

Pematang/Sihapas Siliciclastics, Assessment Unit 38080101
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	1	1.00	377	876	1,494	899	208	509	971	539	5	12	25	13	41	94	206	105
Gas Fields	6						1,538	3,309	6,299	3,539	28	65	135	71	285	651	1,653	763
Total		1.00	377	876	1,494	899	1,746	3,818	7,270	4,078	32	77	160	84				

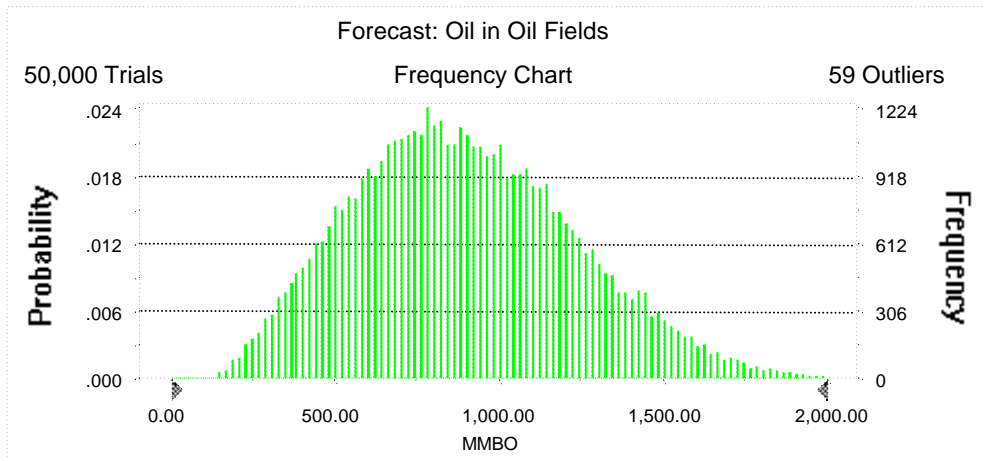
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Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 2,000.00 MMBO
Entire range is from 89.70 to 2,397.68 MMBO
After 50,000 trials, the standard error of the mean is 1.52

Statistics:	Value
Trials	50000
Mean	899.40
Median	876.34
Mode	---
Standard Deviation	339.56
Variance	115,298.10
Skewness	0.35
Kurtosis	2.80
Coefficient of Variability	0.38
Range Minimum	89.70
Range Maximum	2,397.68
Range Width	2,307.98
Mean Standard Error	1.52



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	89.70
95%	376.52
90%	469.74
85%	538.73
80%	597.04
75%	649.80
70%	697.74
65%	743.33
60%	787.72
55%	830.45
50%	876.34
45%	921.43
40%	969.60
35%	1,018.17
30%	1,072.59
25%	1,127.42
20%	1,187.70
15%	1,261.37
10%	1,357.37
5%	1,494.29
0%	2,397.68

End of Forecast

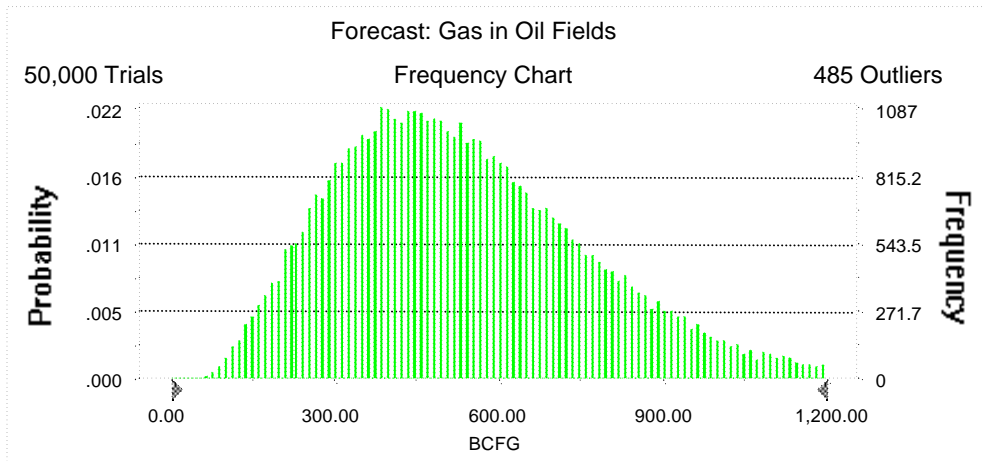
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Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 1,200.00 BCFG
 Entire range is from 53.90 to 1,923.25 BCFG
 After 50,000 trials, the standard error of the mean is 1.05

