

South Kara Sea Offshore, Assessment Unit 11740302
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	20	1.00	485	3,031	8,173	3,510	2,552	16,235	46,717	19,318	144	946	2,913	1,160	164	687	2,390	891
Gas Fields	120						104,321	350,275	778,939	384,557	2,417	8,503	20,510	9,579	19,863	70,032	223,361	88,058
Total		1.00	485	3,031	8,173	3,510	106,872	366,510	825,657	403,875	2,561	9,450	23,423	10,739				

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Forecast: Oil in Oil Fields

Summary:

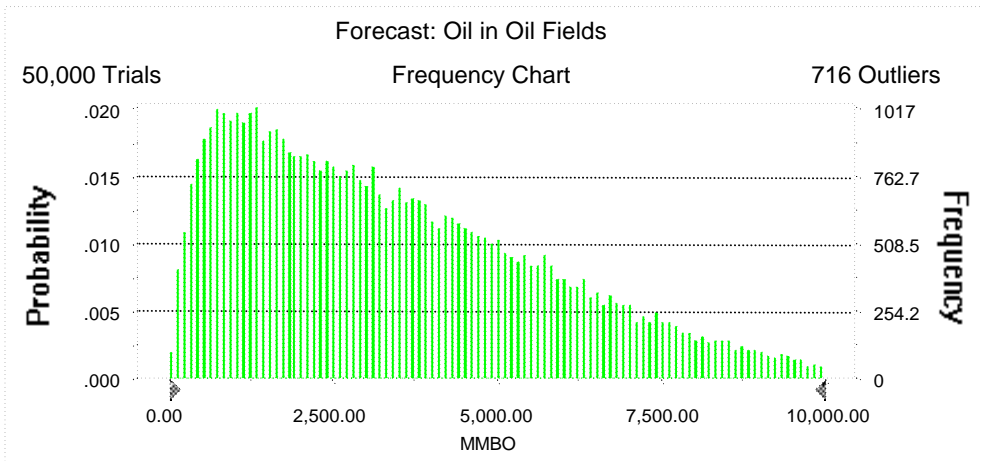
Display range is from 0.00 to 10,000.00 MMBO

Entire range is from 22.41 to 16,525.72 MMBO

After 50,000 trials, the standard error of the mean is 10.96

Statistics:

	<u>Value</u>
Trials	50000
Mean	3,509.79
Median	3,030.71
Mode	---
Standard Deviation	2,451.39
Variance	6,009,319.07
Skewness	0.89
Kurtosis	3.51
Coefficient of Variability	0.70
Range Minimum	22.41
Range Maximum	16,525.72
Range Width	16,503.31
Mean Standard Error	10.96



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	22.41
95%	485.00
90%	756.48
85%	1,004.65
80%	1,256.92
75%	1,518.92
70%	1,788.14
65%	2,083.42
60%	2,391.78
55%	2,704.00
50%	3,030.71
45%	3,378.47
40%	3,743.09
35%	4,136.69
30%	4,557.23
25%	5,024.83
20%	5,561.28
15%	6,182.78
10%	6,966.72
5%	8,172.72
0%	16,525.72

