

Foredeep Basins, Assessment Unit 10080103
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	5	1.00	54	187	468	214	53	188	493	219	3	11	31	13	19	57	192	74
Gas Fields	30						7,962	18,822	34,257	19,671	290	729	1,472	786	1,108	2,853	7,571	3,373
Total		1.00	54	187	468	214	8,014	19,010	34,749	19,891	293	740	1,503	800				

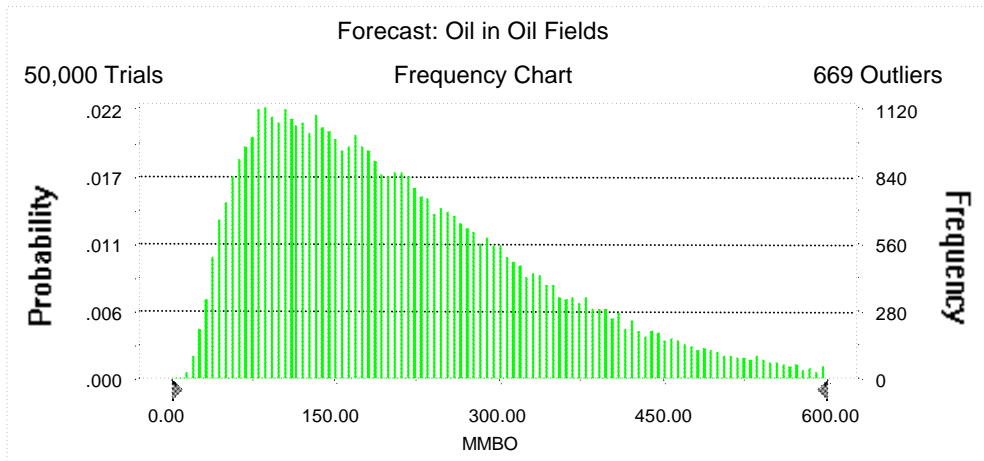
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Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 600.00 MMBO
Entire range is from 12.41 to 1,156.67 MMBO
After 50,000 trials, the standard error of the mean is 0.59

Statistics:	Value
Trials	50000
Mean	214.16
Median	186.52
Mode	---
Standard Deviation	132.67
Variance	17,601.88
Skewness	1.14
Kurtosis	4.63
Coefficient of Variability	0.62
Range Minimum	12.41
Range Maximum	1,156.67
Range Width	1,144.26
Mean Standard Error	0.59



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	12.41
95%	53.63
90%	70.26
85%	84.67
80%	98.36
75%	112.22
70%	126.40
65%	140.60
60%	155.35
55%	170.75
50%	186.52
45%	203.93
40%	221.63
35%	241.07
30%	263.16
25%	287.51
20%	315.13
15%	350.02
10%	395.86
5%	467.68
0%	1,156.67

End of Forecast

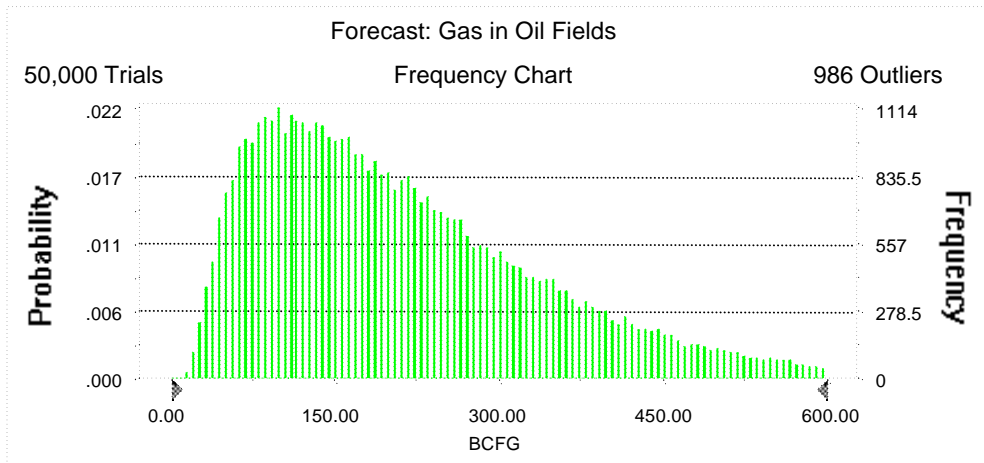
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Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 600.00 BCFG
 Entire range is from 10.90 to 1,248.89 BCFG
 After 50,000 trials, the standard error of the mean is 0.64

