

La Luna and Older, Assessment Unit 60900104
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	4	1.00	76	219	423	231	69	215	517	244	4	13	32	15	18	43	120	52
Gas Fields	24						35	123	381	155	1	5	16	6	32	73	279	104
Total		1.00	76	219	423	231	104	338	899	399	5	17	48	21				

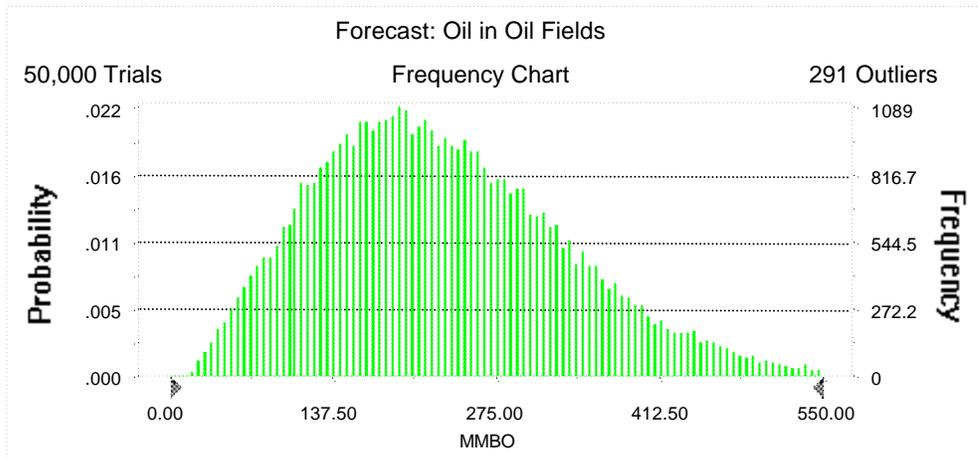
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Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 550.00 MMBO
Entire range is from 11.86 to 843.24 MMBO
After 50,000 trials, the standard error of the mean is 0.47

Statistics:	Value
Trials	50000
Mean	230.75
Median	219.07
Mode	---
Standard Deviation	106.16
Variance	11,269.55
Skewness	0.61
Kurtosis	3.33
Coefficient of Variability	0.46
Range Minimum	11.86
Range Maximum	843.24
Range Width	831.38
Mean Standard Error	0.47



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	11.86
95%	76.18
90%	102.19
85%	120.93
80%	137.40
75%	152.20
70%	166.02
65%	179.51
60%	192.63
55%	205.52
50%	219.07
45%	233.24
40%	248.09
35%	262.81
30%	279.53
25%	297.65
20%	317.74
15%	341.73
10%	373.40
5%	423.04
0%	843.24

End of Forecast

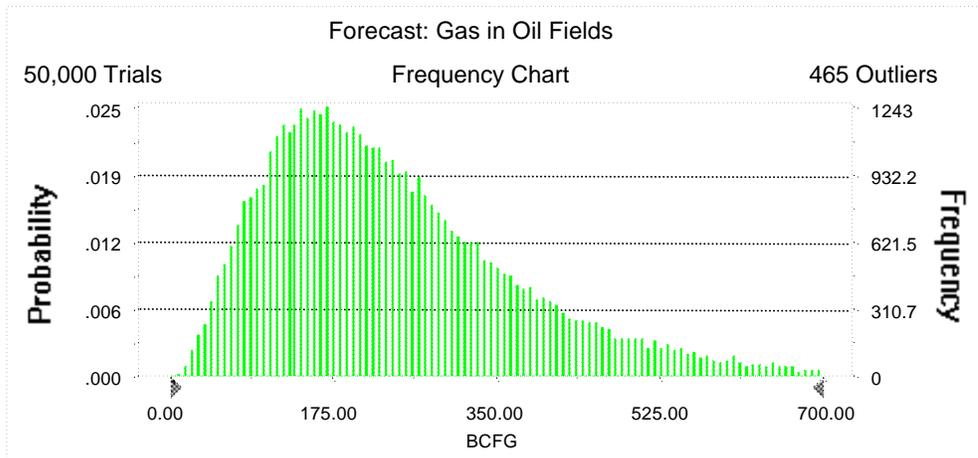
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Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 700.00 BCFG
Entire range is from 7.17 to 1,267.21 BCFG
After 50,000 trials, the standard error of the mean is 0.63

