

**Southwest Foldbelt, Assessment Unit 31540103**  
**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	1.00	109	433	1,087	495	226	925	2,512	1,090	13	54	157	65	43	133	439	171
Gas Fields	60						1,613	6,119	13,577	6,682	66	261	630	294	427	1,208	3,417	1,457
Total		1.00	109	433	1,087	495	1,838	7,044	16,089	7,773	79	315	786	359				

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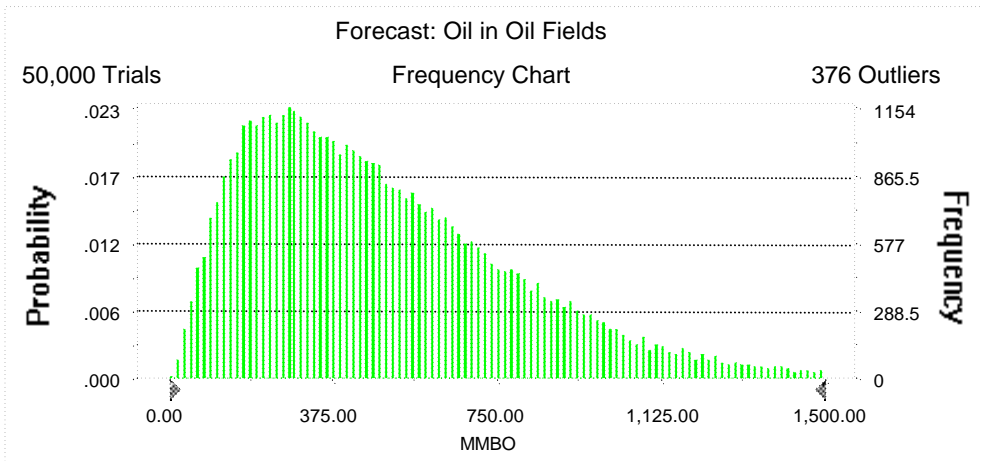
**Forecast: Oil in Oil Fields**

Summary:

Display range is from 0.00 to 1,500.00 MMBO  
Entire range is from 11.13 to 2,961.62 MMBO  
After 50,000 trials, the standard error of the mean is 1.40

Statistics:

	<u>Value</u>
Trials	50000
Mean	495.21
Median	433.10
Mode	---
Standard Deviation	313.21
Variance	98,101.71
Skewness	1.09
Kurtosis	4.53
Coefficient of Variability	0.63
Range Minimum	11.13
Range Maximum	2,961.62
Range Width	2,950.49
Mean Standard Error	1.40



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

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	11.13
95%	108.80
90%	152.32
85%	187.92
80%	221.95
75%	255.71
70%	288.95
65%	322.28
60%	357.78
55%	394.75
50%	433.10
45%	472.87
40%	516.21
35%	563.46
30%	614.08
25%	670.76
20%	737.50
15%	818.23
10%	923.74
5%	1,087.47
0%	2,961.62

End of Forecast

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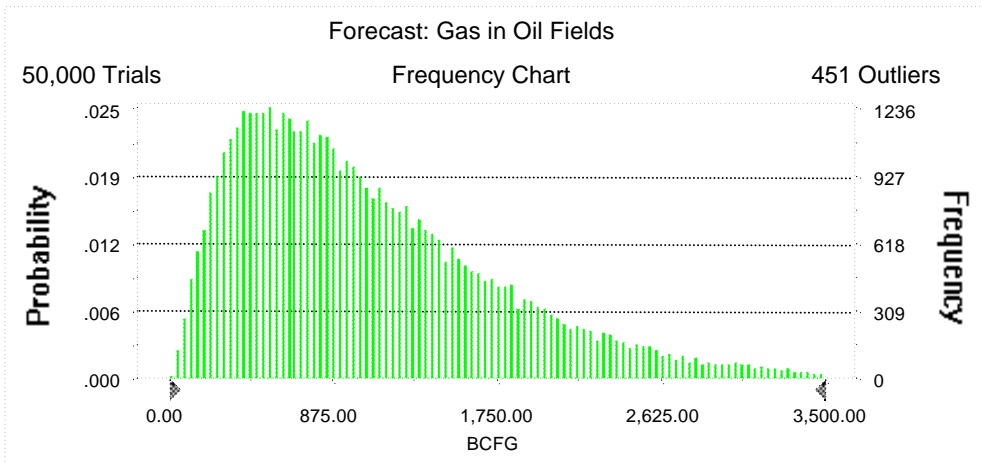
**Forecast: Gas in Oil Fields**