End of Forecast

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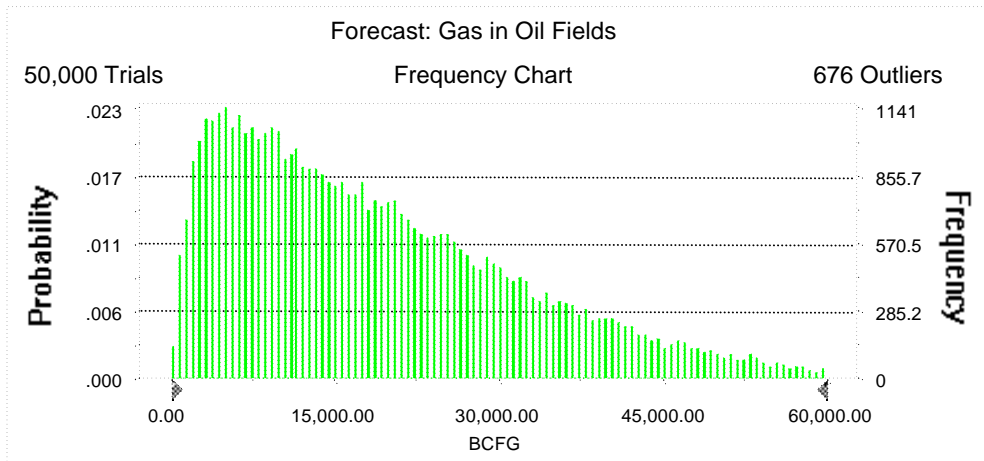
Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 60,000.00 BCFG
Entire range is from 121.18 to 123,208.46 BCFG
After 50,000 trials, the standard error of the mean is 63.49

Statistics:

	<u>Value</u>
Trials	50000
Mean	19,317.68
Median	16,234.79
Mode	---
Standard Deviation	14,196.40
Variance	201,537,767.95
Skewness	1.11
Kurtosis	4.34
Coefficient of Variability	0.73
Range Minimum	121.18
Range Maximum	123,208.46
Range Width	123,087.28
Mean Standard Error	63.49



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	121.18
95%	2,551.60
90%	3,954.46
85%	5,305.93
80%	6,667.79
75%	8,118.36
70%	9,548.35
65%	11,073.92
60%	12,697.29
55%	14,403.83
50%	16,234.79
45%	18,120.43
40%	20,166.81
35%	22,277.33
30%	24,745.86
25%	27,348.82
20%	30,418.56
15%	34,206.74
10%	39,122.43
5%	46,717.48
0%	123,208.46

End of Forecast

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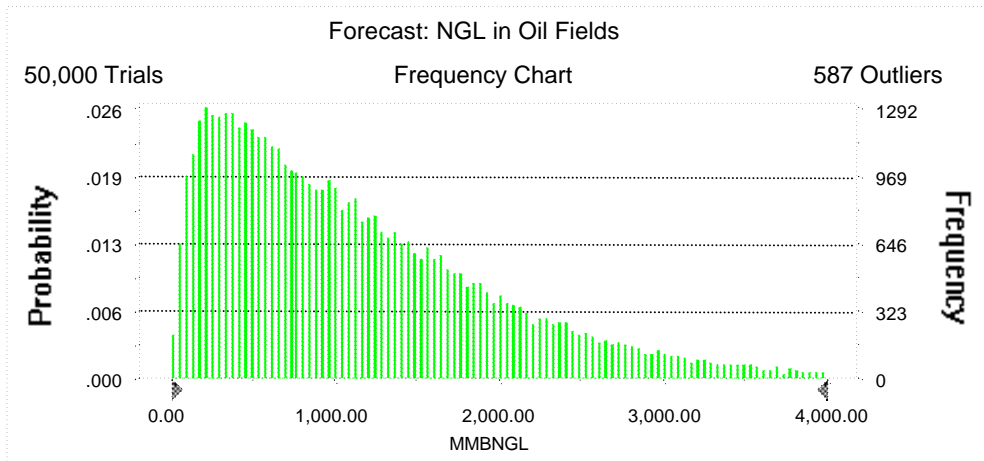
Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 4,000.00 MMBNGL
Entire range is from 5.46 to 8,001.45 MMBNGL
After 50,000 trials, the standard error of the mean is 4.04

Statistics:

	<u>Value</u>
Trials	50000
Mean	1,159.52
Median	946.24
Mode	---
Standard Deviation	903.68
Variance	816,633.30
Skewness	1.37
Kurtosis	5.56
Coefficient of Variability	0.78
Range Minimum	5.46
Range Maximum	8,001.45
Range Width	7,995.99
Mean Standard Error	4.04