Statistics:	Value
Trials	50000
Mean	243.68
Median	215.47
Mode	---
Standard Deviation	140.98
Variance	19,874.26
Skewness	1.22
Kurtosis	5.14
Coefficient of Variability	0.58
Range Minimum	7.17
Range Maximum	1,267.21
Range Width	1,260.04
Mean Standard Error	0.63



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	7.17
95%	69.16
90%	91.89
85%	110.65
80%	126.16
75%	141.27
70%	155.60
65%	169.92
60%	184.51
55%	199.83
50%	215.47
45%	232.13
40%	249.79
35%	269.25
30%	290.51
25%	315.52
20%	345.18
15%	382.54
10%	433.04
5%	517.26
0%	1,267.21

End of Forecast

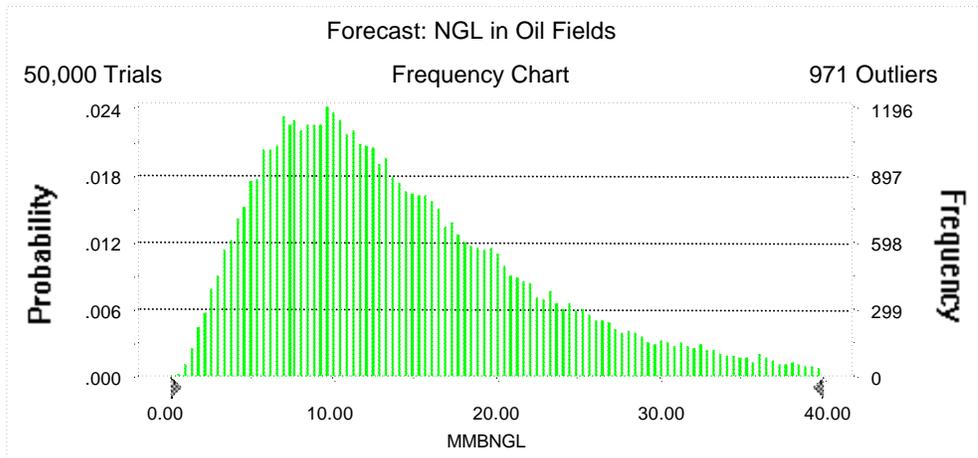
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Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 40.00 MMBNGL
Entire range is from 0.39 to 88.09 MMBNGL
After 50,000 trials, the standard error of the mean is 0.04

Statistics:	Value
Trials	50000
Mean	14.61
Median	12.55
Mode	---
Standard Deviation	9.14
Variance	83.52
Skewness	1.44
Kurtosis	6.16
Coefficient of Variability	0.63
Range Minimum	0.39
Range Maximum	88.09
Range Width	87.71
Mean Standard Error	0.04



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.39
95%	3.85
90%	5.17
85%	6.23
80%	7.16
75%	8.05
70%	8.94
65%	9.82
60%	10.68
55%	11.59
50%	12.55
45%	13.58
40%	14.75
35%	15.99
30%	17.35
25%	19.00
20%	20.85
15%	23.31
10%	26.68
5%	32.45
0%	88.09

