

Baikal-Patom Foldbelt Riphean-Craton Margin Vendian, Assessment Unit 12100101
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	376	1,422	3,487	1,611	1,761	6,911	18,244	8,052	99	402	1,139	482	94	335	1,205	444
Gas Fields	30						14,961	37,808	61,776	37,987	641	1,649	2,989	1,711	1,733	4,392	10,160	4,954
Total		1.00	376	1,422	3,487	1,611	16,722	44,719	80,020	46,039	740	2,051	4,128	2,194				

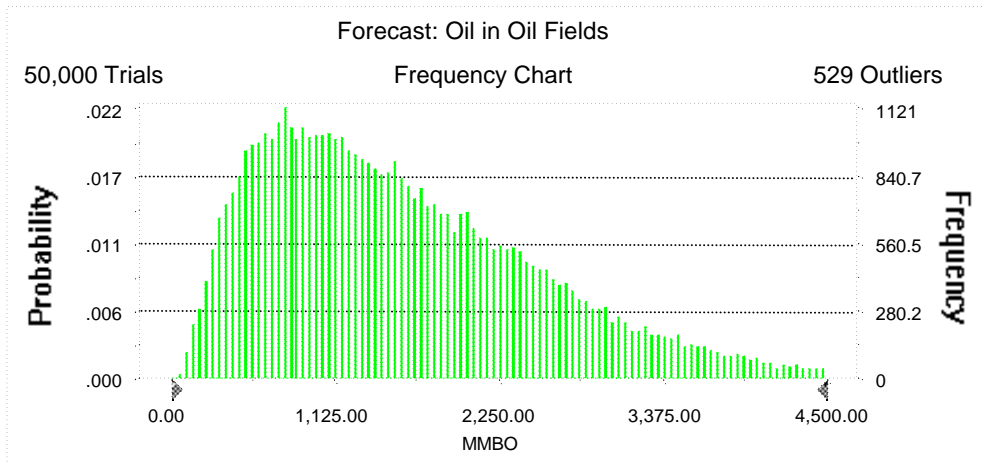
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Monte Carlo Results

Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 4,500.00 MMBO
Entire range is from 50.29 to 8,037.20 MMBO
After 50,000 trials, the standard error of the mean is 4.40

Statistics:	<u>Value</u>
Trials	50000
Mean	1,610.91
Median	1,421.59
Mode	---
Standard Deviation	984.13
Variance	968,519.28
Skewness	0.99
Kurtosis	4.10
Coefficient of Variability	0.61
Range Minimum	50.29
Range Maximum	8,037.20
Range Width	7,986.91
Mean Standard Error	4.40



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	50.29
95%	375.96
90%	516.85
85%	630.92
80%	740.79
75%	847.08
70%	956.75
65%	1,067.94
60%	1,179.29
55%	1,297.64
50%	1,421.59
45%	1,551.61
40%	1,690.40
35%	1,842.11
30%	2,012.17
25%	2,187.69
20%	2,394.74
15%	2,634.41
10%	2,957.58
5%	3,487.49
0%	8,037.20

End of Forecast

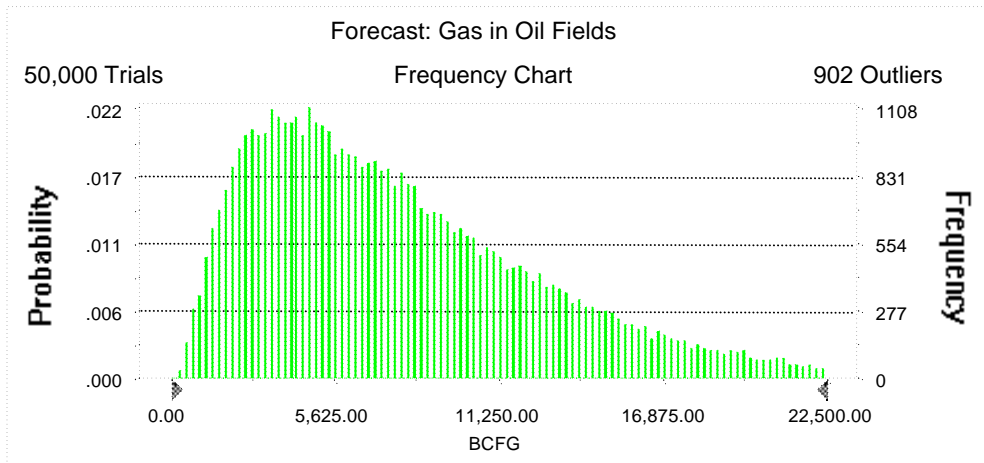
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Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 22,500.00 BCFG
Entire range is from 231.33 to 50,798.97 BCFG
After 50,000 trials, the standard error of the mean is 23.66

