

**Onshore Stavropol-Prikumsk, Assessment Unit 11090302
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	3	1.00	185	277	421	287	310	547	929	574	18	33	56	34	17	30	61	33
Gas Fields	18						368	567	882	589	3	6	10	6	48	86	193	98
Total		1.00	185	277	421	287	678	1,114	1,811	1,163	21	38	66	40				

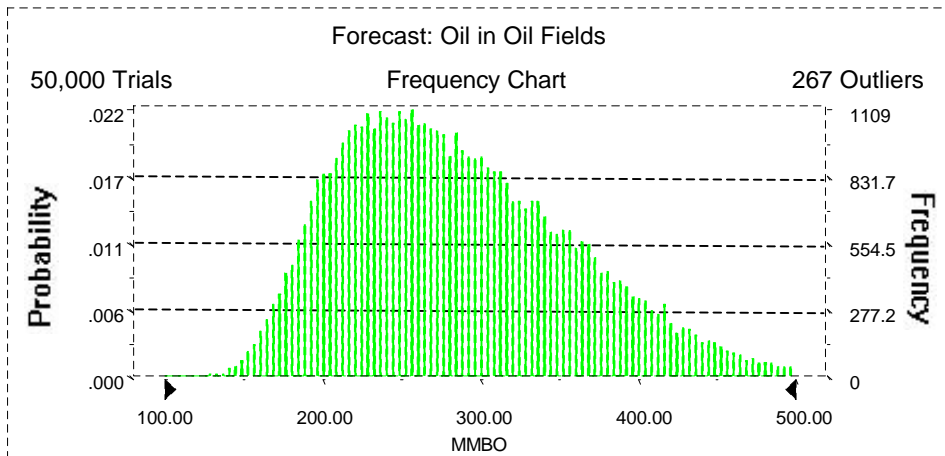
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Forecast: Oil in Oil Fields

Summary:

Display range is from 100.00 to 500.00 MMBO
 Entire range is from 113.19 to 703.46 MMBO
 After 50,000 trials, the standard error of the mean is 0.33

Statistics:	<u>Value</u>
Trials	50000
Mean	287.23
Median	277.35
Mode	---
Standard Deviation	73.69
Variance	5,430.42
Skewness	0.59
Kurtosis	3.01
Coefficient of Variability	0.26
Range Minimum	113.19
Range Maximum	703.46
Range Width	590.27
Mean Standard Error	0.33



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	113.19
95%	184.78
90%	199.33
85%	210.93
80%	220.96
75%	230.35
70%	239.69
65%	248.99
60%	258.06
55%	267.54
50%	277.35
45%	287.57
40%	298.32
35%	309.59
30%	321.69
25%	335.64
20%	350.74
15%	368.06
10%	389.85
5%	421.48
0%	703.46

End of Forecast

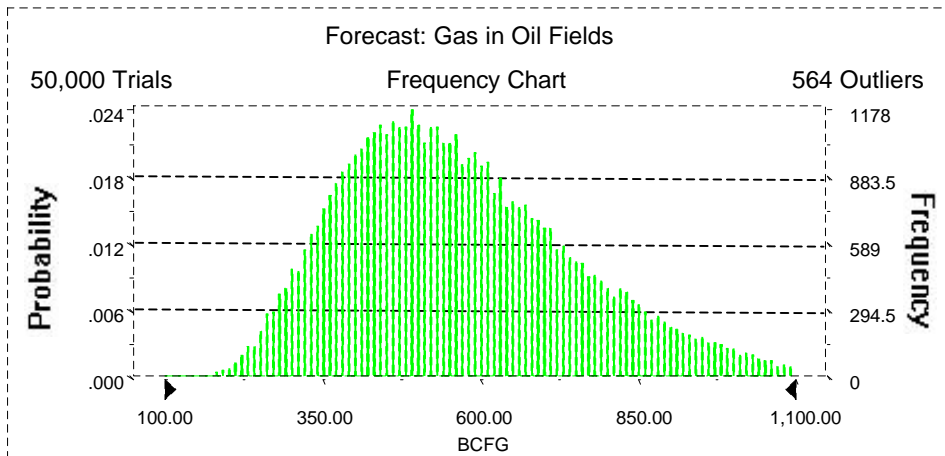
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Forecast: Gas in Oil Fields