Statistics:	<u>Value</u>
Trials	50000
Mean	219.34
Median	187.67
Mode	---
Standard Deviation	142.24
Variance	20,230.92
Skewness	1.30
Kurtosis	5.38
Coefficient of Variability	0.65
Range Minimum	10.90
Range Maximum	1,248.89
Range Width	1,237.99
Mean Standard Error	0.64



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	10.90
95%	52.62
90%	69.24
85%	84.19
80%	98.15
75%	112.14
70%	126.40
65%	141.00
60%	155.85
55%	171.10
50%	187.67
45%	205.39
40%	224.11
35%	244.20
30%	266.53
25%	293.11
20%	323.57
15%	360.68
10%	411.66
5%	492.55
0%	1,248.89

End of Forecast

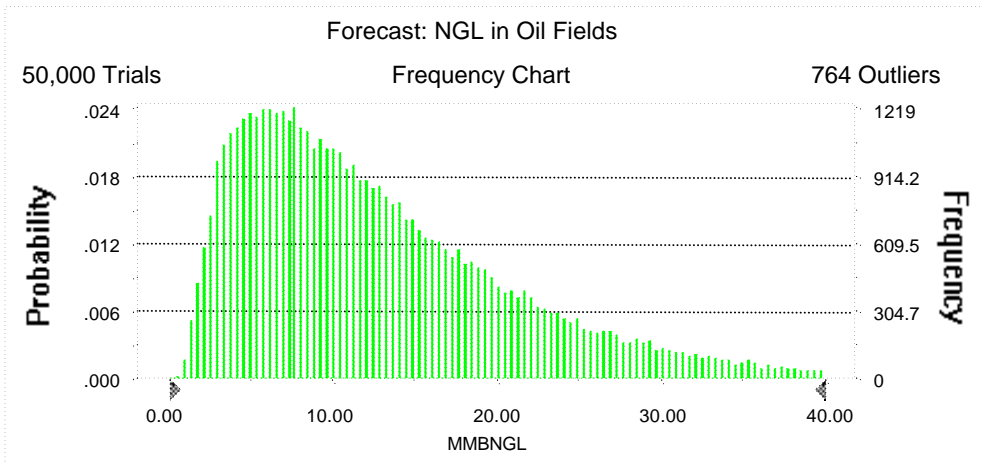
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Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 40.00 MMBNGL
 Entire range is from 0.54 to 93.20 MMBNGL
 After 50,000 trials, the standard error of the mean is 0.04

Statistics:	<u>Value</u>
Trials	50000
Mean	13.15
Median	10.98
Mode	---
Standard Deviation	9.09
Variance	82.55
Skewness	1.52
Kurtosis	6.58
Coefficient of Variability	0.69
Range Minimum	0.54
Range Maximum	93.20
Range Width	92.66
Mean Standard Error	0.04



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.54
95%	2.95
90%	3.90
85%	4.78
80%	5.62
75%	6.45
70%	7.28
65%	8.13
60%	9.03
55%	9.98
50%	10.98
45%	12.04
40%	13.19
35%	14.44
30%	15.89
25%	17.56
20%	19.43
15%	21.89
10%	25.20
5%	30.71
0%	93.20

End of Forecast

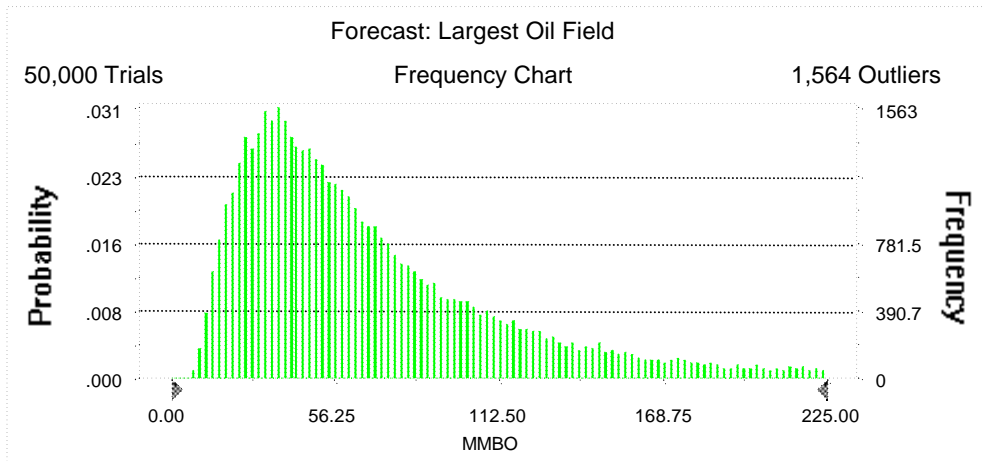
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Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 225.00 MMBO
 Entire range is from 6.68 to 399.37 MMBO
 After 50,000 trials, the standard error of the mean is 0.26