Summary:

Display range is from 0.00 to 3,500.00 BCFG  
 Entire range is from 18.62 to 7,336.62 BCFG  
 After 50,000 trials, the standard error of the mean is 3.29

Statistics:

	<u>Value</u>
Trials	50000
Mean	1,090.31
Median	924.53
Mode	---
Standard Deviation	736.74
Variance	542,778.58
Skewness	1.31
Kurtosis	5.49
Coefficient of Variability	0.68
Range Minimum	18.62
Range Maximum	7,336.62
Range Width	7,318.00
Mean Standard Error	3.29



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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	18.62
95%	225.65
90%	316.50
85%	393.99
80%	465.91
75%	537.07
70%	610.58
65%	686.08
60%	761.60
55%	841.34
50%	924.53
45%	1,013.74
40%	1,113.30
35%	1,220.49
30%	1,337.75
25%	1,468.28
20%	1,629.95
15%	1,824.50
10%	2,082.59
5%	2,512.18
0%	7,336.62

End of Forecast

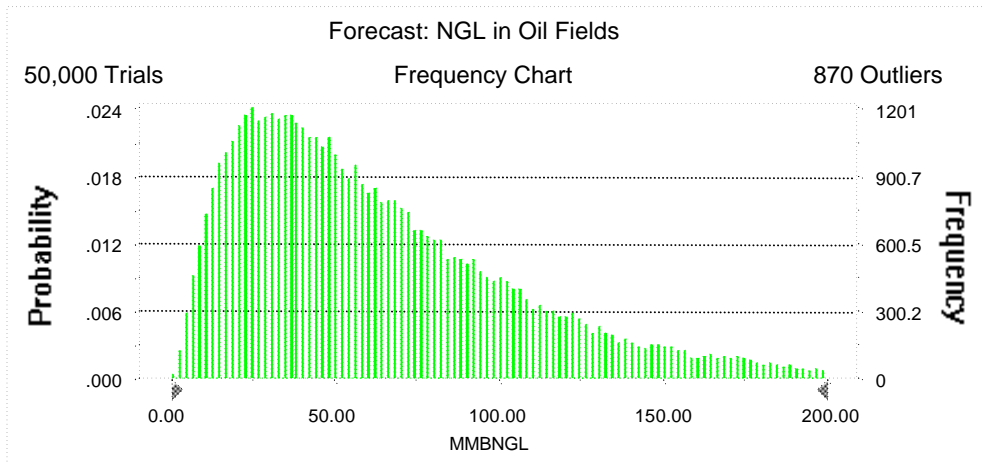
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**Forecast: NGL in Oil Fields**

Summary:

Display range is from 0.00 to 200.00 MMBNGL  
Entire range is from 0.94 to 461.64 MMBNGL  
After 50,000 trials, the standard error of the mean is 0.21

Statistics:	Value
Trials	50000
Mean	65.38
Median	53.95
Mode	---
Standard Deviation	46.91
Variance	2,200.33
Skewness	1.51
Kurtosis	6.45
Coefficient of Variability	0.72
Range Minimum	0.94
Range Maximum	461.64
Range Width	460.70
Mean Standard Error	0.21