Statistics:	<u>Value</u>
Trials	50000
Mean	8,051.88
Median	6,911.11
Mode	---
Standard Deviation	5,291.58
Variance	28,000,775.69
Skewness	1.23
Kurtosis	5.03
Coefficient of Variability	0.66
Range Minimum	231.33
Range Maximum	50,798.97
Range Width	50,567.64
Mean Standard Error	23.66



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	231.33
95%	1,760.79
90%	2,423.90
85%	2,987.25
80%	3,530.35
75%	4,058.60
70%	4,591.70
65%	5,124.45
60%	5,670.61
55%	6,283.69
50%	6,911.11
45%	7,556.89
40%	8,240.35
35%	9,020.93
30%	9,880.40
25%	10,856.57
20%	12,024.66
15%	13,392.84
10%	15,227.92
5%	18,244.13
0%	50,798.97

End of Forecast

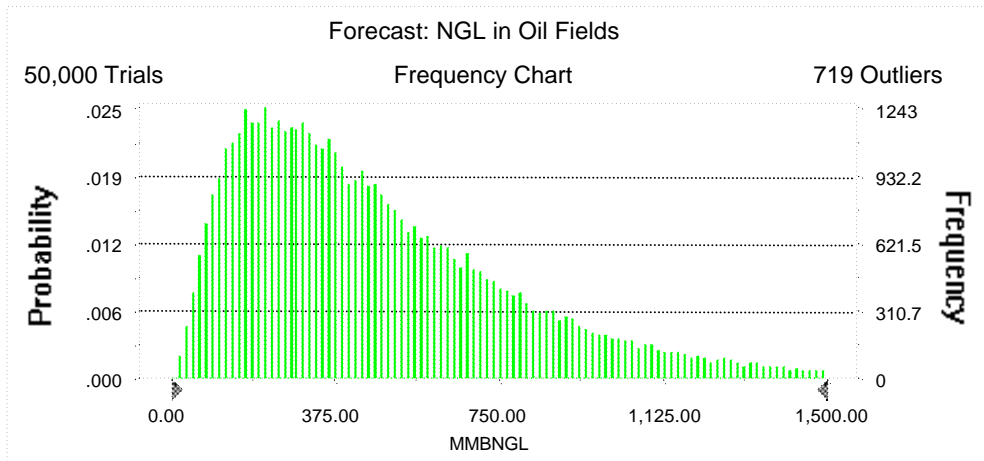
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Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 1,500.00 MMBNGL
 Entire range is from 9.76 to 3,458.52 MMBNGL
 After 50,000 trials, the standard error of the mean is 1.51

Statistics:	<u>Value</u>
Trials	50000
Mean	482.37
Median	401.66
Mode	---
Standard Deviation	337.81
Variance	114,117.73
Skewness	1.47
Kurtosis	6.20
Coefficient of Variability	0.70
Range Minimum	9.76
Range Maximum	3,458.52
Range Width	3,448.76
Mean Standard Error	1.51



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Monte Carlo Results

Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	9.76
95%	98.94
90%	137.02
85%	170.18
80%	201.36
75%	232.88
70%	265.01
65%	297.73
60%	330.30
55%	365.06
50%	401.66
45%	442.53
40%	483.89
35%	531.55
30%	585.97
25%	646.85
20%	717.81
15%	806.84
10%	931.62
5%	1,139.47
0%	3,458.52