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	5.46
95%	144.46
90%	227.86
85%	305.89
80%	385.30
75%	467.47
70%	551.29
65%	639.65
60%	734.58
55%	835.69
50%	946.24
45%	1,056.66
40%	1,177.71
35%	1,310.62
30%	1,458.73
25%	1,625.34
20%	1,815.84
15%	2,056.24
10%	2,385.89
5%	2,913.22
0%	8,001.45

End of Forecast

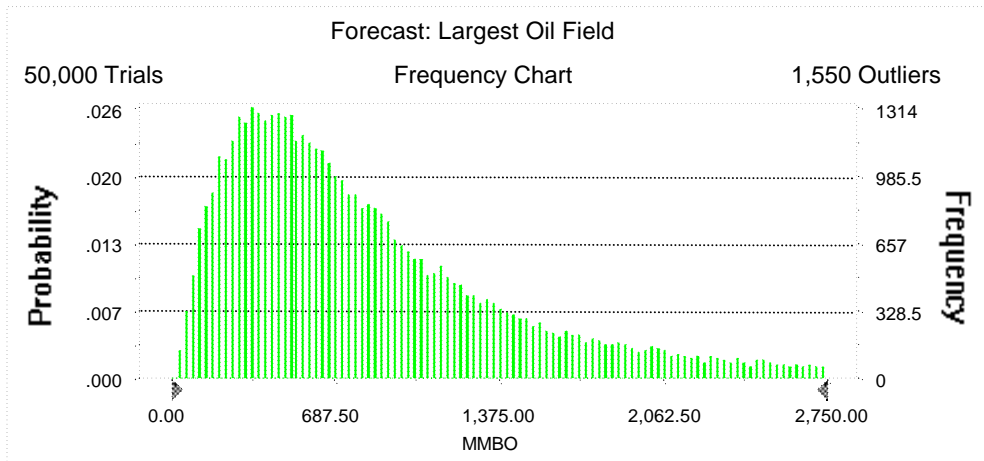
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Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 2,750.00 MMBO
Entire range is from 22.41 to 3,997.30 MMBO
After 50,000 trials, the standard error of the mean is 3.15

Statistics:	Value
Trials	50000
Mean	890.61
Median	687.08
Mode	---
Standard Deviation	703.47
Variance	494,876.05
Skewness	1.64
Kurtosis	5.95
Coefficient of Variability	0.79
Range Minimum	22.41
Range Maximum	3,997.30
Range Width	3,974.89
Mean Standard Error	3.15



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	22.41
95%	163.67
90%	231.89
85%	291.60
80%	345.10
75%	399.16
70%	452.32
65%	506.53
60%	563.86
55%	623.42
50%	687.08
45%	759.28
40%	838.88
35%	923.26
30%	1,028.89
25%	1,155.56
20%	1,313.91
15%	1,521.10
10%	1,840.66
5%	2,390.28
0%	3,997.30

End of Forecast

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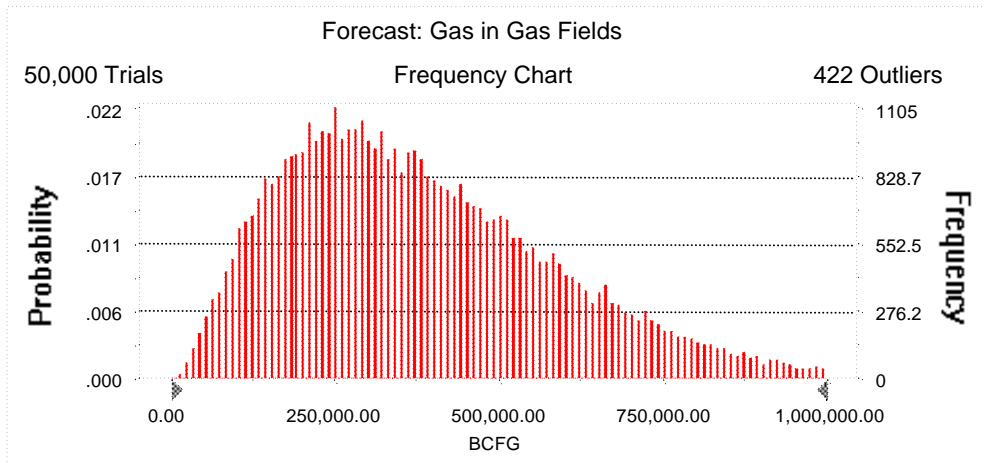
Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 1,000,000.00 BCFG
Entire range is from 8,499.43 to 1,614,896.49 BCFG
After 50,000 trials, the standard error of the mean is 939.73