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

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.94
95%	12.72
90%	17.89
85%	22.46
80%	26.73
75%	31.02
70%	35.31
65%	39.59
60%	44.13
55%	48.89
50%	53.95
45%	59.43
40%	65.57
35%	71.95
30%	79.25
25%	87.92
20%	97.90
15%	110.09
10%	127.15
5%	156.80
0%	461.64

End of Forecast

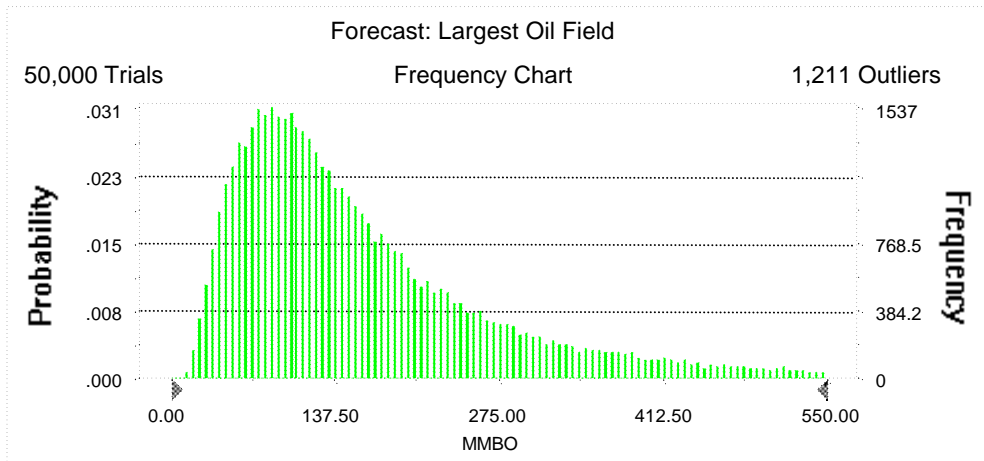
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**Forecast: Largest Oil Field**

Summary:

Display range is from 0.00 to 550.00 MMBO  
 Entire range is from 11.13 to 898.98 MMBO  
 After 50,000 trials, the standard error of the mean is 0.59

Statistics:	<u>Value</u>
Trials	50000
Mean	170.81
Median	132.53
Mode	---
Standard Deviation	130.86
Variance	17,125.44
Skewness	2.00
Kurtosis	8.07
Coefficient of Variability	0.77
Range Minimum	11.13
Range Maximum	898.98
Range Width	887.86
Mean Standard Error	0.59





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

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	11.13
95%	42.60
90%	54.70
85%	65.06
80%	74.74
75%	83.81
70%	92.77
65%	101.98
60%	111.51
55%	121.50
50%	132.53
45%	144.86
40%	158.12
35%	173.63
30%	191.41
25%	213.41
20%	241.17
15%	278.94
10%	335.17
5%	439.13
0%	898.98

End of Forecast

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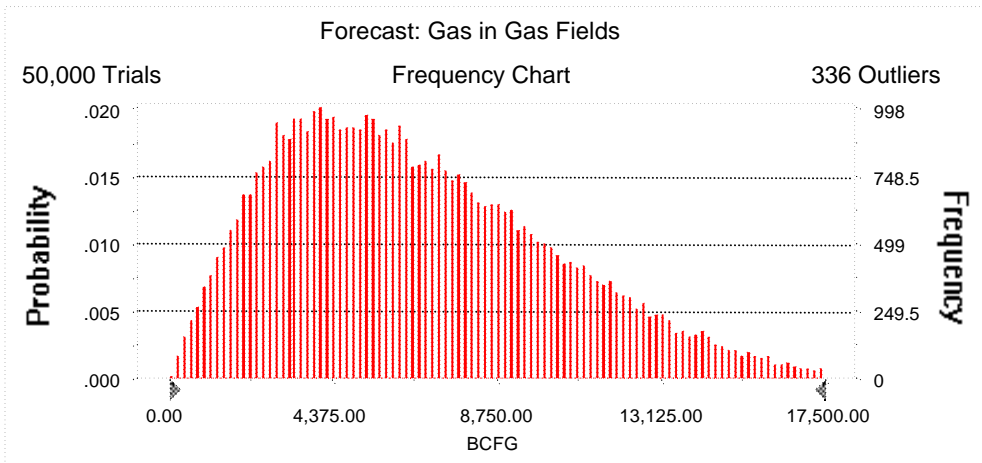
**Forecast: Gas in Gas Fields**