Statistics:	<u>Value</u>
Trials	50000
Mean	539.00
Median	508.71
Mode	---
Standard Deviation	235.50
Variance	55,462.18
Skewness	0.71
Kurtosis	3.53
Coefficient of Variability	0.44
Range Minimum	53.90
Range Maximum	1,923.25
Range Width	1,869.35
Mean Standard Error	1.05



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	53.90
95%	207.97
90%	260.22
85%	300.16
80%	334.27
75%	365.27
70%	394.70
65%	422.98
60%	451.41
55%	479.56
50%	508.71
45%	538.86
40%	570.04
35%	603.50
30%	639.59
25%	681.51
20%	727.56
15%	785.83
10%	859.54
5%	970.62
0%	1,923.25

End of Forecast

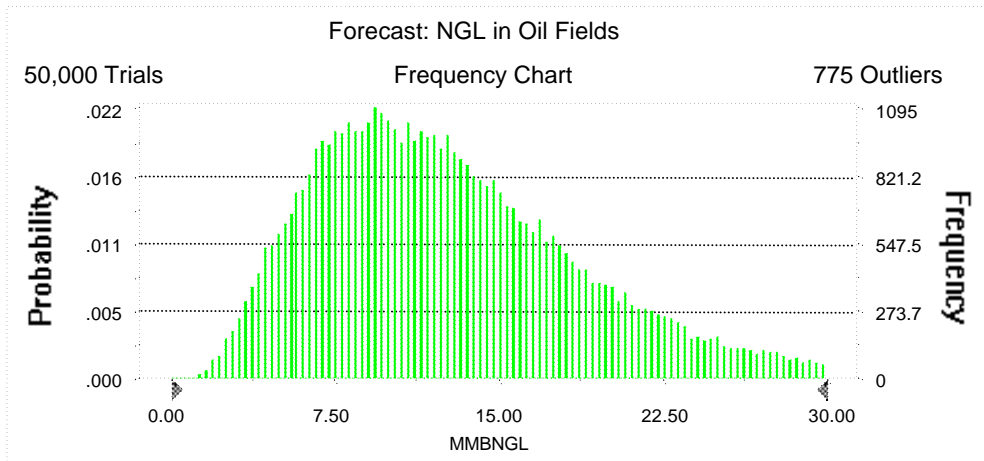
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Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 30.00 MMBNGL
Entire range is from 1.06 to 52.82 MMBNGL
After 50,000 trials, the standard error of the mean is 0.03

Statistics:	<u>Value</u>
Trials	50000
Mean	12.92
Median	11.91
Mode	---
Standard Deviation	6.34
Variance	40.25
Skewness	0.96
Kurtosis	4.23
Coefficient of Variability	0.49
Range Minimum	1.06
Range Maximum	52.82
Range Width	51.76
Mean Standard Error	0.03



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	1.06
95%	4.52
90%	5.74
85%	6.69
80%	7.48
75%	8.22
70%	8.97
65%	9.67
60%	10.39
55%	11.14
50%	11.91
45%	12.68
40%	13.49
35%	14.39
30%	15.36
25%	16.49
20%	17.76
15%	19.34
10%	21.51
5%	24.94
0%	52.82

End of Forecast

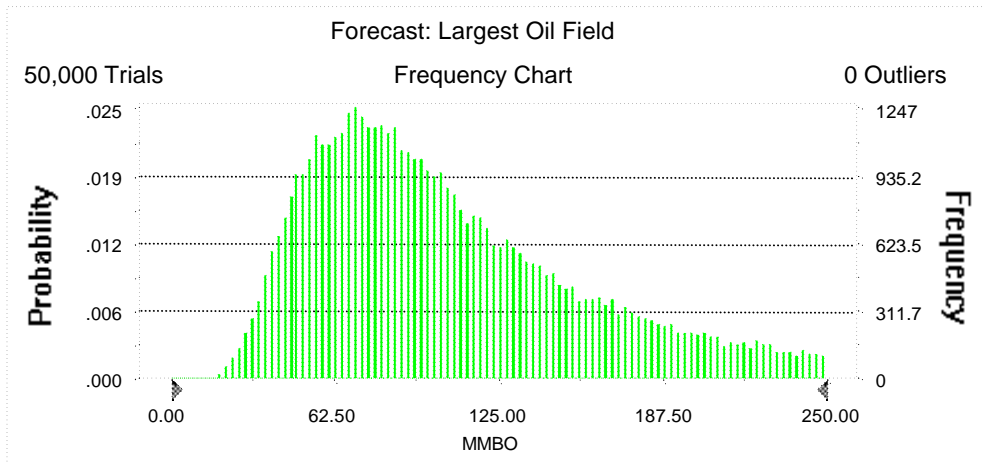
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Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 250.00 MMBO
 Entire range is from 9.01 to 249.99 MMBO
 After 50,000 trials, the standard error of the mean is 0.22