End of Forecast

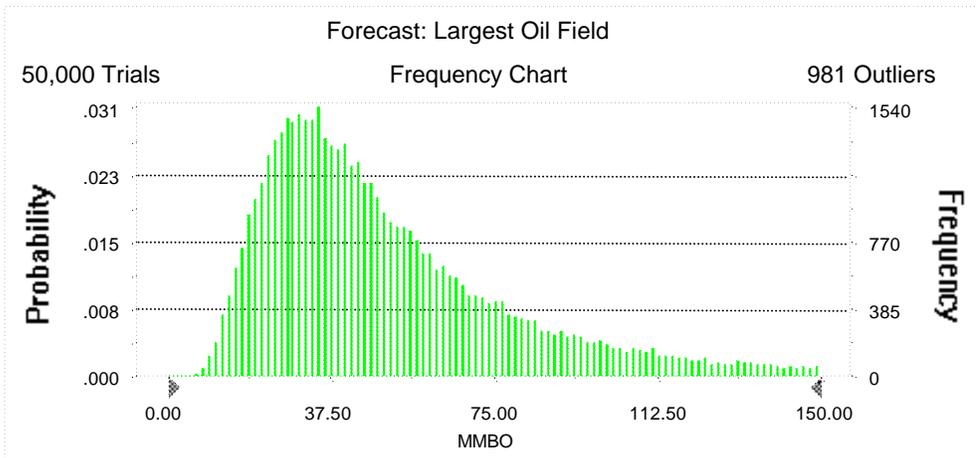
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Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 150.00 MMBO
Entire range is from 6.19 to 199.89 MMBO
After 50,000 trials, the standard error of the mean is 0.14

Statistics:	Value
Trials	50000
Mean	52.29
Median	43.41
Mode	---
Standard Deviation	32.26
Variance	1,040.70
Skewness	1.61
Kurtosis	5.99
Coefficient of Variability	0.62
Range Minimum	6.19
Range Maximum	199.89
Range Width	193.69
Mean Standard Error	0.14



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	6.19
95%	17.92
90%	21.71
85%	24.73
80%	27.40
75%	29.93
70%	32.47
65%	34.98
60%	37.59
55%	40.46
50%	43.41
45%	46.65
40%	50.25
35%	54.50
30%	59.15
25%	64.90
20%	72.17
15%	81.43
10%	95.43
5%	119.63
0%	199.89

End of Forecast

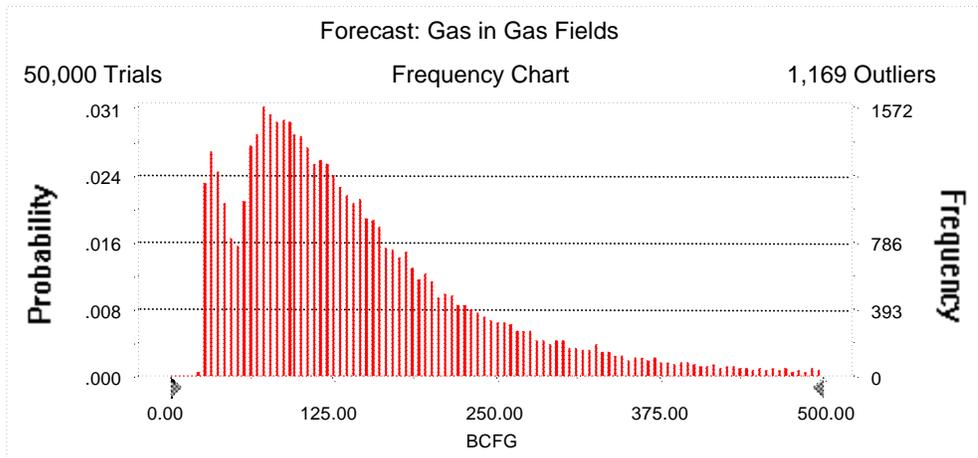
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Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 500.00 BCFG
Entire range is from 24.35 to 1,441.13 BCFG
After 50,000 trials, the standard error of the mean is 0.55

