

North and West Margins Subsalt Barrier Reefs, Assessment Unit 10160102
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	327	607	1,040	637	466	901	1,620	956	25	53	105	57	37	61	115	66
Gas Fields	60						1,685	3,153	5,424	3,315	24	47	85	50	188	342	728	382
Total		1.00	327	607	1,040	637	2,152	4,053	7,043	4,271	49	100	189	107				

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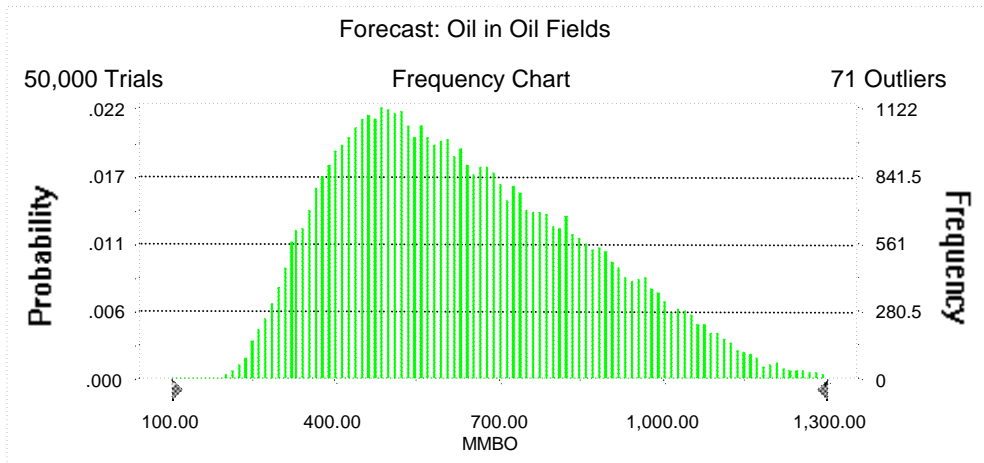
Forecast: Oil in Oil Fields

Summary:

Display range is from 100.00 to 1,300.00 MMBO
Entire range is from 172.84 to 1,489.12 MMBO
After 50,000 trials, the standard error of the mean is 0.98

Statistics:

	<u>Value</u>
Trials	50000
Mean	637.14
Median	606.94
Mode	---
Standard Deviation	220.24
Variance	48,503.64
Skewness	0.50
Kurtosis	2.61
Coefficient of Variability	0.35
Range Minimum	172.84
Range Maximum	1,489.12
Range Width	1,316.27
Mean Standard Error	0.98



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	172.84
95%	326.68
90%	371.58
85%	406.07
80%	436.44
75%	464.49
70%	491.78
65%	519.07
60%	546.87
55%	576.18
50%	606.94
45%	638.13
40%	672.43
35%	707.15
30%	746.40
25%	789.02
20%	835.59
15%	888.81
10%	953.33
5%	1,040.24
0%	1,489.12

End of Forecast

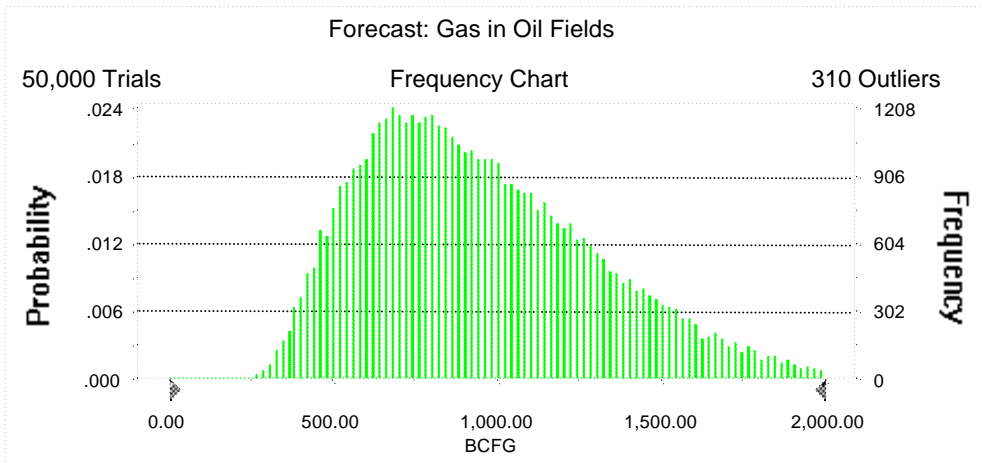
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Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 2,000.00 BCFG
 Entire range is from 187.36 to 2,527.67 BCFG
 After 50,000 trials, the standard error of the mean is 1.60