Summary:

Display range is from 100.00 to 1,100.00 BCFG
 Entire range is from 159.04 to 1,628.70 BCFG
 After 50,000 trials, the standard error of the mean is 0.85

Statistics:	<u>Value</u>
Trials	50000
Mean	573.74
Median	546.89
Mode	---
Standard Deviation	190.45
Variance	36,271.91
Skewness	0.74
Kurtosis	3.56
Coefficient of Variability	0.33
Range Minimum	159.04
Range Maximum	1,628.70
Range Width	1,469.65
Mean Standard Error	0.85



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	159.04
95%	309.55
90%	352.14
85%	382.77
80%	409.24
75%	433.17
70%	456.05
65%	478.65
60%	500.59
55%	523.52
50%	546.89
45%	570.58
40%	596.52
35%	623.50
30%	654.14
25%	687.62
20%	725.71
15%	773.56
10%	835.45
5%	928.58
0%	1,628.70

End of Forecast

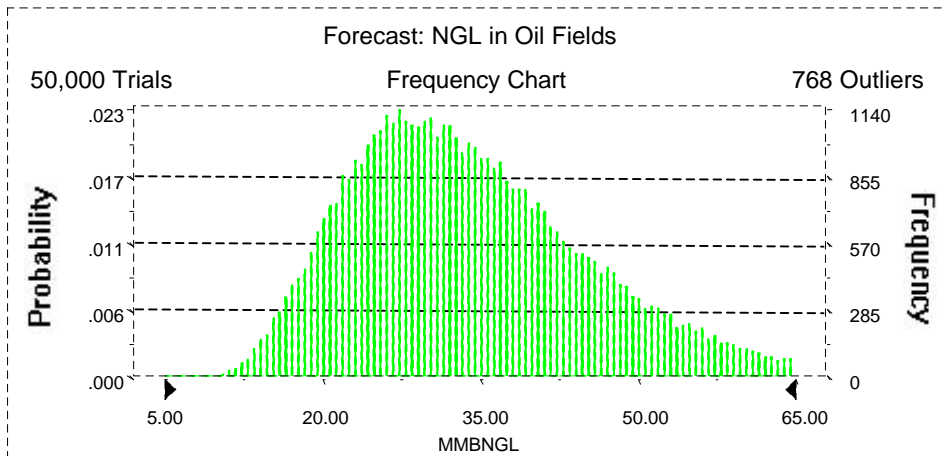
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Forecast: NGL in Oil Fields

Summary:

Display range is from 5.00 to 65.00 MMBNGL
Entire range is from 8.81 to 103.32 MMBNGL
After 50,000 trials, the standard error of the mean is 0.05

Statistics:	<u>Value</u>
Trials	50000
Mean	34.45
Median	32.73
Mode	---
Standard Deviation	11.70
Variance	136.88
Skewness	0.78
Kurtosis	3.66
Coefficient of Variability	0.34
Range Minimum	8.81
Range Maximum	103.32
Range Width	94.51
Mean Standard Error	0.05



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	8.81
95%	18.36
90%	20.87
85%	22.75
80%	24.40
75%	25.84
70%	27.21
65%	28.53
60%	29.95
55%	31.35
50%	32.73
45%	34.25
40%	35.78
35%	37.44
30%	39.30
25%	41.30
20%	43.72
15%	46.65
10%	50.36
5%	56.28
0%	103.32

End of Forecast

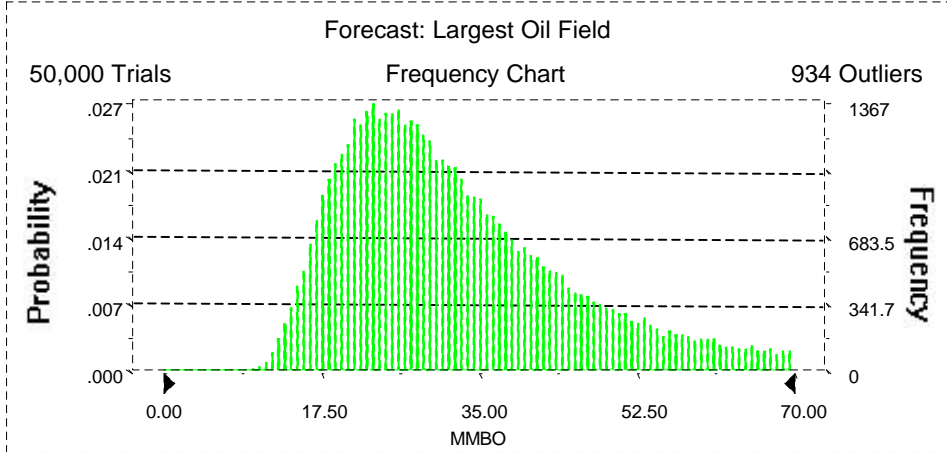
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Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 70.00 MMBO
 Entire range is from 7.92 to 80.00 MMBO
 After 50,000 trials, the standard error of the mean is 0.06