Statistics:	Value
Trials	50000
Mean	155.06
Median	122.55
Mode	---
Standard Deviation	122.35
Variance	14,969.76
Skewness	2.60
Kurtosis	13.75
Coefficient of Variability	0.79
Range Minimum	24.35
Range Maximum	1,441.13
Range Width	1,416.78
Mean Standard Error	0.55



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Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	24.35
95%	35.09
90%	46.80
85%	60.81
80%	69.79
75%	77.82
70%	86.09
65%	94.56
60%	103.21
55%	112.74
50%	122.55
45%	133.36
40%	145.27
35%	158.12
30%	173.61
25%	192.10
20%	215.45
15%	246.60
10%	292.47
5%	381.44
0%	1,441.13

End of Forecast

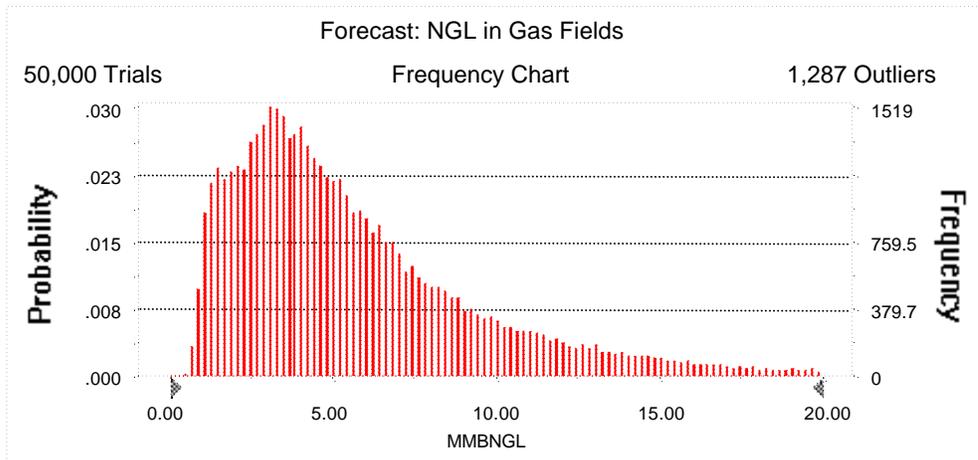
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Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 20.00 MMBNGL
Entire range is from 0.53 to 71.61 MMBNGL
After 50,000 trials, the standard error of the mean is 0.02

Statistics:	Value
Trials	50000
Mean	6.21
Median	4.80
Mode	---
Standard Deviation	5.17
Variance	26.76
Skewness	2.81
Kurtosis	16.11
Coefficient of Variability	0.83
Range Minimum	0.53
Range Maximum	71.61
Range Width	71.08
Mean Standard Error	0.02



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.53
95%	1.37
90%	1.80
85%	2.23
80%	2.62
75%	2.98
70%	3.31
65%	3.66
60%	4.02
55%	4.39
50%	4.80
45%	5.24
40%	5.74
35%	6.29
30%	6.92
25%	7.69
20%	8.69
15%	10.02
10%	11.97
5%	15.63
0%	71.61

End of Forecast

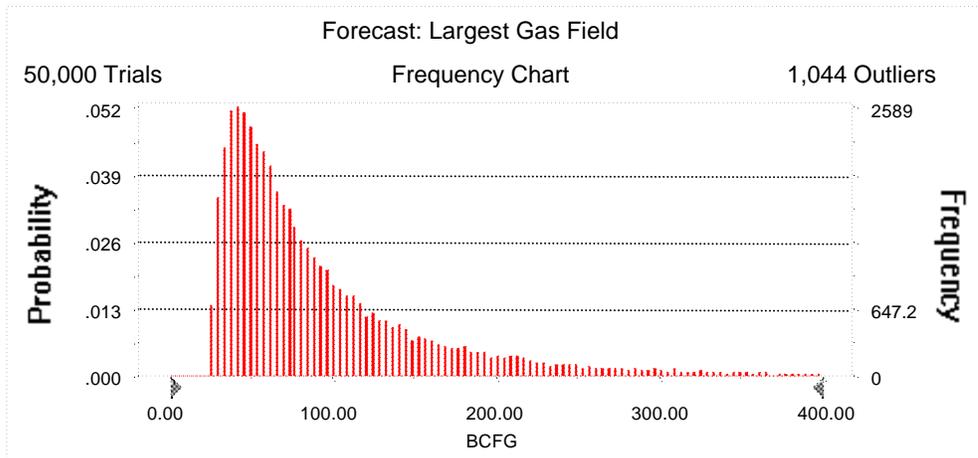
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Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 400.00 BCFG
Entire range is from 24.35 to 999.32 BCFG
After 50,000 trials, the standard error of the mean is 0.43