Statistics:

	<u>Value</u>
Trials	50000
Mean	384,557.34
Median	350,275.28
Mode	---
Standard Deviation	210,129.99
Variance	44,154,611,544.10
Skewness	0.81
Kurtosis	3.56
Coefficient of Variability	0.55
Range Minimum	8,499.43
Range Maximum	1,614,896.49
Range Width	1,606,397.06
Mean Standard Error	939.73



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Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	8,499.43
95%	104,320.52
90%	141,113.23
85%	171,676.96
80%	199,304.17
75%	224,821.55
70%	249,669.81
65%	273,539.33
60%	298,085.53
55%	323,328.81
50%	350,275.28
45%	378,169.62
40%	407,159.49
35%	439,858.82
30%	473,630.52
25%	511,528.94
20%	555,295.98
15%	607,160.91
10%	675,787.11
5%	778,939.46
0%	1,614,896.49

End of Forecast

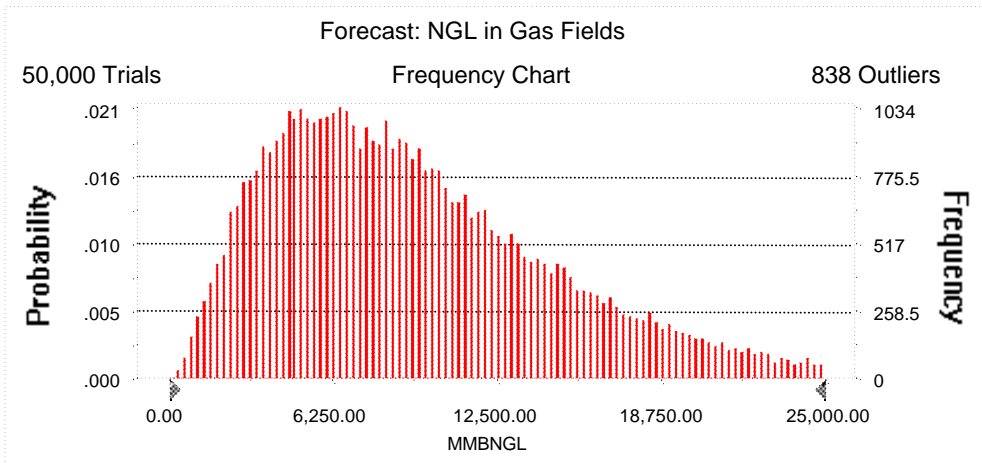
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Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 25,000.00 MMBNGL
 Entire range is from 126.09 to 48,049.63 MMBNGL
 After 50,000 trials, the standard error of the mean is 25.51

Statistics:	<u>Value</u>
Trials	50000
Mean	9,579.36
Median	8,503.31
Mode	---
Standard Deviation	5,704.81
Variance	32,544,822.02
Skewness	1.08
Kurtosis	4.49
Coefficient of Variability	0.60
Range Minimum	126.09
Range Maximum	48,049.63
Range Width	47,923.54
Mean Standard Error	25.51