Statistics:	<u>Value</u>
Trials	50000
Mean	73.96
Median	56.94
Mode	---
Standard Deviation	57.48
Variance	3,303.96
Skewness	2.08
Kurtosis	8.49
Coefficient of Variability	0.78
Range Minimum	6.68
Range Maximum	399.37
Range Width	392.69
Mean Standard Error	0.26



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	6.68
95%	19.08
90%	24.03
85%	28.21
80%	32.22
75%	35.88
70%	39.54
65%	43.55
60%	47.78
55%	52.14
50%	56.94
45%	62.09
40%	67.95
35%	74.50
30%	82.49
25%	92.14
20%	104.50
15%	120.21
10%	144.54
5%	191.95
0%	399.37

End of Forecast

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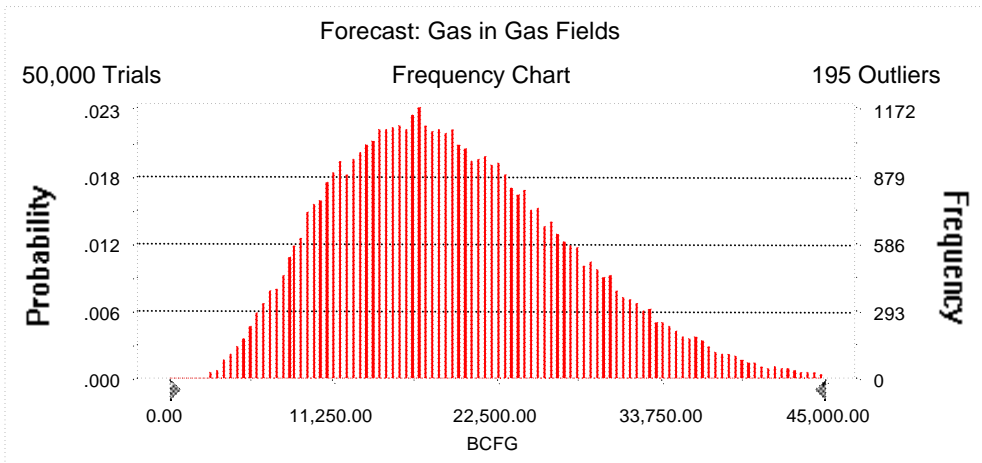
Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 45,000.00 BCFG
 Entire range is from 2,058.42 to 63,214.34 BCFG
 After 50,000 trials, the standard error of the mean is 36.14

Statistics:

	<u>Value</u>
Trials	50000
Mean	19,671.43
Median	18,821.86
Mode	---
Standard Deviation	8,081.18
Variance	65,305,540.41
Skewness	0.56
Kurtosis	3.17
Coefficient of Variability	0.41
Range Minimum	2,058.42
Range Maximum	63,214.34
Range Width	61,155.91
Mean Standard Error	36.14



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Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	2,058.42
95%	7,961.78
90%	9,844.05
85%	11,256.59
80%	12,492.65
75%	13,667.10
70%	14,746.14
65%	15,769.95
60%	16,794.09
55%	17,773.99
50%	18,821.86
45%	19,861.36
40%	21,014.26
35%	22,181.33
30%	23,410.72
25%	24,796.77
20%	26,384.98
15%	28,263.54
10%	30,623.06
5%	34,256.59
0%	63,214.34