End of Forecast

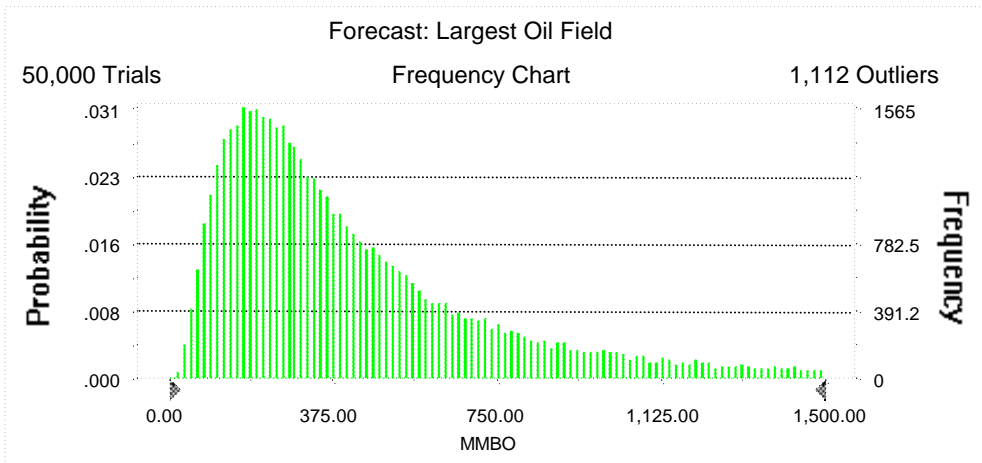
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Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 1,500.00 MMBO
 Entire range is from 12.92 to 1,999.29 MMBO
 After 50,000 trials, the standard error of the mean is 1.57

Statistics:	<u>Value</u>
Trials	50000
Mean	443.63
Median	335.42
Mode	---
Standard Deviation	351.76
Variance	123,737.32
Skewness	1.73
Kurtosis	6.21
Coefficient of Variability	0.79
Range Minimum	12.92
Range Maximum	1,999.29
Range Width	1,986.37
Mean Standard Error	1.57



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	12.92
95%	94.49
90%	125.57
85%	151.75
80%	176.56
75%	200.74
70%	225.22
65%	250.64
60%	276.41
55%	304.57
50%	335.42
45%	369.90
40%	408.64
35%	453.28
30%	505.57
25%	566.73
20%	647.76
15%	756.26
10%	915.80
5%	1,205.36
0%	1,999.29

End of Forecast

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Monte Carlo Results

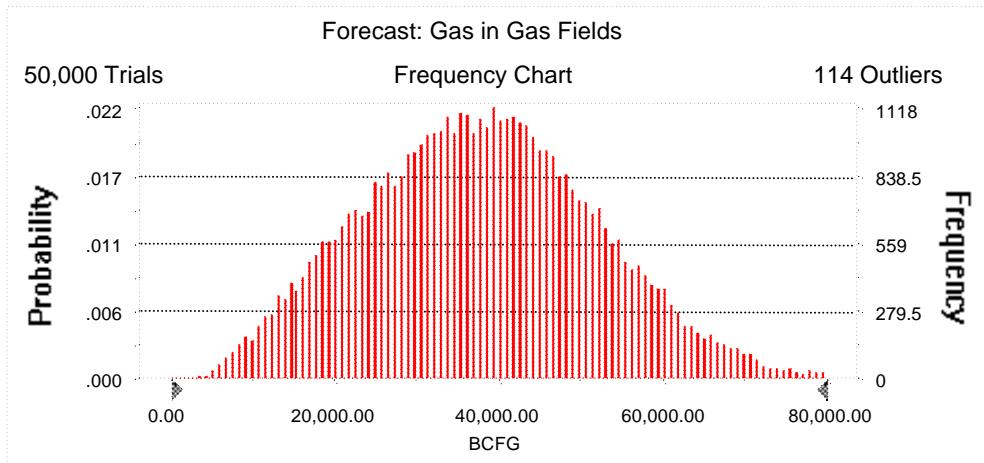
Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 80,000.00 BCFG
 Entire range is from 3,178.73 to 99,079.92 BCFG
 After 50,000 trials, the standard error of the mean is 63.56

Statistics:

	<u>Value</u>
Trials	50000
Mean	37,986.93
Median	37,807.95
Mode	---
Standard Deviation	14,212.52
Variance	201,995,642.65
Skewness	0.19
Kurtosis	2.77
Coefficient of Variability	0.37
Range Minimum	3,178.73
Range Maximum	99,079.92
Range Width	95,901.19
Mean Standard Error	63.56



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Monte Carlo Results

Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	3,178.73
95%	14,961.01
90%	19,277.34
85%	22,504.08
80%	25,341.56
75%	27,775.89
70%	30,027.74
65%	32,074.77
60%	34,013.72
55%	35,917.87
50%	37,807.95
45%	39,663.12
40%	41,519.76
35%	43,374.32
30%	45,396.46
25%	47,592.01
20%	50,063.07
15%	52,924.78
10%	56,608.37
5%	61,776.18
0%	99,079.92