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	126.09
95%	2,416.66
90%	3,280.00
85%	4,013.07
80%	4,676.94
75%	5,284.75
70%	5,927.83
65%	6,539.02
60%	7,161.50
55%	7,829.87
50%	8,503.31
45%	9,202.84
40%	9,933.90
35%	10,737.35
30%	11,660.82
25%	12,694.10
20%	13,933.38
15%	15,388.96
10%	17,371.86
5%	20,509.60
0%	48,049.63

End of Forecast

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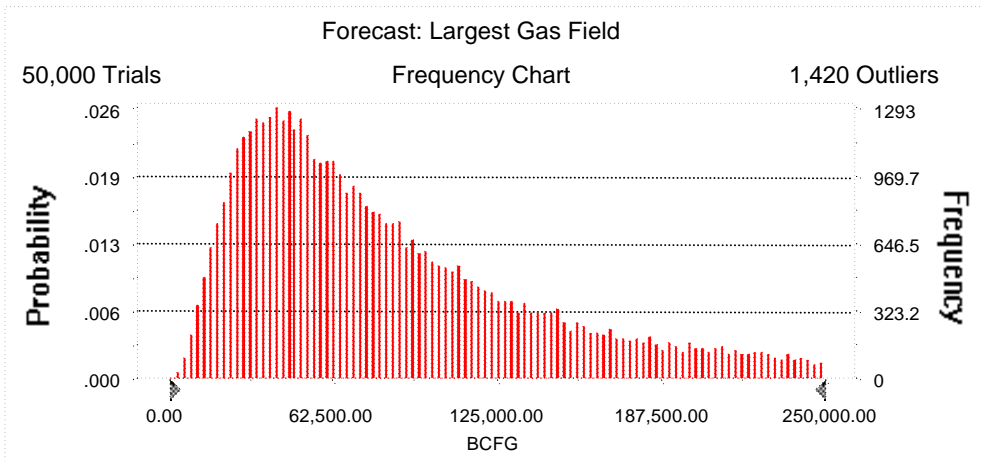
Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 250,000.00 BCFG
 Entire range is from 1,450.93 to 299,986.71 BCFG
 After 50,000 trials, the standard error of the mean is 278.23

Statistics:

	<u>Value</u>
Trials	50000
Mean	88,057.76
Median	70,032.22
Mode	---
Standard Deviation	62,214.45
Variance	3,870,637,698.28
Skewness	1.23
Kurtosis	4.03
Coefficient of Variability	0.71
Range Minimum	1,450.93
Range Maximum	299,986.71
Range Width	298,535.78
Mean Standard Error	278.23



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Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	1,450.93
95%	19,862.67
90%	26,365.70
85%	31,840.17
80%	36,871.96
75%	41,857.34
70%	46,834.66
65%	51,913.78
60%	57,499.87
55%	63,416.19
50%	70,032.22
45%	77,088.05
40%	85,166.06
35%	94,133.24
30%	104,807.04
25%	117,143.30
20%	132,805.37
15%	152,497.48
10%	181,031.04
5%	223,360.93
0%	299,986.71

End of Forecast

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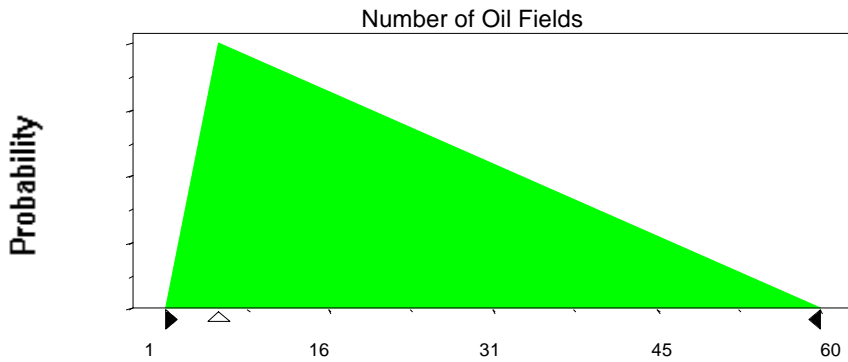
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	1
Likeliest	6
Maximum	60