Statistics:	<u>Value</u>
Trials	50000
Mean	104.55
Median	93.81
Mode	---
Standard Deviation	49.99
Variance	2,498.65
Skewness	0.81
Kurtosis	3.02
Coefficient of Variability	0.48
Range Minimum	9.01
Range Maximum	249.99
Range Width	240.98
Mean Standard Error	0.22



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	9.01
95%	40.86
90%	48.85
85%	55.24
80%	60.91
75%	66.55
70%	71.74
65%	76.93
60%	82.31
55%	87.75
50%	93.81
45%	100.09
40%	106.86
35%	114.71
30%	123.38
25%	133.58
20%	145.55
15%	160.98
10%	179.65
5%	206.44
0%	249.99

End of Forecast

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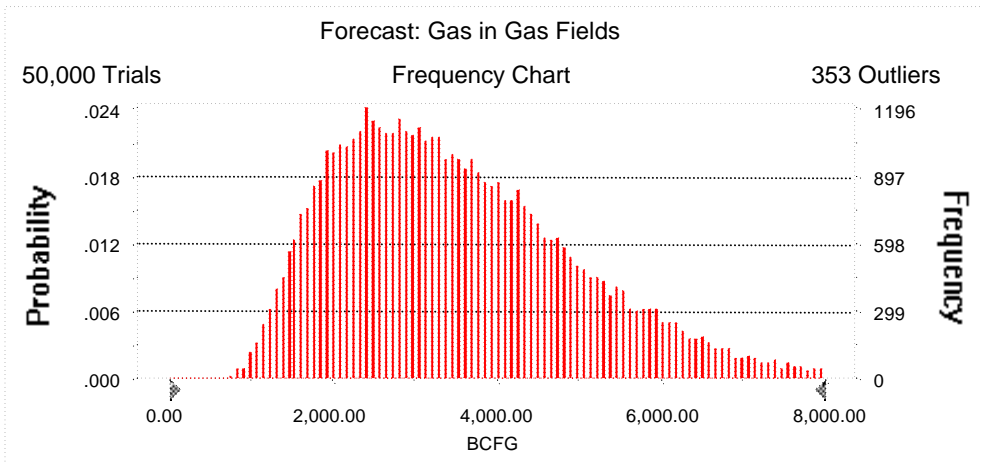
Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 8,000.00 BCFG
 Entire range is from 608.99 to 11,792.77 BCFG
 After 50,000 trials, the standard error of the mean is 6.65

Statistics:

	<u>Value</u>
Trials	50000
Mean	3,539.18
Median	3,309.47
Mode	---
Standard Deviation	1,487.84
Variance	2,213,681.05
Skewness	0.79
Kurtosis	3.56
Coefficient of Variability	0.42
Range Minimum	608.99
Range Maximum	11,792.77
Range Width	11,183.77
Mean Standard Error	6.65



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Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	608.99
95%	1,537.82
90%	1,812.71
85%	2,025.87
80%	2,220.21
75%	2,406.60
70%	2,578.07
65%	2,762.04
60%	2,939.09
55%	3,122.73
50%	3,309.47
45%	3,511.94
40%	3,718.47
35%	3,942.15
30%	4,181.80
25%	4,436.17
20%	4,741.92
15%	5,111.52
10%	5,591.67
5%	6,299.09
0%	11,792.77