Summary:

Display range is from 0.00 to 17,500.00 BCFG  
 Entire range is from 91.45 to 28,084.07 BCFG  
 After 50,000 trials, the standard error of the mean is 16.65

Statistics:

	<u>Value</u>
Trials	50000
Mean	6,682.48
Median	6,119.02
Mode	---
Standard Deviation	3,724.15
Variance	13,869,310.98
Skewness	0.70
Kurtosis	3.23
Coefficient of Variability	0.56
Range Minimum	91.45
Range Maximum	28,084.07
Range Width	27,992.62
Mean Standard Error	16.65



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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	91.45
95%	1,612.82
90%	2,302.81
85%	2,852.57
80%	3,333.33
75%	3,796.26
70%	4,242.71
65%	4,698.33
60%	5,175.20
55%	5,635.98
50%	6,119.02
45%	6,620.03
40%	7,177.16
35%	7,742.87
30%	8,361.07
25%	9,047.17
20%	9,823.64
15%	10,750.74
10%	11,886.01
5%	13,577.21
0%	28,084.07

End of Forecast

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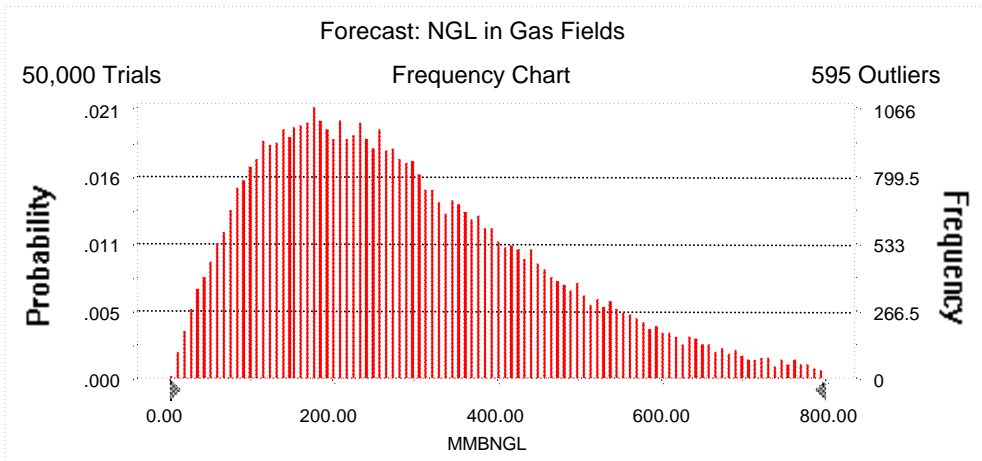
**Forecast: NGL in Gas Fields**

Summary:

Display range is from 0.00 to 800.00 MMBNGL  
 Entire range is from 3.53 to 1,467.57 MMBNGL  
 After 50,000 trials, the standard error of the mean is 0.79

Statistics:

	<u>Value</u>
Trials	50000
Mean	293.74
Median	261.47
Mode	---
Standard Deviation	176.88
Variance	31,285.80
Skewness	0.97
Kurtosis	4.07
Coefficient of Variability	0.60
Range Minimum	3.53
Range Maximum	1,467.57
Range Width	1,464.04
Mean Standard Error	0.79



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

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	3.53
95%	66.50
90%	95.10
85%	118.14
80%	139.39
75%	159.88
70%	179.34
65%	199.05
60%	219.55
55%	240.13
50%	261.47
45%	283.28
40%	307.05
35%	334.05
30%	363.52
25%	395.55
20%	433.21
15%	478.15
10%	538.00
5%	629.60
0%	1,467.57