Statistics:	<u>Value</u>
Trials	50000
Mean	33.01
Median	29.96
Mode	---
Standard Deviation	13.36
Variance	178.56
Skewness	1.06
Kurtosis	3.86
Coefficient of Variability	0.40
Range Minimum	7.92
Range Maximum	80.00
Range Width	72.08
Mean Standard Error	0.06



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	7.92
95%	16.77
90%	18.76
85%	20.39
80%	21.81
75%	23.14
70%	24.46
65%	25.79
60%	27.13
55%	28.50
50%	29.96
45%	31.56
40%	33.23
35%	35.17
30%	37.32
25%	39.87
20%	42.90
15%	46.70
10%	52.05
5%	60.67
0%	80.00

End of Forecast

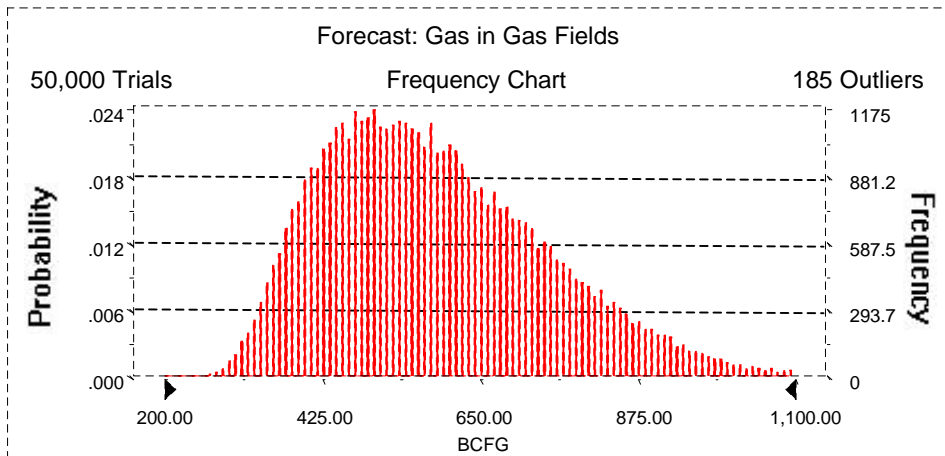
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Forecast: Gas in Gas Fields

Summary:

Display range is from 200.00 to 1,100.00 BCFG
 Entire range is from 241.58 to 1,434.16 BCFG
 After 50,000 trials, the standard error of the mean is 0.71

Statistics:	<u>Value</u>
Trials	50000
Mean	588.85
Median	567.26
Mode	---
Standard Deviation	159.56
Variance	25,459.63
Skewness	0.67
Kurtosis	3.24
Coefficient of Variability	0.27
Range Minimum	241.58
Range Maximum	1,434.16
Range Width	1,192.58
Mean Standard Error	0.71



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Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	241.58
95%	368.27
90%	399.78
85%	424.66
80%	446.37
75%	466.91
70%	486.73
65%	506.13
60%	526.41
55%	546.50
50%	567.26
45%	588.48
40%	610.88
35%	634.12
30%	661.16
25%	690.12
20%	722.49
15%	760.21
10%	809.56
5%	882.02
0%	1,434.16