End of Forecast

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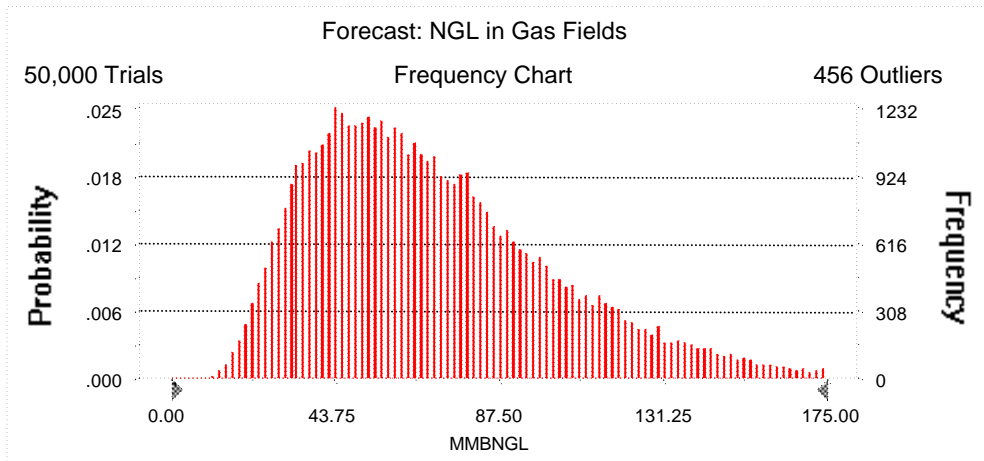
Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 175.00 MMBNGL
 Entire range is from 8.38 to 309.00 MMBNGL
 After 50,000 trials, the standard error of the mean is 0.15

Statistics:

	<u>Value</u>
Trials	50000
Mean	70.84
Median	64.76
Mode	---
Standard Deviation	33.72
Variance	1,136.93
Skewness	1.04
Kurtosis	4.48
Coefficient of Variability	0.48
Range Minimum	8.38
Range Maximum	309.00
Range Width	300.61
Mean Standard Error	0.15



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	8.38
95%	27.75
90%	33.36
85%	37.75
80%	41.95
75%	45.67
70%	49.44
65%	53.08
60%	56.92
55%	60.70
50%	64.76
45%	68.95
40%	73.45
35%	78.23
30%	83.24
25%	89.47
20%	96.61
15%	105.38
10%	116.82
5%	135.06
0%	309.00

End of Forecast

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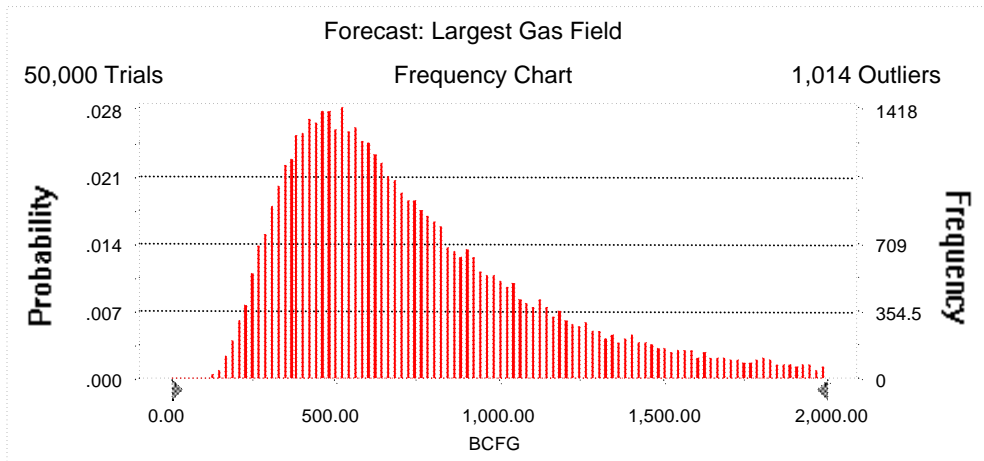
Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 2,000.00 BCFG
 Entire range is from 92.85 to 2,499.22 BCFG
 After 50,000 trials, the standard error of the mean is 1.90

Statistics:

	<u>Value</u>
Trials	50000
Mean	763.35
Median	650.59
Mode	---
Standard Deviation	425.88
Variance	181,372.60
Skewness	1.37
Kurtosis	4.89
Coefficient of Variability	0.56
Range Minimum	92.85
Range Maximum	2,499.22
Range Width	2,406.37
Mean Standard Error	1.90



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Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	92.85
95%	284.87
90%	339.59
85%	383.31
80%	421.90
75%	459.16
70%	494.86
65%	531.44
60%	569.27
55%	608.58
50%	650.59
45%	696.98
40%	749.37
35%	806.71
30%	874.49
25%	952.62
20%	1,047.34
15%	1,173.16
10%	1,353.16
5%	1,653.17
0%	2,499.22