End of Forecast

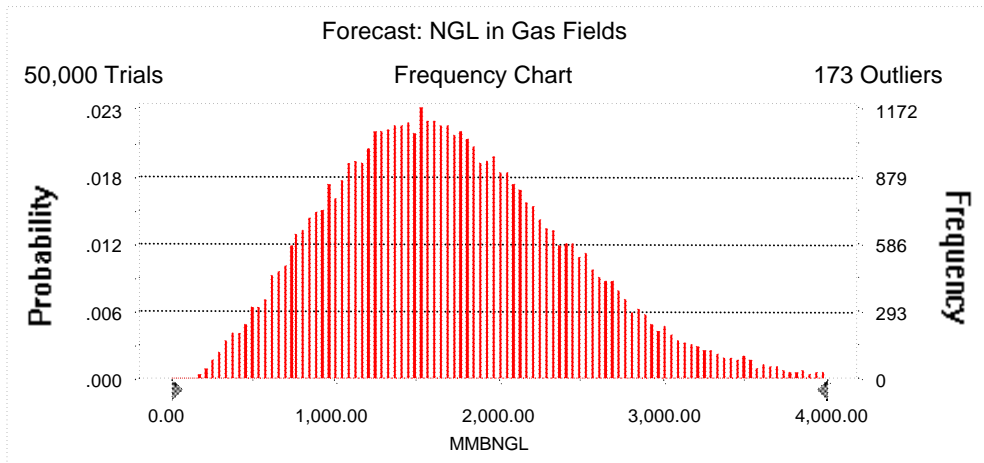
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Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 4,000.00 MMBNGL
Entire range is from 134.45 to 5,467.10 MMBNGL
After 50,000 trials, the standard error of the mean is 3.22

Statistics:	<u>Value</u>
Trials	50000
Mean	1,711.26
Median	1,648.96
Mode	---
Standard Deviation	719.14
Variance	517,161.14
Skewness	0.52
Kurtosis	3.22
Coefficient of Variability	0.42
Range Minimum	134.45
Range Maximum	5,467.10
Range Width	5,332.66
Mean Standard Error	3.22



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	134.45
95%	640.91
90%	821.88
85%	962.00
80%	1,082.06
75%	1,189.30
70%	1,287.10
65%	1,379.56
60%	1,468.89
55%	1,559.16
50%	1,648.96
45%	1,740.06
40%	1,835.28
35%	1,937.13
30%	2,045.89
25%	2,164.04
20%	2,301.44
15%	2,467.72
10%	2,670.55
5%	2,988.66
0%	5,467.10

End of Forecast

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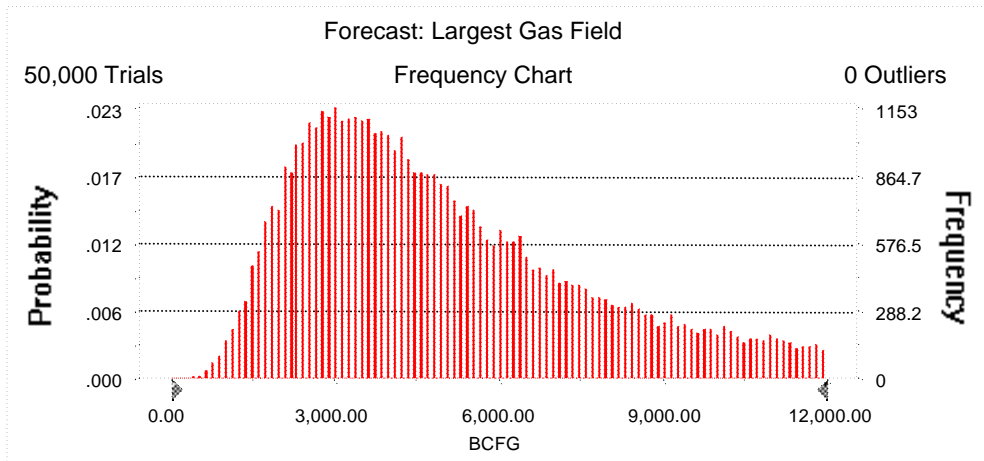
Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 12,000.00 BCFG
 Entire range is from 366.01 to 11,998.98 BCFG
 After 50,000 trials, the standard error of the mean is 11.35

Statistics:

	<u>Value</u>
Trials	50000
Mean	4,953.93
Median	4,392.15
Mode	---
Standard Deviation	2,538.87
Variance	6,445,861.30
Skewness	0.78
Kurtosis	2.89
Coefficient of Variability	0.51
Range Minimum	366.01
Range Maximum	11,998.98
Range Width	11,632.97
Mean Standard Error	11.35