Statistics:	<u>Value</u>
Trials	50000
Mean	955.67
Median	900.75
Mode	---
Standard Deviation	357.90
Variance	128,094.20
Skewness	0.67
Kurtosis	3.11
Coefficient of Variability	0.37
Range Minimum	187.36
Range Maximum	2,527.67
Range Width	2,340.31
Mean Standard Error	1.60



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	187.36
95%	466.36
90%	534.18
85%	589.61
80%	638.70
75%	681.55
70%	723.63
65%	766.82
60%	810.16
55%	853.37
50%	900.75
45%	950.32
40%	1,001.50
35%	1,056.33
30%	1,116.38
25%	1,182.70
20%	1,257.26
15%	1,344.26
10%	1,458.64
5%	1,619.81
0%	2,527.67

End of Forecast

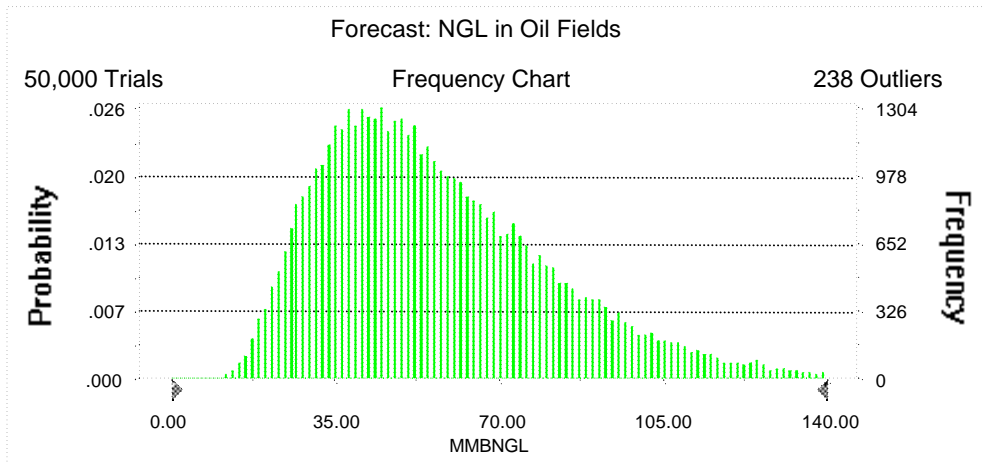
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Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 140.00 MMBNGL
 Entire range is from 8.46 to 205.43 MMBNGL
 After 50,000 trials, the standard error of the mean is 0.11

Statistics:	<u>Value</u>
Trials	50000
Mean	57.26
Median	52.81
Mode	---
Standard Deviation	24.77
Variance	613.45
Skewness	0.90
Kurtosis	3.84
Coefficient of Variability	0.43
Range Minimum	8.46
Range Maximum	205.43
Range Width	196.97
Mean Standard Error	0.11



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	8.46
95%	24.85
90%	29.23
85%	32.82
80%	35.91
75%	38.76
70%	41.47
65%	44.29
60%	47.08
55%	49.89
50%	52.81
45%	55.94
40%	59.42
35%	63.00
30%	67.07
25%	71.67
20%	76.72
15%	83.03
10%	91.45
5%	104.53
0%	205.43

End of Forecast

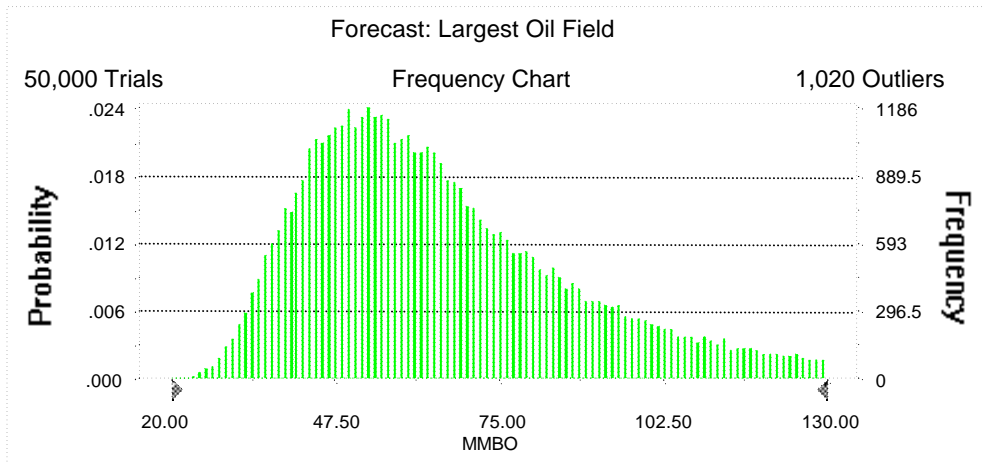
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Forecast: Largest Oil Field