End of Forecast

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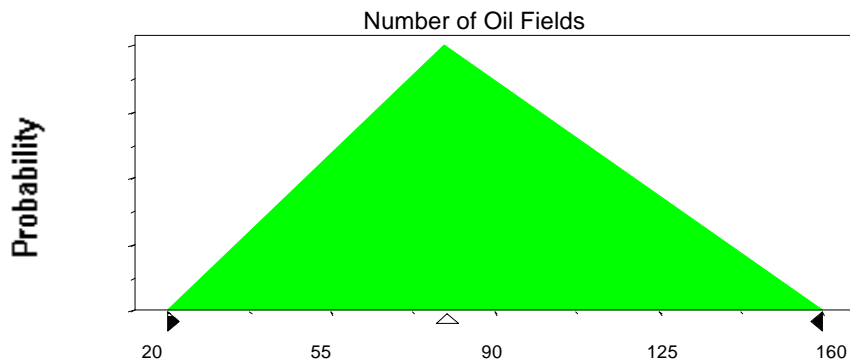
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	20
Likeliest	80
Maximum	160

Selected range is from 20 to 160
Mean value in simulation was 86



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	9.78
Standard Deviation	21.80

Shifted parameters

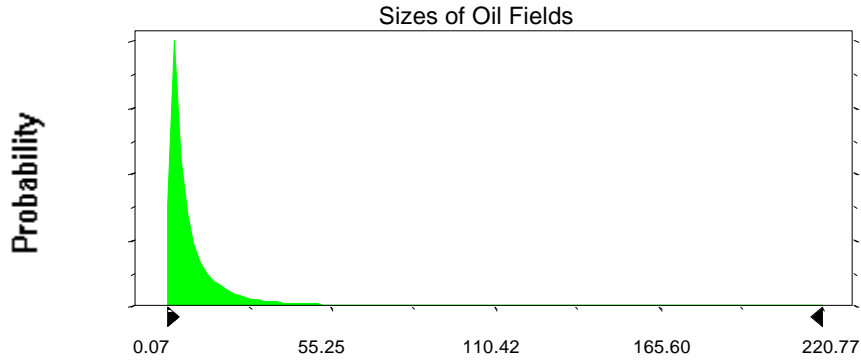
10.78
21.8

Selected range is from 0.00 to 249.00
Mean value in simulation was 9.41

1.00 to 250.00
10.41

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Assumption: Sizes of Oil Fields (cont'd)



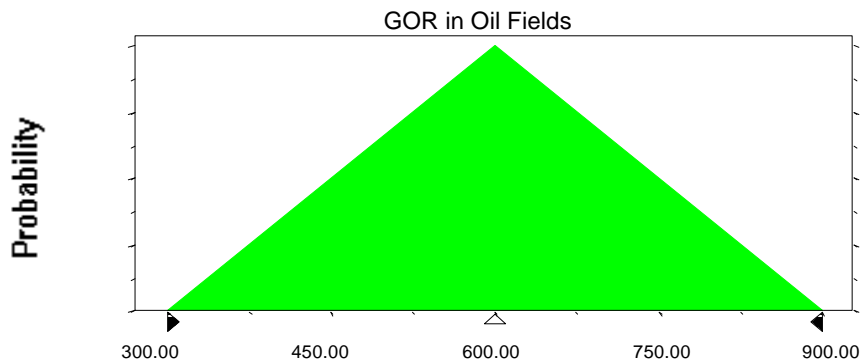
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	300.00
Likeliest	600.00
Maximum	900.00

Selected range is from 300.00 to 900.00

Mean value in simulation was 599.50



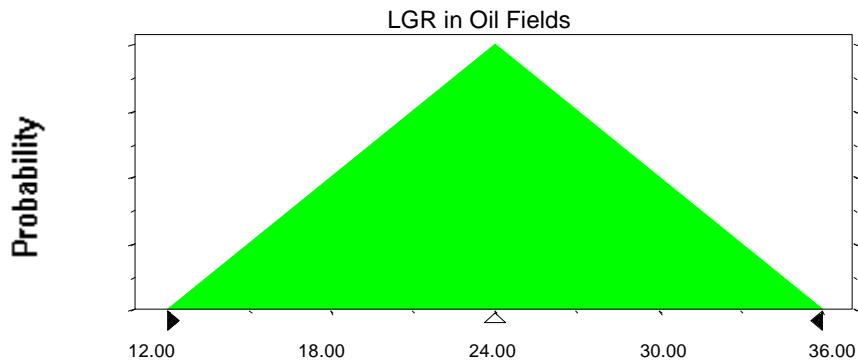
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Assumption: LGR in Oil Fields