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Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	366.01
95%	1,732.70
90%	2,124.91
85%	2,441.55
80%	2,723.35
75%	2,993.22
70%	3,258.10
65%	3,533.17
60%	3,801.83
55%	4,092.34
50%	4,392.15
45%	4,732.53
40%	5,088.76
35%	5,488.46
30%	5,954.31
25%	6,457.16
20%	7,082.02
15%	7,851.52
10%	8,820.35
5%	10,160.50
0%	11,998.98

End of Forecast

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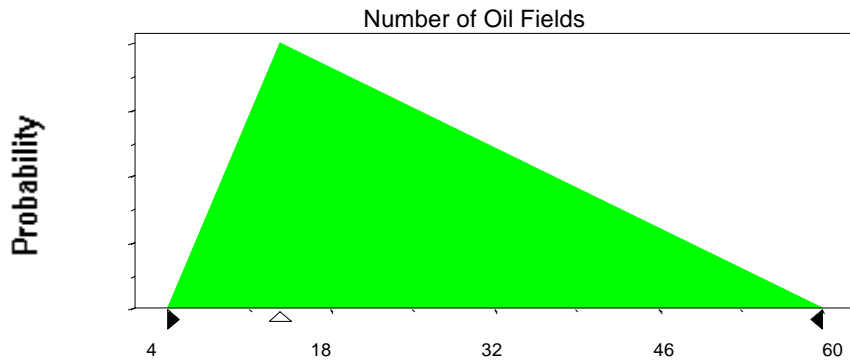
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	4
Likeliest	14
Maximum	60

Selected range is from 4 to 60
Mean value in simulation was 26



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	60.65
Standard Deviation	173.62

Shifted parameters

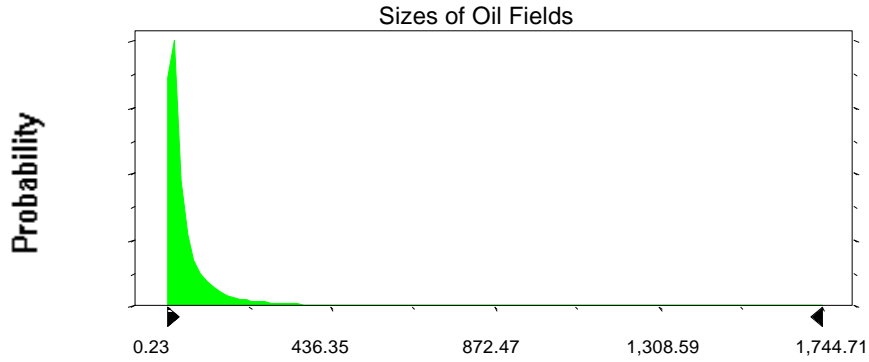
65.65
173.62

Selected range is from 0.00 to 1,995.00
Mean value in simulation was 55.90

5.00 to 2,000.00
60.9

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Assumption: Sizes of Oil Fields (cont'd)



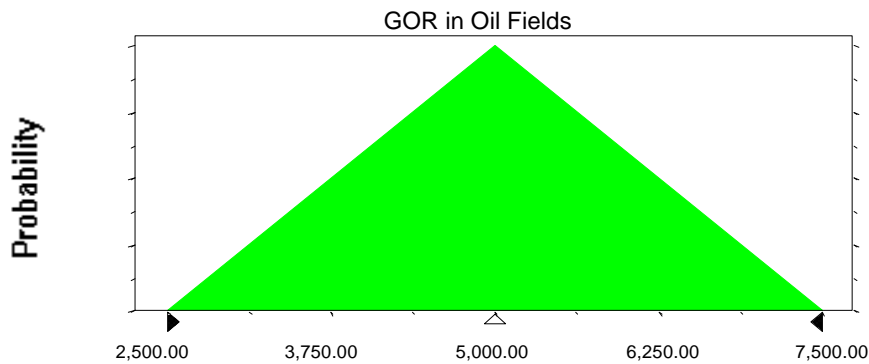
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	2,500.00
Likeliest	5,000.00
Maximum	7,500.00