End of Forecast

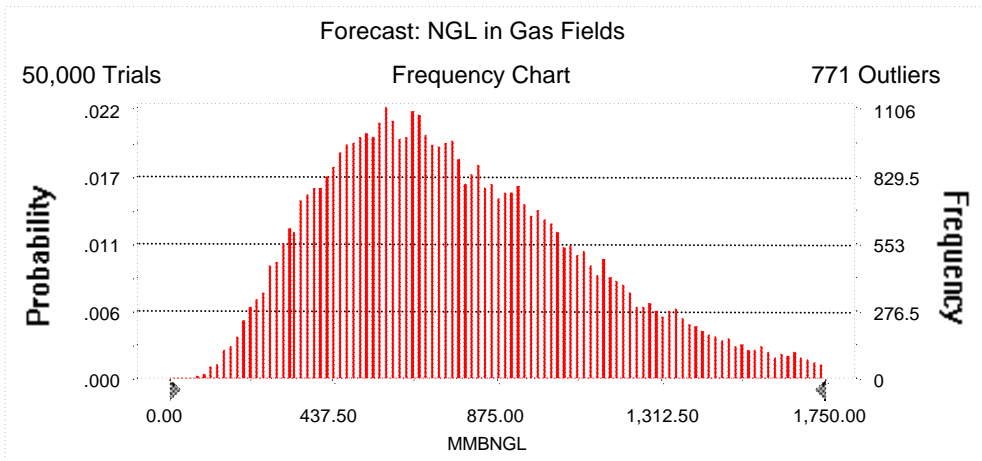
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Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 1,750.00 MMBNGL
Entire range is from 60.42 to 3,288.66 MMBNGL
After 50,000 trials, the standard error of the mean is 1.64

Statistics:	Value
Trials	50000
Mean	786.43
Median	729.22
Mode	---
Standard Deviation	367.14
Variance	134,790.01
Skewness	0.84
Kurtosis	3.87
Coefficient of Variability	0.47
Range Minimum	60.42
Range Maximum	3,288.66
Range Width	3,228.24
Mean Standard Error	1.64



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	60.42
95%	289.73
90%	362.31
85%	418.84
80%	469.51
75%	514.33
70%	558.87
65%	599.57
60%	643.31
55%	683.92
50%	729.22
45%	774.56
40%	827.13
35%	880.88
30%	939.08
25%	1,001.79
20%	1,075.29
15%	1,166.01
10%	1,285.65
5%	1,471.99
0%	3,288.66

End of Forecast

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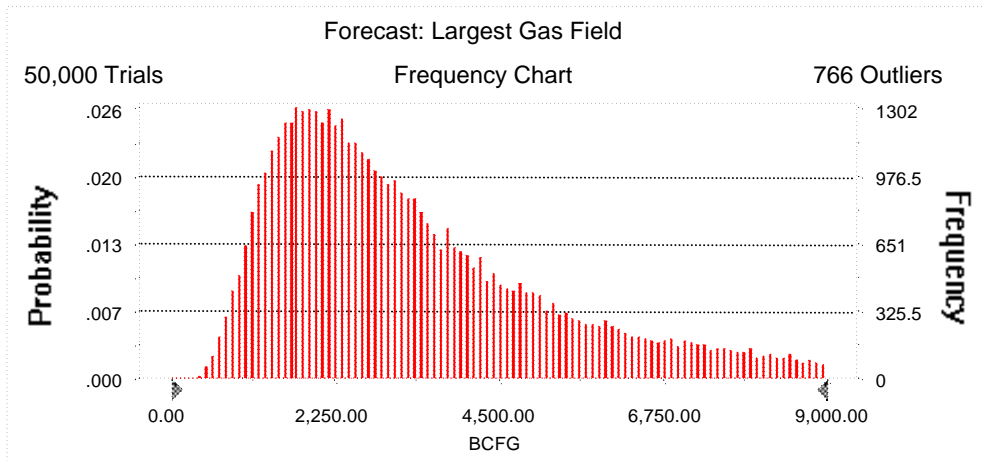
Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 9,000.00 BCFG
Entire range is from 245.48 to 9,997.99 BCFG
After 50,000 trials, the standard error of the mean is 8.80

Statistics:

	<u>Value</u>
Trials	50000
Mean	3,372.95
Median	2,852.84
Mode	---
Standard Deviation	1,968.57
Variance	3,875,273.38
Skewness	1.12
Kurtosis	3.79
Coefficient of Variability	0.58
Range Minimum	245.48
Range Maximum	9,997.99
Range Width	9,752.51
Mean Standard Error	8.80



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Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	245.48
95%	1,108.03
90%	1,350.69
85%	1,549.70
80%	1,730.24
75%	1,903.03
70%	2,078.61
65%	2,256.99
60%	2,441.55
55%	2,637.74
50%	2,852.84
45%	3,087.02
40%	3,335.67
35%	3,619.15
30%	3,954.63
25%	4,342.54
20%	4,835.52
15%	5,443.43
10%	6,300.65
5%	7,571.14
0%	9,997.99