Triangular distribution with parameters:

Minimum	12.00
Likeliest	24.00
Maximum	36.00

Selected range is from 12.00 to 36.00
Mean value in simulation was 23.97



Assumption: Number of Gas Fields

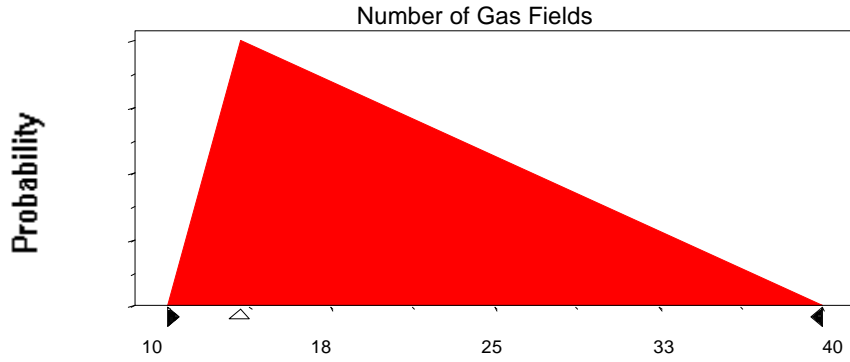
Triangular distribution with parameters:

Minimum	10
Likeliest	13
Maximum	40

Selected range is from 10 to 40
Mean value in simulation was 21

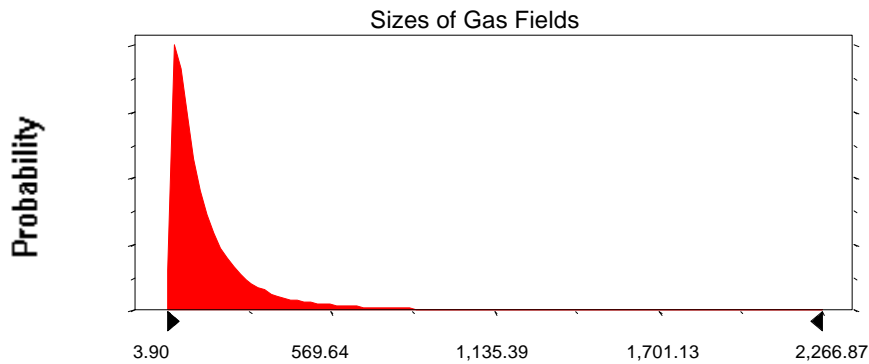
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Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	165.03	171.03
Standard Deviation	238.13	238.13
Selected range is from 0.00 to 2,494.00		6.00 to 2,500.00
Mean value in simulation was 160.94		166.94



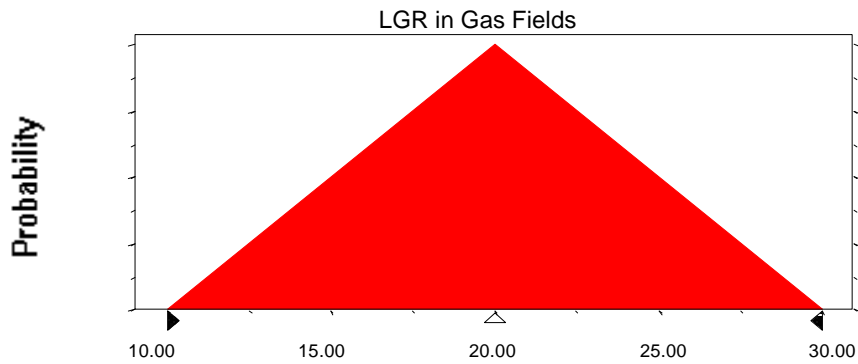
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Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	10.00
Likeliest	20.00
Maximum	30.00

Selected range is from 10.00 to 30.00
Mean value in simulation was 20.01



End of Assumptions

Simulation started on 5/28/99 at 13:04:35
Simulation stopped on 5/28/99 at 13:53:56