Summary:

Display range is from 20.00 to 130.00 MMBO
 Entire range is from 21.37 to 150.00 MMBO
 After 50,000 trials, the standard error of the mean is 0.11

Statistics:	<u>Value</u>
Trials	50000
Mean	66.31
Median	61.33
Mode	---
Standard Deviation	23.72
Variance	562.78
Skewness	1.01
Kurtosis	3.78
Coefficient of Variability	0.36
Range Minimum	21.37
Range Maximum	150.00
Range Width	128.63
Mean Standard Error	0.11



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	21.37
95%	36.61
90%	40.66
85%	43.80
80%	46.45
75%	48.97
70%	51.39
65%	53.76
60%	56.14
55%	58.66
50%	61.33
45%	64.04
40%	66.95
35%	70.21
30%	74.16
25%	78.73
20%	84.14
15%	90.84
10%	100.04
5%	114.72
0%	150.00

End of Forecast

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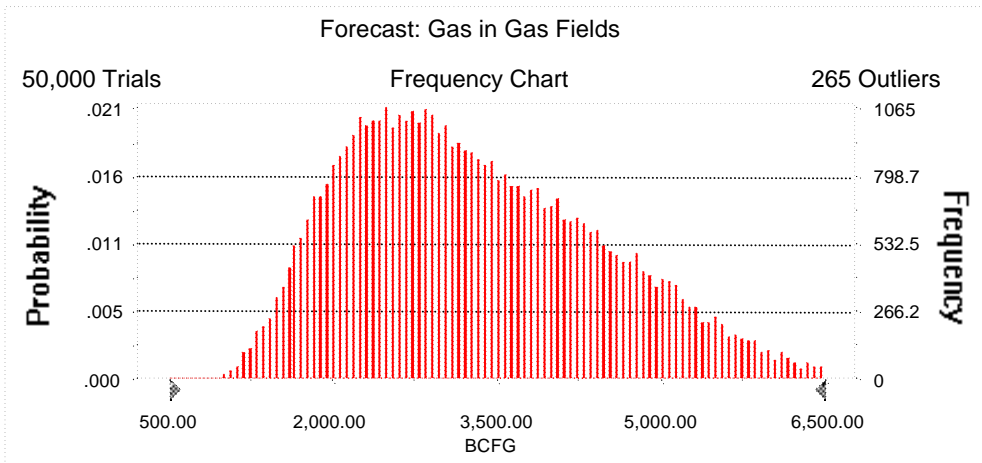
Forecast: Gas in Gas Fields

Summary:

Display range is from 500.00 to 6,500.00 BCFG
 Entire range is from 944.78 to 8,306.21 BCFG
 After 50,000 trials, the standard error of the mean is 5.18

Statistics:

	<u>Value</u>
Trials	50000
Mean	3,315.29
Median	3,152.72
Mode	---
Standard Deviation	1,158.82
Variance	1,342,867.25
Skewness	0.52
Kurtosis	2.73
Coefficient of Variability	0.35
Range Minimum	944.78
Range Maximum	8,306.21
Range Width	7,361.43
Mean Standard Error	5.18



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Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	944.78
95%	1,685.41
90%	1,921.28
85%	2,107.19
80%	2,263.73
75%	2,412.29
70%	2,556.11
65%	2,703.86
60%	2,850.41
55%	2,997.60
50%	3,152.72
45%	3,319.22
40%	3,495.04
35%	3,686.40
30%	3,886.92
25%	4,103.06
20%	4,344.74
15%	4,621.89
10%	4,957.72
5%	5,423.50
0%	8,306.21