End of Forecast

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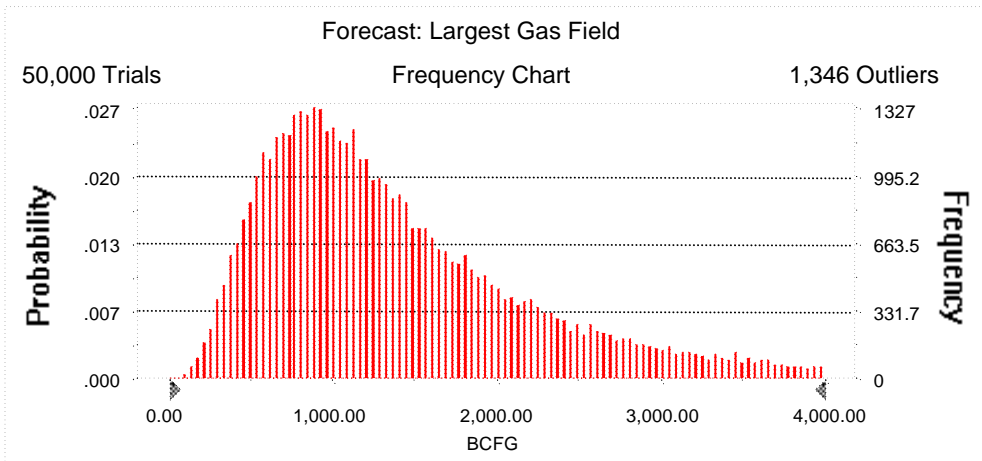
**Forecast: Largest Gas Field**

Summary:

Display range is from 0.00 to 4,000.00 BCFG  
 Entire range is from 88.82 to 5,397.20 BCFG  
 After 50,000 trials, the standard error of the mean is 4.16

Statistics:

	<u>Value</u>
Trials	50000
Mean	1,456.97
Median	1,207.95
Mode	---
Standard Deviation	931.31
Variance	867,333.92
Skewness	1.46
Kurtosis	5.27
Coefficient of Variability	0.64
Range Minimum	88.82
Range Maximum	5,397.20
Range Width	5,308.38
Mean Standard Error	4.16



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

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	88.82
95%	426.62
90%	547.12
85%	638.19
80%	722.01
75%	801.44
70%	878.66
65%	953.52
60%	1,035.47
55%	1,120.91
50%	1,207.95
45%	1,307.31
40%	1,414.46
35%	1,537.74
30%	1,680.78
25%	1,849.52
20%	2,058.73
15%	2,330.05
10%	2,721.17
5%	3,416.74
0%	5,397.20

End of Forecast

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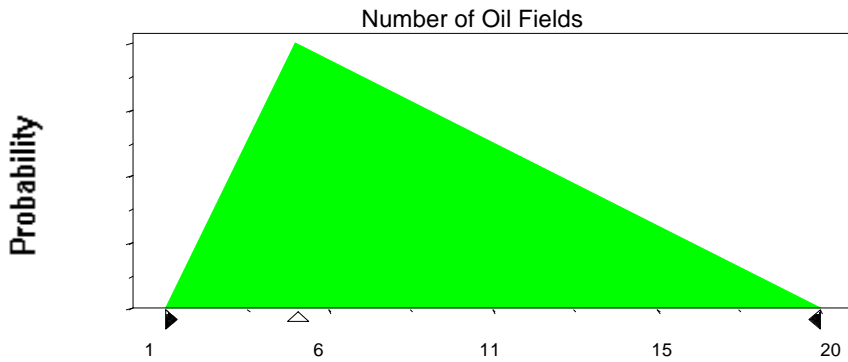
Assumptions

**Assumption: Number of Oil Fields**

Triangular distribution with parameters:

Minimum	1
Likeliest	5
Maximum	20

Selected range is from 1 to 20  
Mean value in simulation was 9



**Assumption: Sizes of Oil Fields**

Lognormal distribution with parameters:

Mean	48.77
Standard Deviation	81.70

Shifted parameters

58.77
81.7

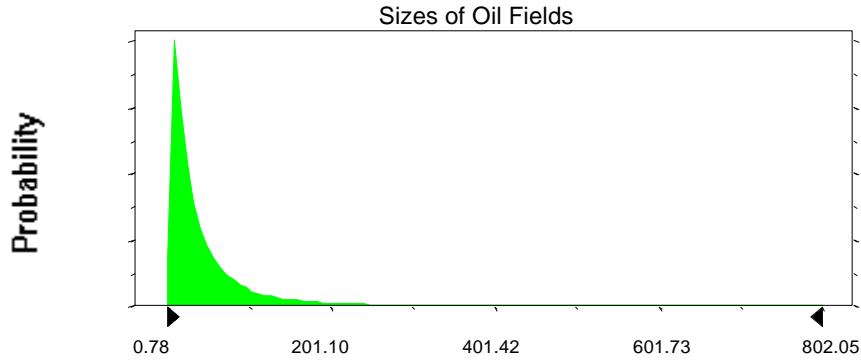
Selected range is from 0.00 to 890.00  
Mean value in simulation was 47.67

10.00 to 900.00  
57.67



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Assumption: Sizes of Oil Fields (cont'd)



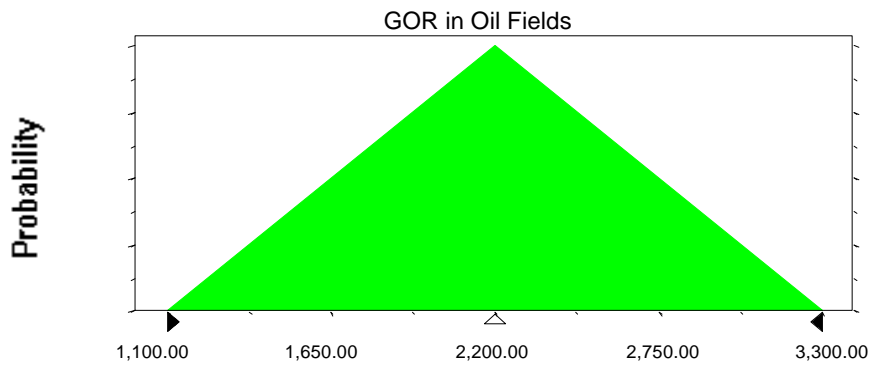
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	1,100.00
Likeliest	2,200.00
Maximum	3,300.00

Selected range is from 1,100.00 to 3,300.00

Mean value in simulation was 2,203.16



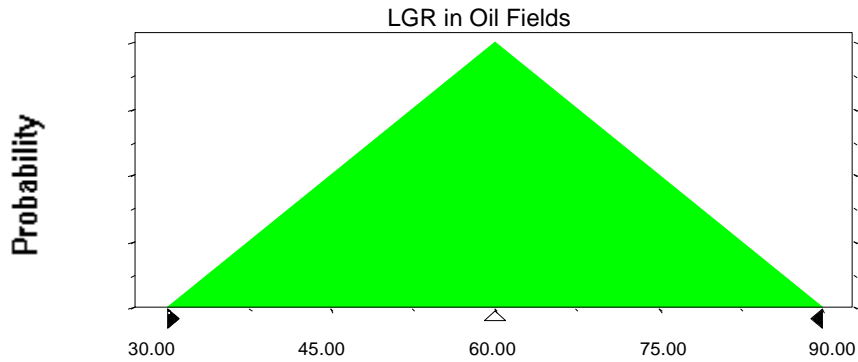
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**Assumption: LGR in Oil Fields**