End of Forecast

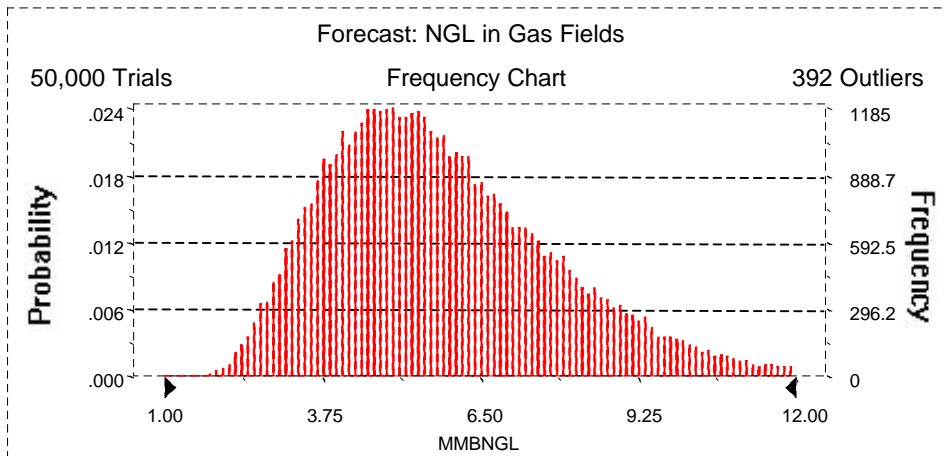
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Forecast: NGL in Gas Fields

Summary:

Display range is from 1.00 to 12.00 MMBNGL
 Entire range is from 1.48 to 18.26 MMBNGL
 After 50,000 trials, the standard error of the mean is 0.01

Statistics:	<u>Value</u>
Trials	50000
Mean	5.88
Median	5.58
Mode	---
Standard Deviation	2.03
Variance	4.10
Skewness	0.81
Kurtosis	3.75
Coefficient of Variability	0.34
Range Minimum	1.48
Range Maximum	18.26
Range Width	16.77
Mean Standard Error	0.01



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	1.48
95%	3.12
90%	3.54
85%	3.86
80%	4.14
75%	4.40
70%	4.64
65%	4.87
60%	5.10
55%	5.34
50%	5.58
45%	5.83
40%	6.10
35%	6.38
30%	6.71
25%	7.07
20%	7.49
15%	7.99
10%	8.65
5%	9.66
0%	18.26

End of Forecast

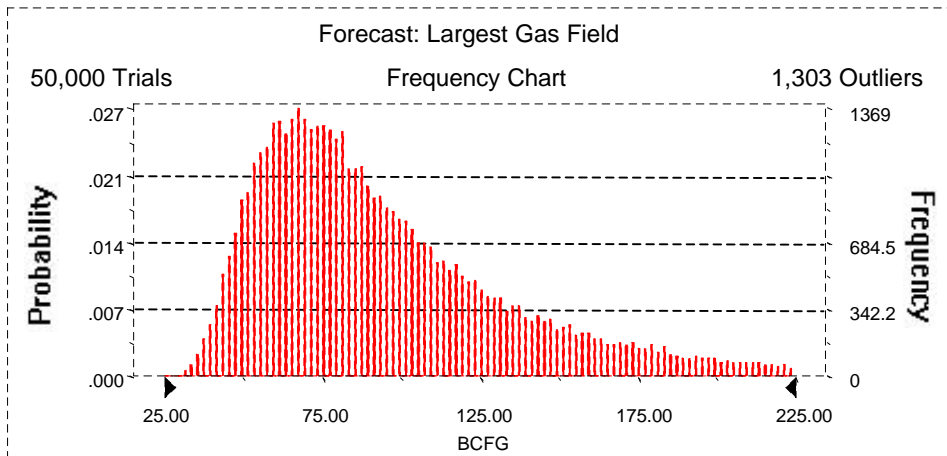
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Forecast: Largest Gas Field

Summary:

Display range is from 25.00 to 225.00 BCFG
 Entire range is from 28.28 to 299.99 BCFG
 After 50,000 trials, the standard error of the mean is 0.21

Statistics:	<u>Value</u>
Trials	50000
Mean	97.99
Median	85.68
Mode	---
Standard Deviation	45.93
Variance	2,110.00
Skewness	1.51
Kurtosis	5.57
Coefficient of Variability	0.47
Range Minimum	28.28
Range Maximum	299.99
Range Width	271.71
Mean Standard Error	0.21