Selected range is from 2,500.00 to 7,500.00

Mean value in simulation was 4,995.11



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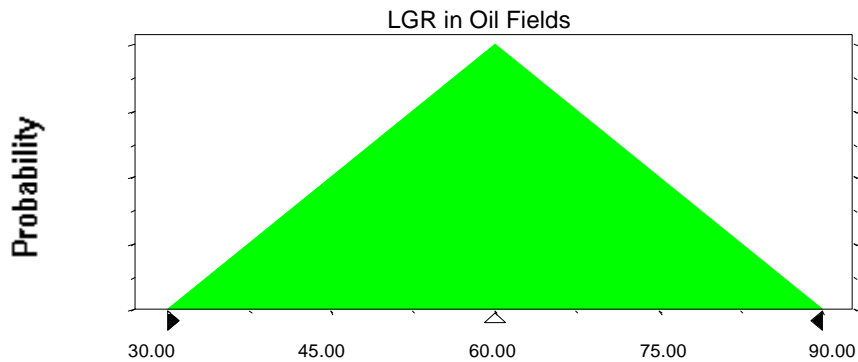
Assumption: LGR in Oil Fields

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 59.96



Assumption: Number of Gas Fields

Triangular distribution with parameters:

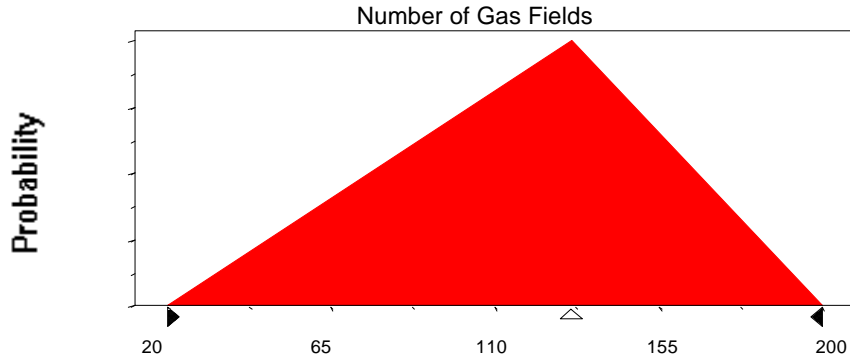
Minimum	20
Likeliest	131
Maximum	200

Selected range is from 20 to 200

Mean value in simulation was 117

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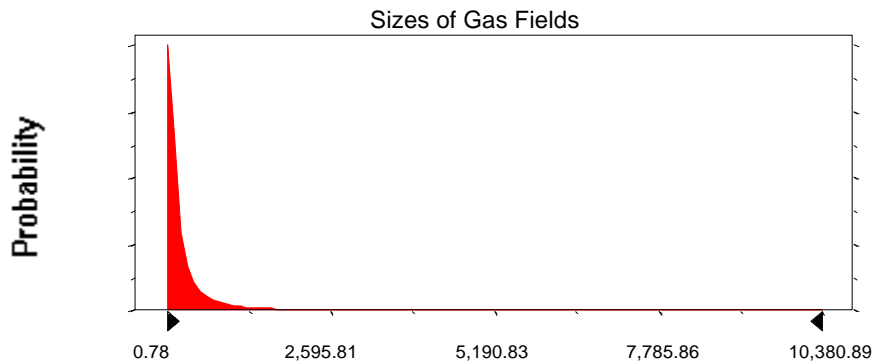
Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:	Shifted parameters
Mean	314.88
Standard Deviation	1,055.68

Selected range is from 0.00 to 11,970.00	30.00 to 12,000.00
Mean value in simulation was 297.97	327.97



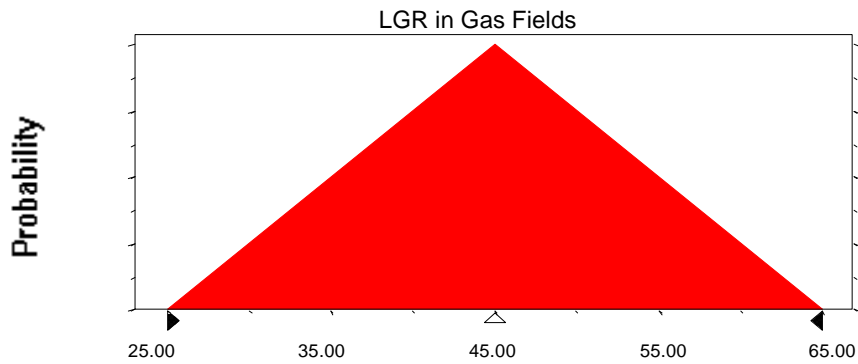
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Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	25.00
Likeliest	45.00
Maximum	65.00

Selected range is from 25.00 to 65.00
Mean value in simulation was 45.07



End of Assumptions

Simulation started on 4/26/99 at 14:01:07
Simulation stopped on 4/26/99 at 15:03:33