End of Forecast

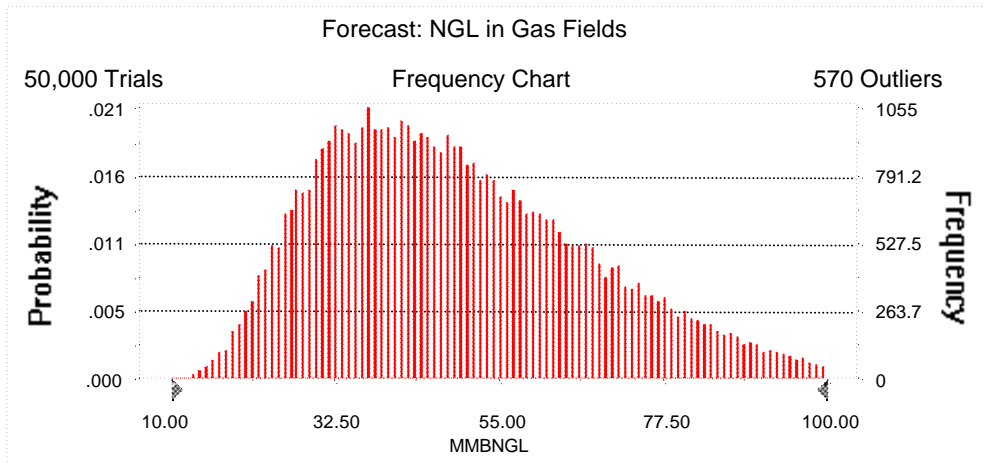
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Forecast: NGL in Gas Fields

Summary:

Display range is from 10.00 to 100.00 MMBNGL
 Entire range is from 10.67 to 135.76 MMBNGL
 After 50,000 trials, the standard error of the mean is 0.08

Statistics:	<u>Value</u>
Trials	50000
Mean	49.77
Median	47.01
Mode	---
Standard Deviation	18.80
Variance	353.56
Skewness	0.69
Kurtosis	3.19
Coefficient of Variability	0.38
Range Minimum	10.67
Range Maximum	135.76
Range Width	125.09
Mean Standard Error	0.08



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	10.67
95%	24.04
90%	27.66
85%	30.59
80%	33.04
75%	35.40
70%	37.66
65%	39.94
60%	42.26
55%	44.58
50%	47.01
45%	49.48
40%	52.08
35%	54.94
30%	58.10
25%	61.58
20%	65.51
15%	70.12
10%	76.06
5%	84.77
0%	135.76

End of Forecast

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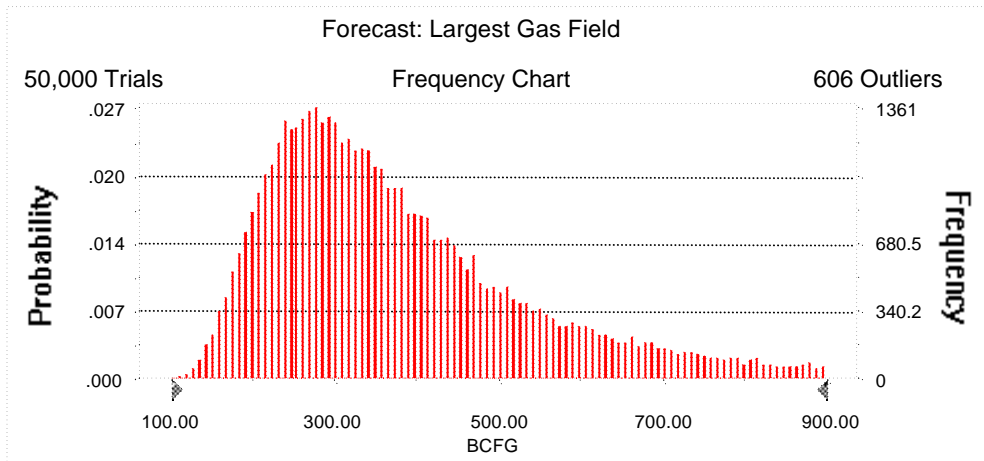
Forecast: Largest Gas Field

Summary:

Display range is from 100.00 to 900.00 BCFG
 Entire range is from 110.80 to 999.93 BCFG
 After 50,000 trials, the standard error of the mean is 0.74

Statistics:

	<u>Value</u>
Trials	50000
Mean	382.13
Median	341.79
Mode	---
Standard Deviation	165.63
Variance	27,432.69
Skewness	1.21
Kurtosis	4.33
Coefficient of Variability	0.43
Range Minimum	110.80
Range Maximum	999.93
Range Width	889.13
Mean Standard Error	0.74



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Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	110.80
95%	188.00
90%	211.86
85%	230.58
80%	246.70
75%	262.35
70%	277.36
65%	292.43
60%	307.83
55%	324.57
50%	341.79
45%	360.00
40%	380.47
35%	403.52
30%	429.32
25%	458.74
20%	497.61
15%	547.25
10%	617.18
5%	728.30
0%	999.93