Selected range is from 1 to 60
Mean value in simulation was 22



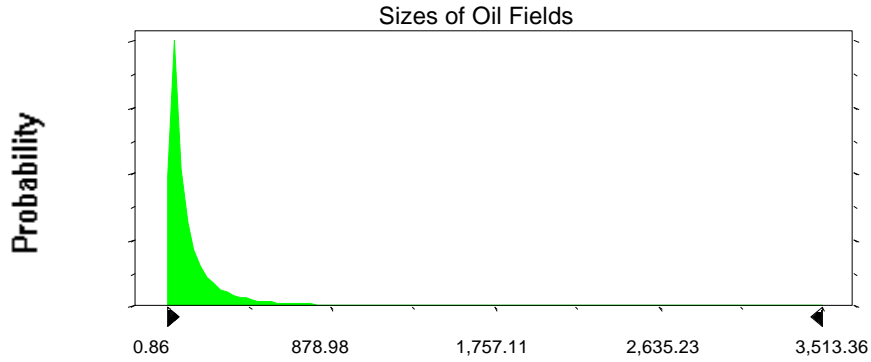
Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	143.65	163.65
Standard Deviation	346.59	346.59

Selected range is from 0.00 to 3,980.00 20.00 to 4,000.00
Mean value in simulation was 137.29 157.29

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Assumption: Sizes of Oil Fields (cont'd)



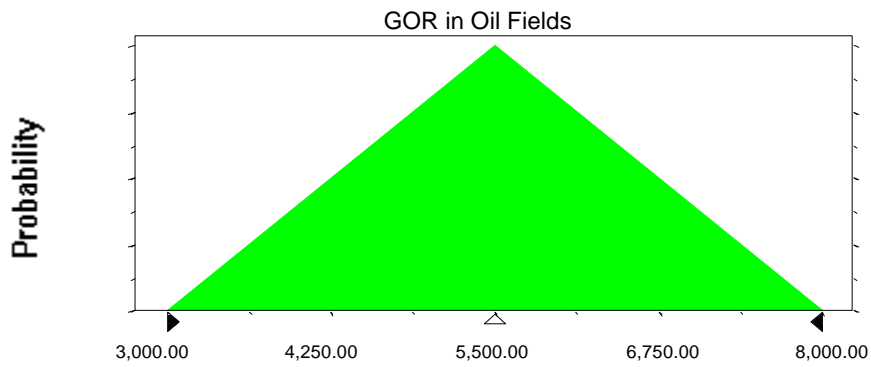
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	3,000.00
Likeliest	5,500.00
Maximum	8,000.00

Selected range is from 3,000.00 to 8,000.00

Mean value in simulation was 5,503.86



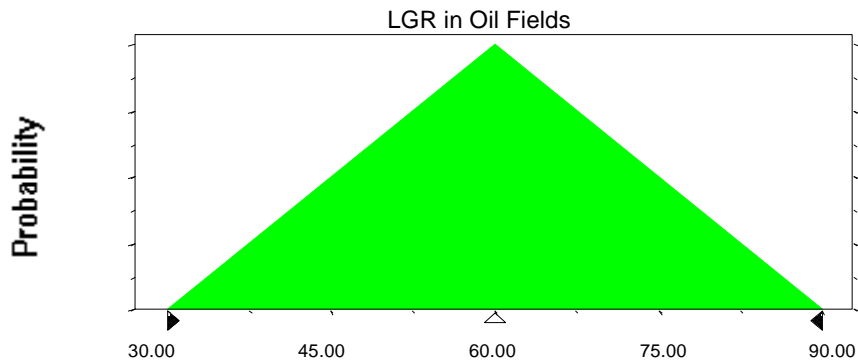
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Assumption: LGR in Oil Fields