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Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	28.28
95%	47.90
90%	53.39
85%	57.80
80%	61.71
75%	65.71
70%	69.51
65%	73.33
60%	77.20
55%	81.27
50%	85.68
45%	90.46
40%	95.87
35%	101.93
30%	108.83
25%	117.17
20%	127.22
15%	140.61
10%	159.61
5%	193.13
0%	299.99

End of Forecast

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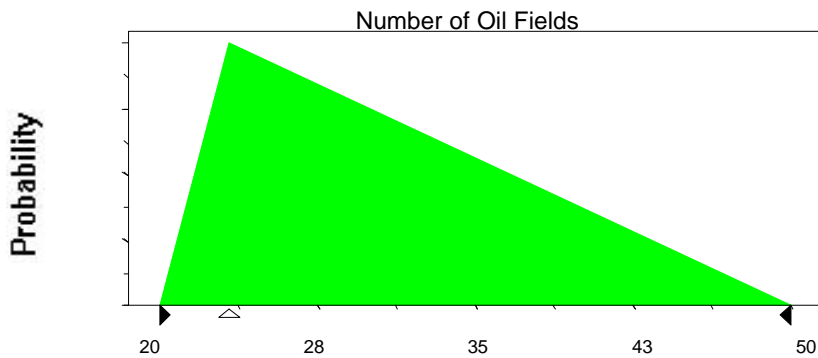
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	20
Likeliest	23
Maximum	50

Selected range is from 20 to 50
Mean value in simulation was 31



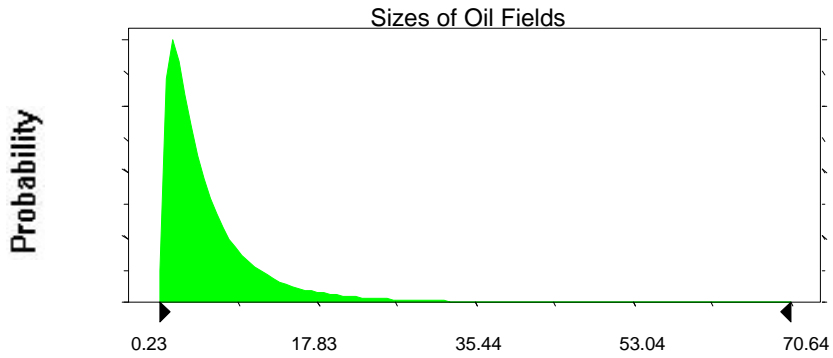
Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:	Shifted parameters	
Mean	6.32	9.32
Standard Deviation	7.74	7.74

Selected range is from 0.00 to 77.00 3.00 to 80.00
Mean value in simulation was 6.24 9.24

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Assumption: Sizes of Oil Fields (cont'd)



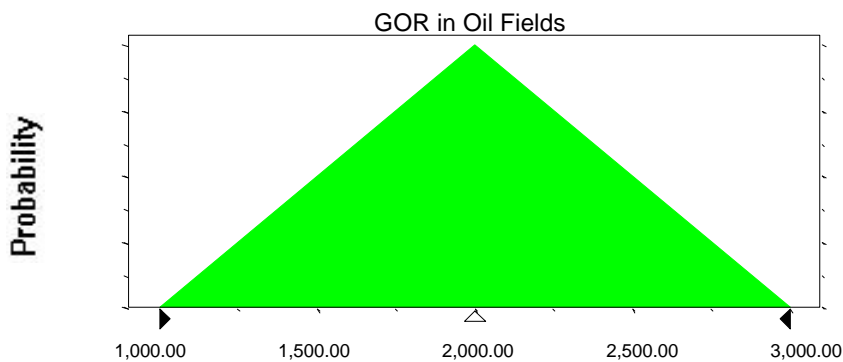
Assumption: GOR in Oil Fields

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 1,997.37



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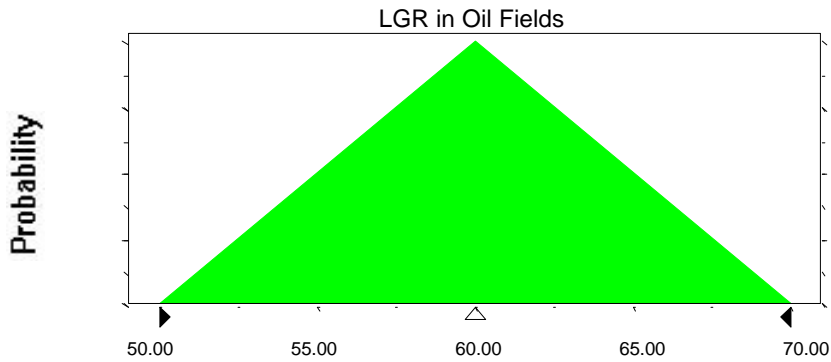
Assumption: LGR in Oil Fields