End of Forecast

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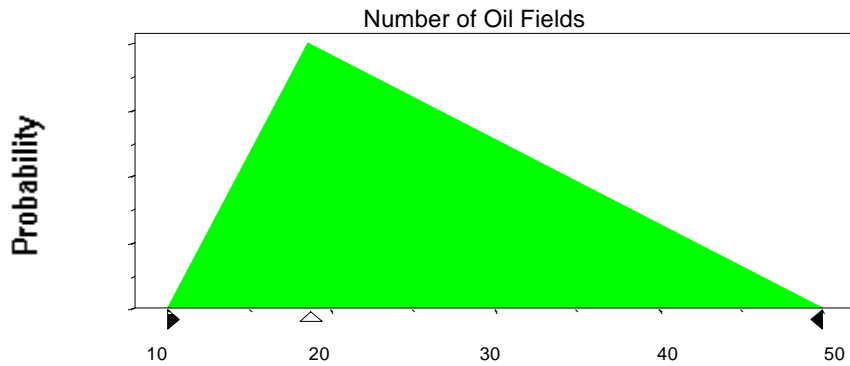
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	10
Likeliest	19
Maximum	50

Selected range is from 10 to 50
Mean value in simulation was 26



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	14.40
Standard Deviation	14.92

Shifted parameters

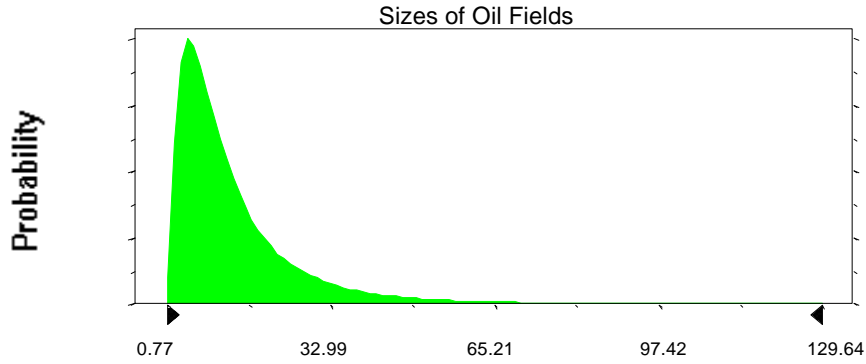
24.4
14.92

Selected range is from 0.00 to 140.00
Mean value in simulation was 14.25

10.00 to 150.00
24.25

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Assumption: Sizes of Oil Fields (cont'd)



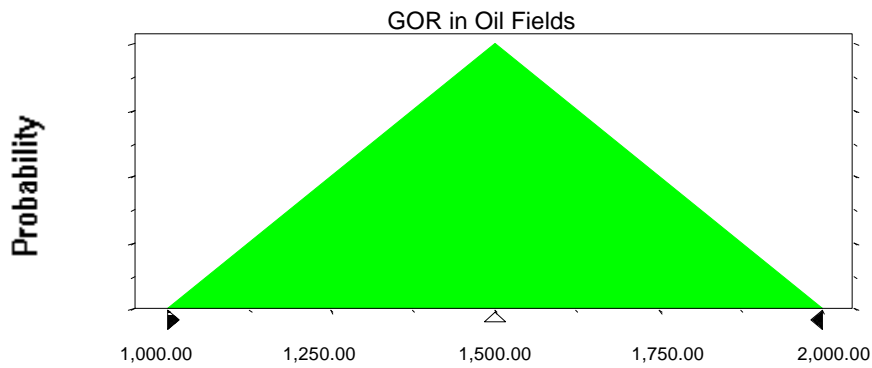
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	1,000.00
Likeliest	1,500.00
Maximum	2,000.00

Selected range is from 1,000.00 to 2,000.00

Mean value in simulation was 1,500.14



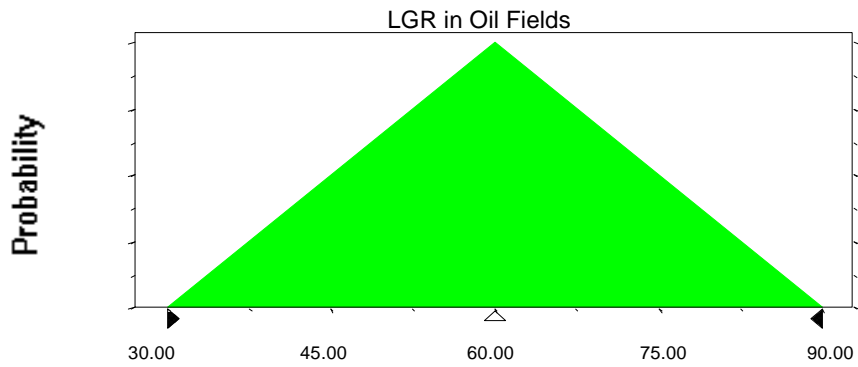
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Assumption: LGR in Oil Fields