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 60.02



Assumption: Number of Gas Fields

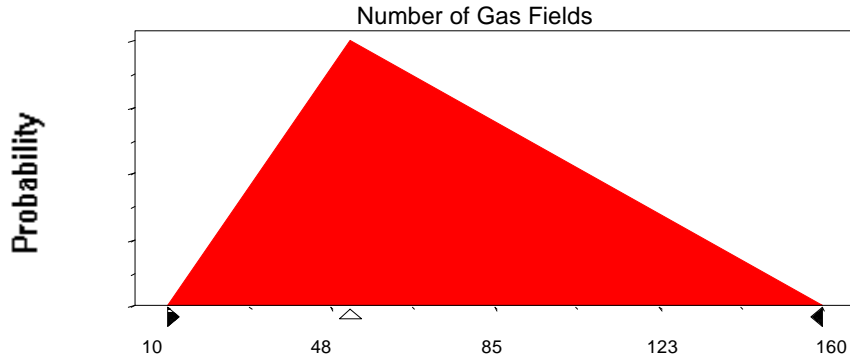
Triangular distribution with parameters:

Minimum	10
Likeliest	52
Maximum	160

Selected range is from 10 to 160
Mean value in simulation was 74

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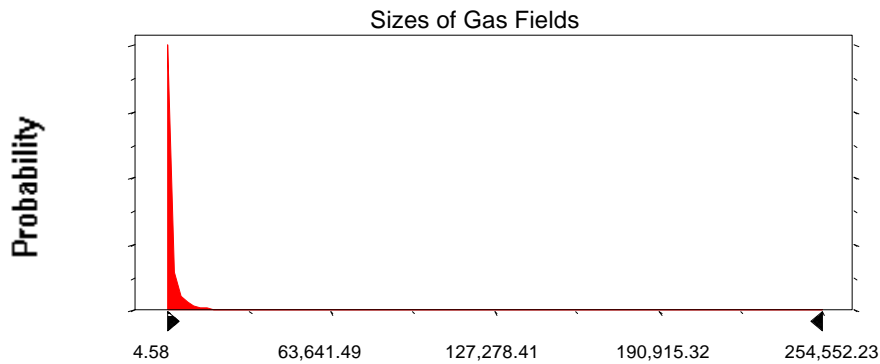
Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	5,667.26	5,787.26
Standard Deviation	29,193.72	29,193.72

Selected range is from 0.00 to 299,880.00 120.00 to 300,000.00
Mean value in simulation was 5,023.97 5,143.97



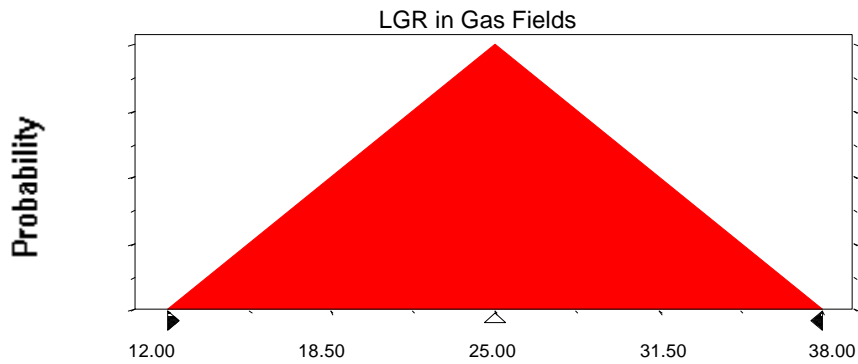
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Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	12.00
Likeliest	25.00
Maximum	38.00

Selected range is from 12.00 to 38.00
Mean value in simulation was 24.94



End of Assumptions

Simulation started on 12/14/99 at 15:57:05
Simulation stopped on 12/14/99 at 16:52:51