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 60.01



**Assumption: Number of Gas Fields**

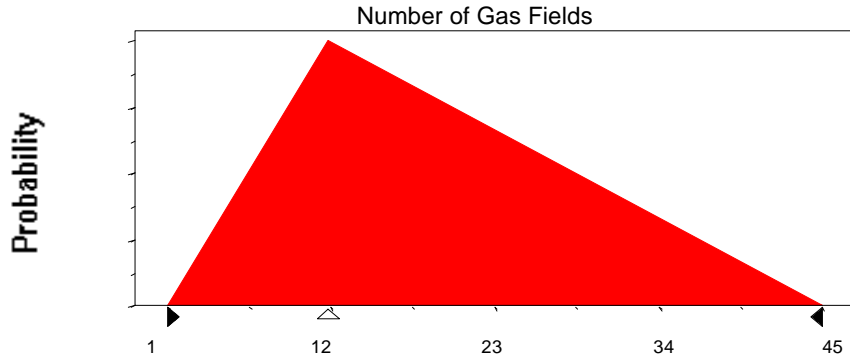
Triangular distribution with parameters:

Minimum	1
Likeliest	12
Maximum	45

Selected range is from 1 to 45  
Mean value in simulation was 19

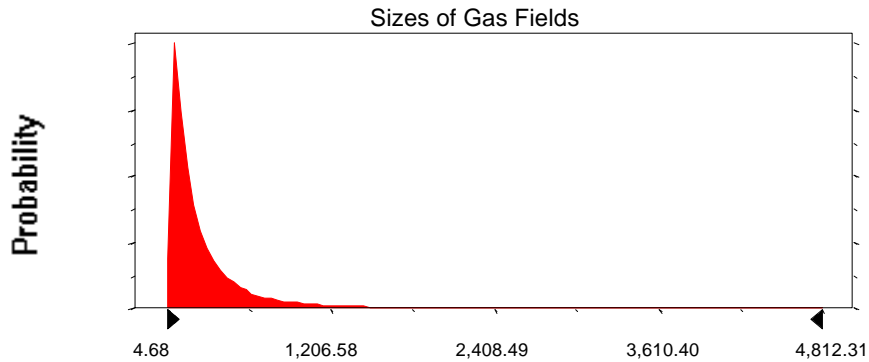
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**Assumption: Number of Gas Fields (cont'd)**



**Assumption: Sizes of Gas Fields**

Lognormal distribution with parameters:		Shifted parameters
Mean	292.63	352.63
Standard Deviation	490.19	490.19
Selected range is from 0.00 to 5,340.00		60.00 to 5,400.00
Mean value in simulation was 284.87		344.87



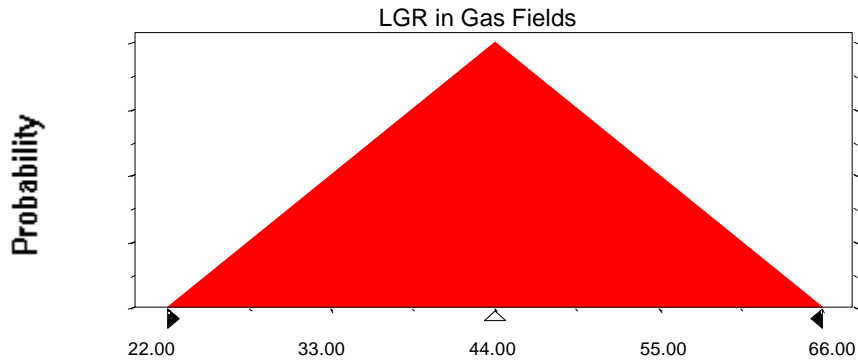
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**Assumption: LGR in Gas Fields**

Triangular distribution with parameters:

Minimum	22.00
Likeliest	44.00
Maximum	66.00

Selected range is from 22.00 to 66.00  
Mean value in simulation was 44.00



End of Assumptions

Simulation started on 11/18/99 at 14:18:24  
Simulation stopped on 11/18/99 at 14:40:06