40%	2,238.18
35%	2,405.17
30%	2,583.06
25%	2,786.31
20%	3,024.82
15%	3,320.82
10%	3,705.09
5%	4,328.18
0%	10,423.16

End of Forecast

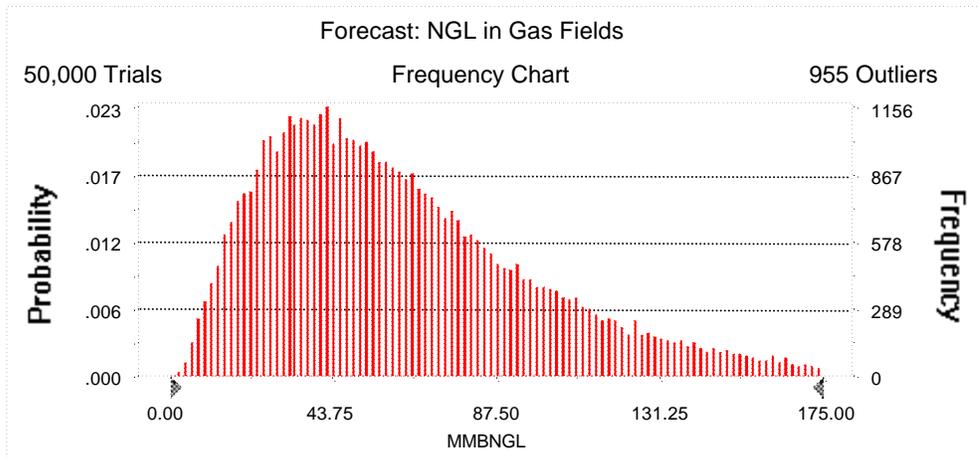
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**Forecast: NGL in Gas Fields**

Summary:

Display range is from 0.00 to 175.00 MMBNGL  
Entire range is from 1.41 to 370.25 MMBNGL  
After 50,000 trials, the standard error of the mean is 0.18

Statistics:	Value
Trials	50000
Mean	64.34
Median	55.67
Mode	---
Standard Deviation	40.21
Variance	1,616.82
Skewness	1.34
Kurtosis	5.65
Coefficient of Variability	0.62
Range Minimum	1.41
Range Maximum	370.25
Range Width	368.84
Mean Standard Error	0.18



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

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	1.41
95%	16.36
90%	22.05
85%	26.71
80%	31.11
75%	35.03
70%	39.01
65%	42.93
60%	46.98
55%	51.27
50%	55.67
45%	60.50
40%	65.44
35%	70.86
30%	77.01
25%	84.08
20%	92.89
15%	103.63
10%	117.91
5%	141.81
0%	370.25

End of Forecast

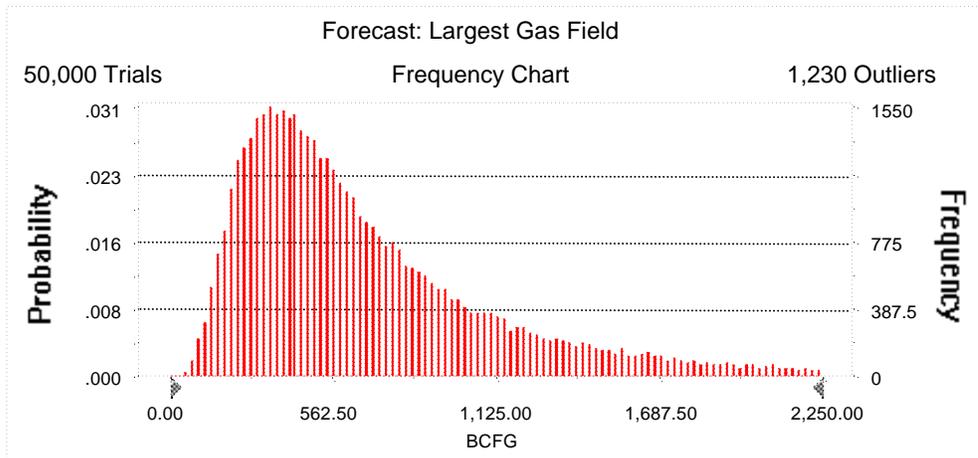
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**Forecast: Largest Gas Field**

Summary:

Display range is from 0.00 to 2,250.00 BCFG  
Entire range is from 35.93 to 3,498.80 BCFG  
After 50,000 trials, the standard error of the mean is 2.36

Statistics:	Value
Trials	50000
Mean	717.60
Median	562.15
Mode	---
Standard Deviation	528.57
Variance	279,382.15
Skewness	1.94
Kurtosis	7.65
Coefficient of Variability	0.74
Range Minimum	35.93
Range Maximum	3,498.80
Range Width	3,462.87
Mean Standard Error	2.36