End of Forecast

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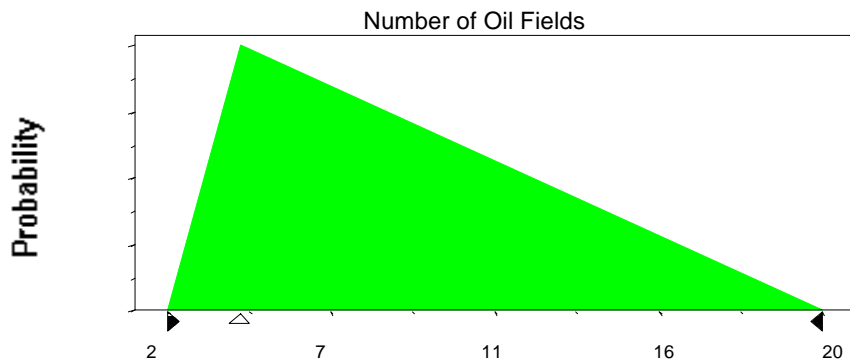
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	2
Likeliest	4
Maximum	20

Selected range is from 2 to 20
Mean value in simulation was 9



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	20.29
Standard Deviation	35.84

Shifted parameters

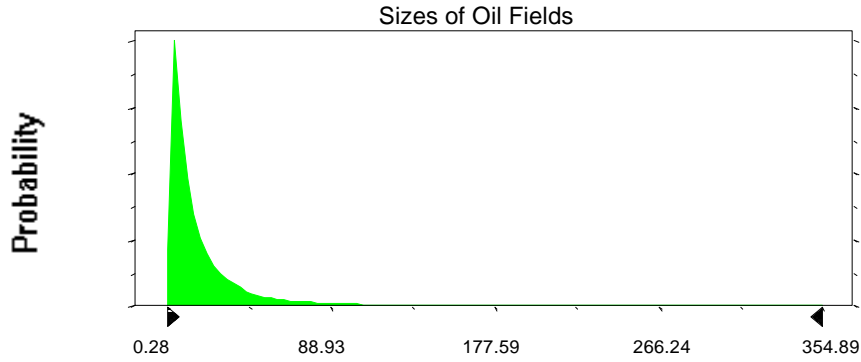
25.29
35.84

Selected range is from 0.00 to 395.00
Mean value in simulation was 19.70

5.00 to 400.00
24.7

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Assumption: Sizes of Oil Fields (cont'd)



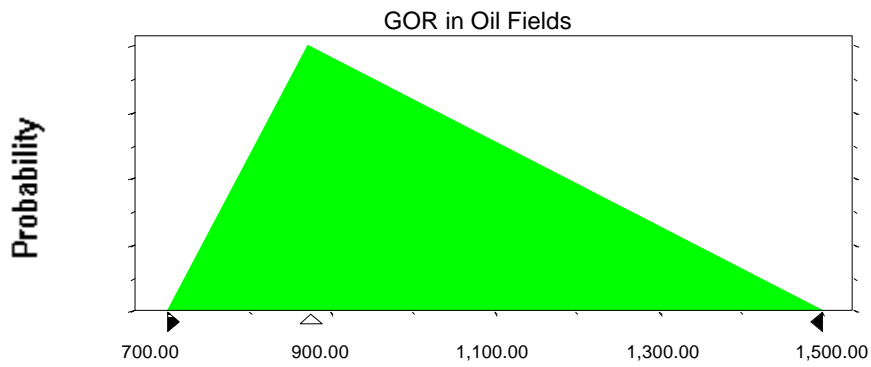
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	700.00
Likeliest	875.00
Maximum	1,500.00