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 60.03



Assumption: Number of Gas Fields

Triangular distribution with parameters:

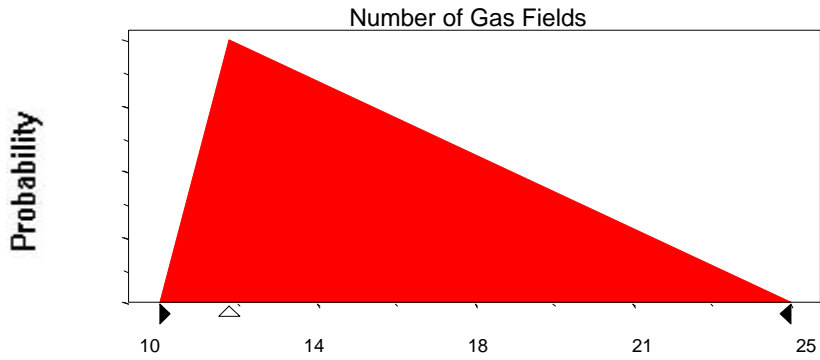
Minimum	10
Likeliest	12
Maximum	25

Selected range is from 10 to 25

Mean value in simulation was 16

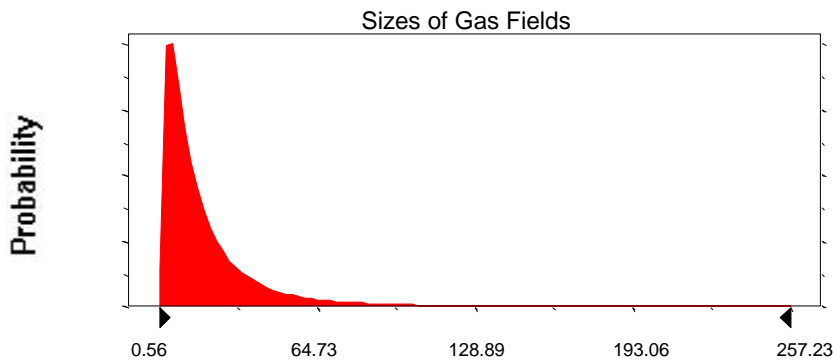
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Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:	Shifted parameters	
Mean	20.22	38.22
Standard Deviation	27.43	27.43
Selected range is from 0.00 to 282.00	18.00 to 300.00	
Mean value in simulation was 19.89	37.89	



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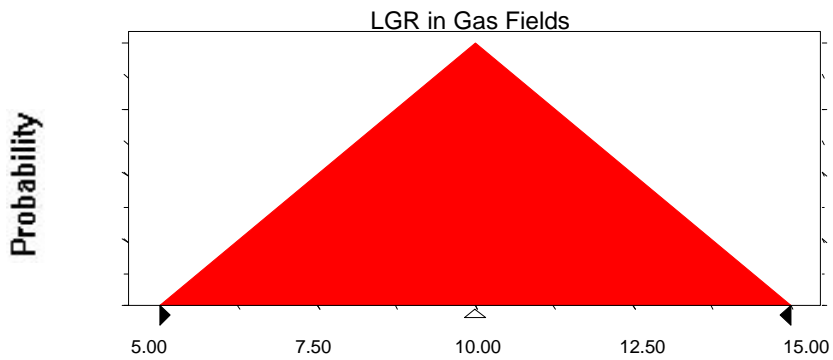
Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	5.00
Likeliest	10.00
Maximum	15.00

Selected range is from 5.00 to 15.00

Mean value in simulation was 9.99



End of Assumptions

Simulation started on 12/1/98 at 10:26:51
Simulation stopped on 12/1/98 at 12:27:38