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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	35.93
95%	196.85
90%	246.59
85%	288.80
80%	326.12
75%	362.77
70%	399.57
65%	437.72
60%	476.48
55%	517.49
50%	562.15
45%	611.00
40%	666.49
35%	730.79
30%	804.79
25%	894.06
20%	1,008.86
15%	1,160.72
10%	1,390.65
5%	1,797.70
0%	3,498.80

End of Forecast

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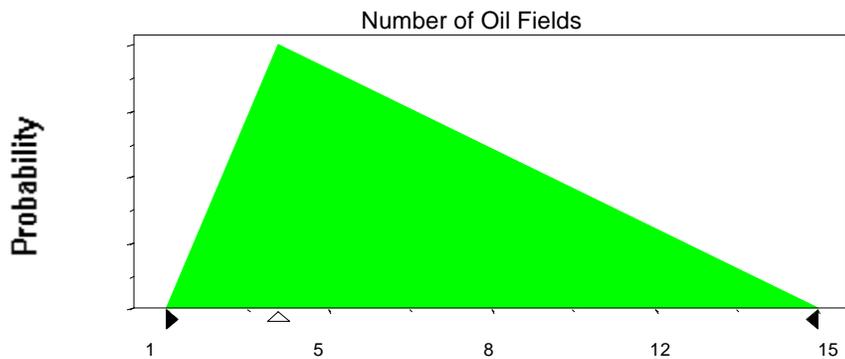
Assumptions

**Assumption: Number of Oil Fields**

Triangular distribution with parameters:

Minimum	1
Likeliest	3
Maximum	15

Selected range is from 1 to 15  
Mean value in simulation was 6



**Assumption: Sizes of Oil Fields**

Lognormal distribution with parameters:

Mean	11.35
Standard Deviation	14.48

Shifted parameters

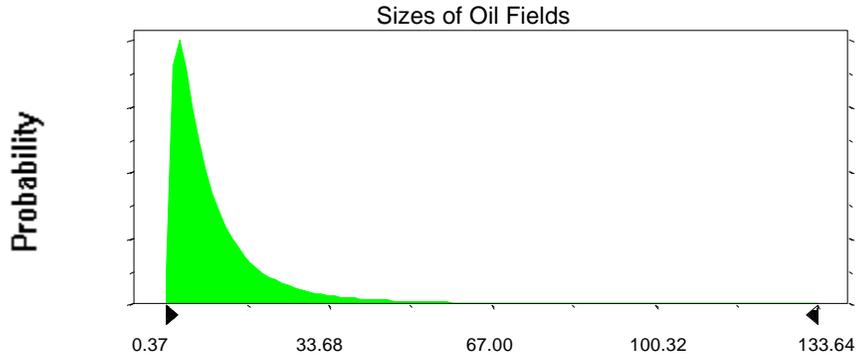
15.35
14.48

Selected range is from 0.00 to 146.00  
Mean value in simulation was 11.16

4.00 to 150.00  
15.16

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Assumption: Sizes of Oil Fields (cont'd)



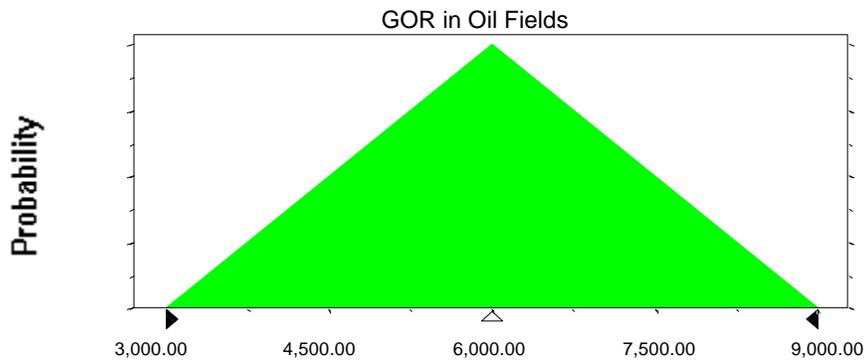
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	3,000.00
Likeliest	6,000.00
Maximum	9,000.00