Selected range is from 700.00 to 1,500.00

Mean value in simulation was 1,024.63



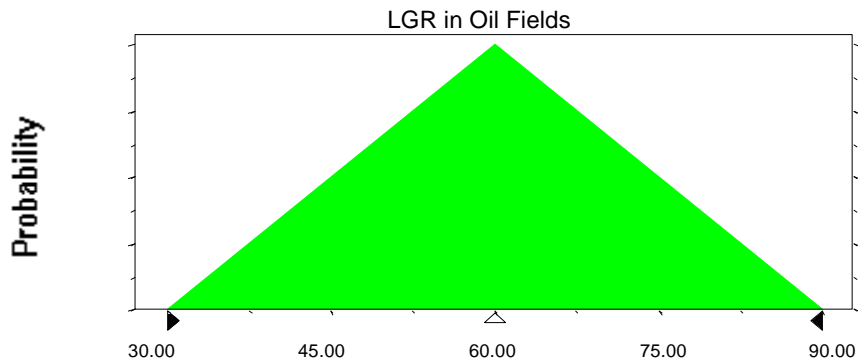
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Assumption: LGR in Oil Fields

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 59.94



Assumption: Number of Gas Fields

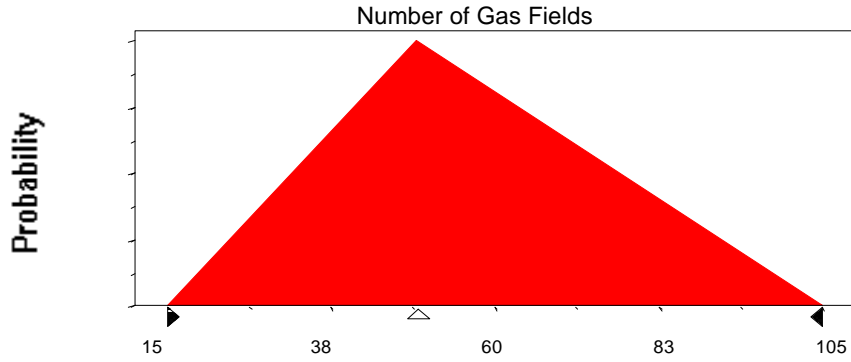
Triangular distribution with parameters:

Minimum	15
Likeliest	49
Maximum	105

Selected range is from 15 to 105
Mean value in simulation was 56

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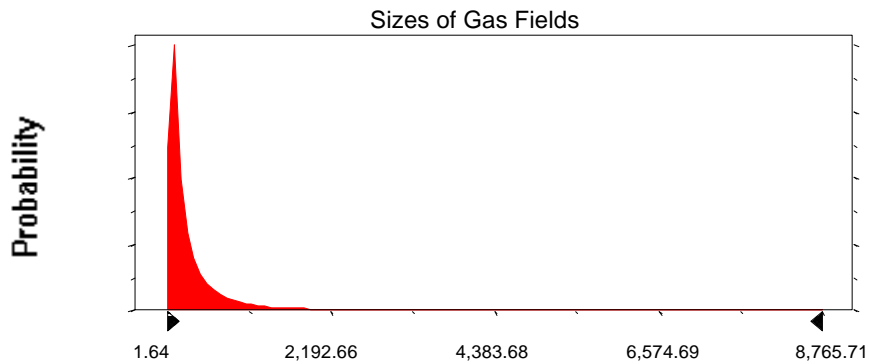
Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:	Shifted parameters	
Mean	333.78	363.78
Standard Deviation	866.31	866.31

Selected range is from 0.00 to 9,970.00 30.00 to 10,000.00
Mean value in simulation was 325.24 355.24



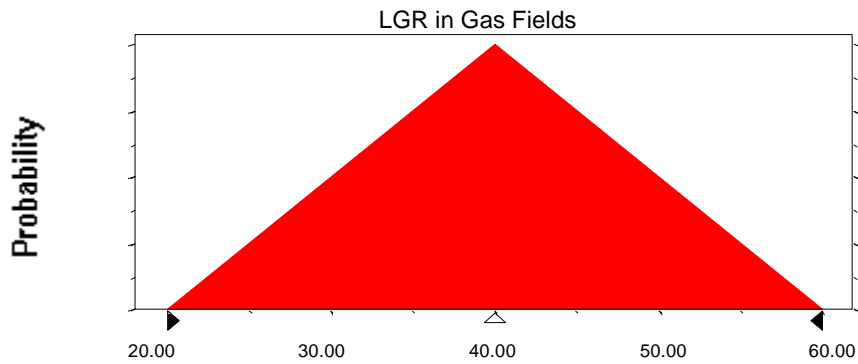
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Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	20.00
Likeliest	40.00
Maximum	60.00

Selected range is from 20.00 to 60.00
Mean value in simulation was 39.98



End of Assumptions

Simulation started on 4/26/99 at 11:03:16
Simulation stopped on 4/26/99 at 11:35:03