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 59.92



Assumption: Number of Gas Fields

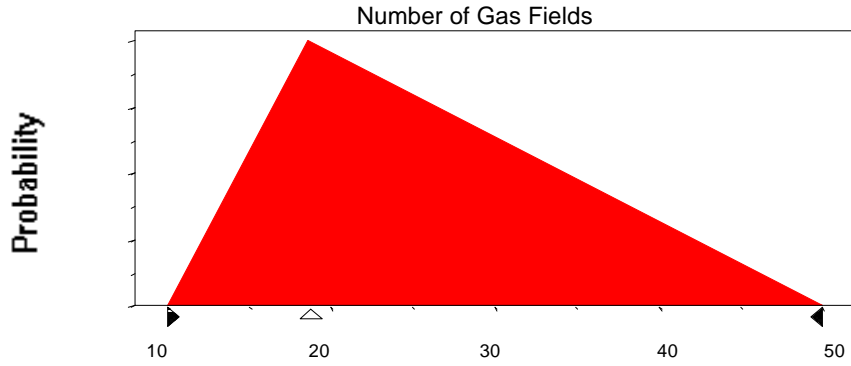
Triangular distribution with parameters:

Minimum	10
Likeliest	19
Maximum	50

Selected range is from 10 to 50
Mean value in simulation was 26

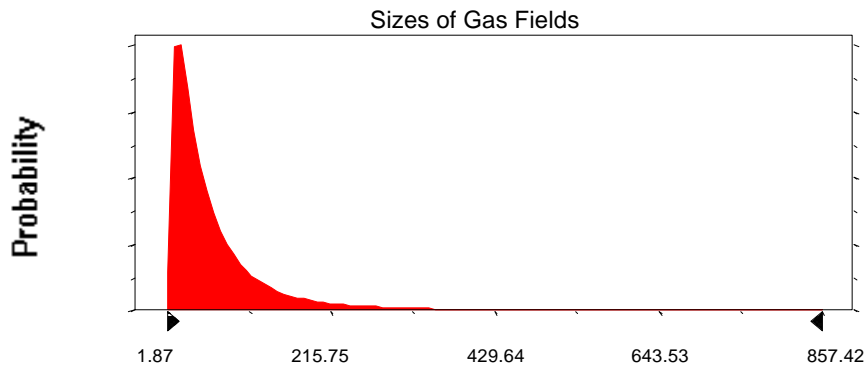
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Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	67.41	127.41
Standard Deviation	91.44	91.44
Selected range is from 0.00 to 940.00		60.00 to 1,000.00
Mean value in simulation was 65.84		125.84



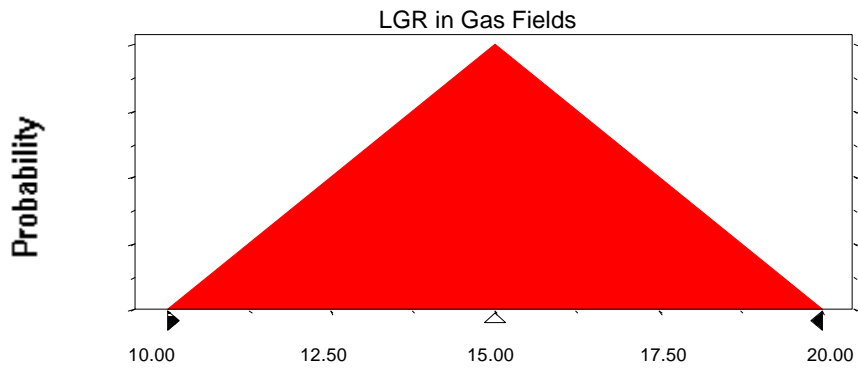
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Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	10.00
Likeliest	15.00
Maximum	20.00

Selected range is from 10.00 to 20.00
Mean value in simulation was 15.01



End of Assumptions

Simulation started on 1/20/99 at 9:57:04
Simulation stopped on 1/20/99 at 10:24:24