Selected range is from 3,000.00 to 9,000.00

Mean value in simulation was 5,999.20



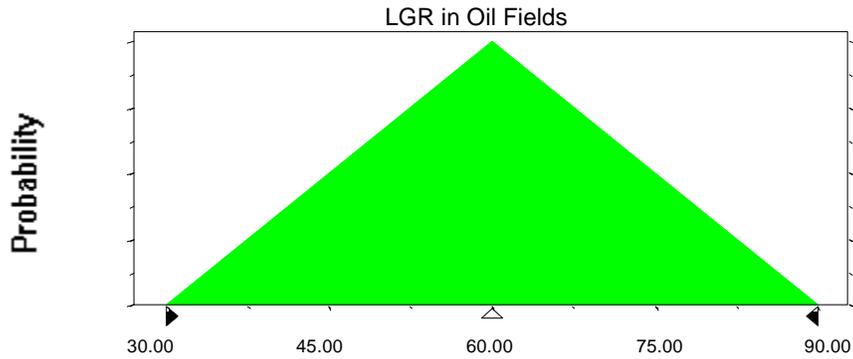
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**Assumption: LGR in Oil Fields**

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 60.05



**Assumption: Number of Gas Fields**

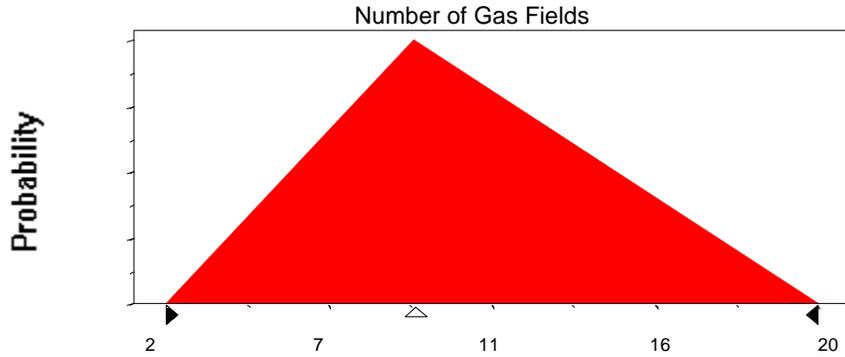
Triangular distribution with parameters:

Minimum	2
Likeliest	9
Maximum	20

Selected range is from 2 to 20  
Mean value in simulation was 10

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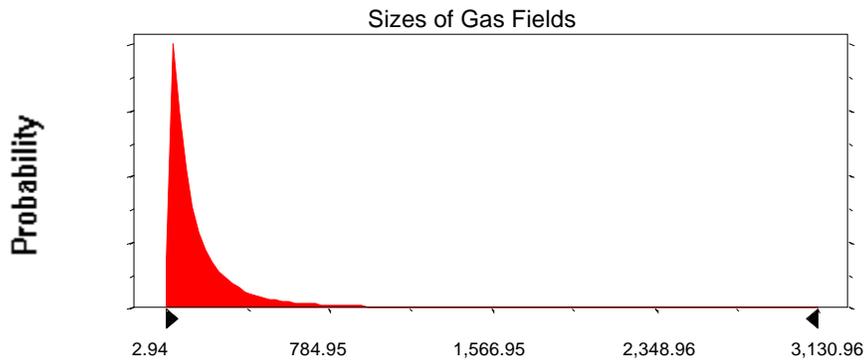
Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	188.48	212.48
Standard Deviation	318.45	318.45

Selected range is from 0.00 to 3,476.00                      24.00 to 3,500.00  
Mean value in simulation was 183.11                              207.11



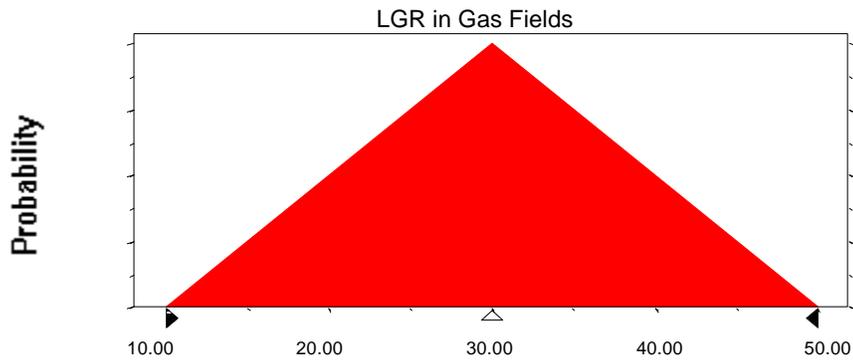
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**Assumption: LGR in Gas Fields**

Triangular distribution with parameters:

Minimum	10.00
Likeliest	30.00
Maximum	50.00

Selected range is from 10.00 to 50.00  
Mean value in simulation was 30.00



End of Assumptions

Simulation started on 7/13/99 at 15:51:17  
Simulation stopped on 7/13/99 at 16:07:38