Statistics:	Value
Trials	50000
Mean	103.90
Median	73.00
Mode	---
Standard Deviation	97.09
Variance	9,426.60
Skewness	3.50
Kurtosis	20.70
Coefficient of Variability	0.93
Range Minimum	24.35
Range Maximum	999.32
Range Width	974.97
Mean Standard Error	0.43



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Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	24.35
95%	32.20
90%	36.63
85%	40.54
80%	44.37
75%	48.31
70%	52.55
65%	57.01
60%	61.68
55%	67.06
50%	73.00
45%	79.62
40%	87.45
35%	96.33
30%	107.25
25%	120.44
20%	138.41
15%	162.94
10%	201.59
5%	278.57
0%	999.32

End of Forecast

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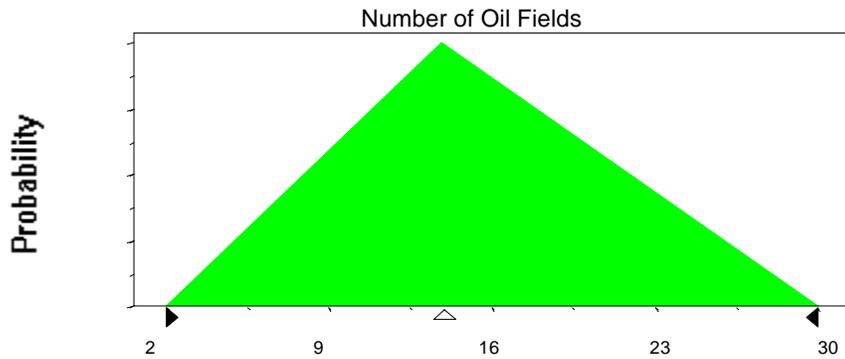
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	2
Likeliest	14
Maximum	30

Selected range is from 2 to 30
Mean value in simulation was 15



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	11.34
Standard Deviation	18.18

Shifted parameters

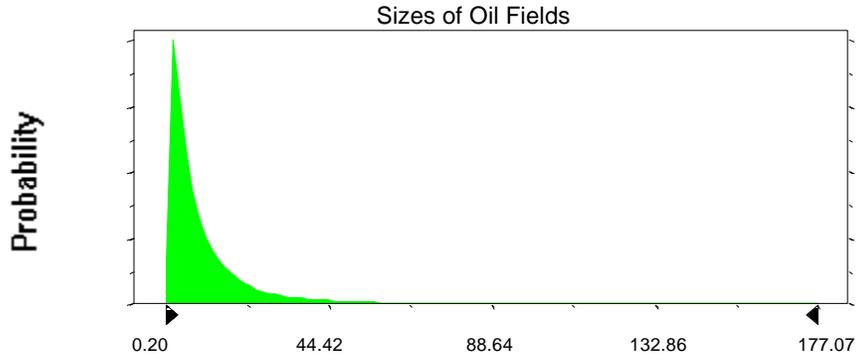
15.34
18.18

Selected range is from 0.00 to 196.00
Mean value in simulation was 11.10

4.00 to 200.00
15.1

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Assumption: Sizes of Oil Fields (cont'd)



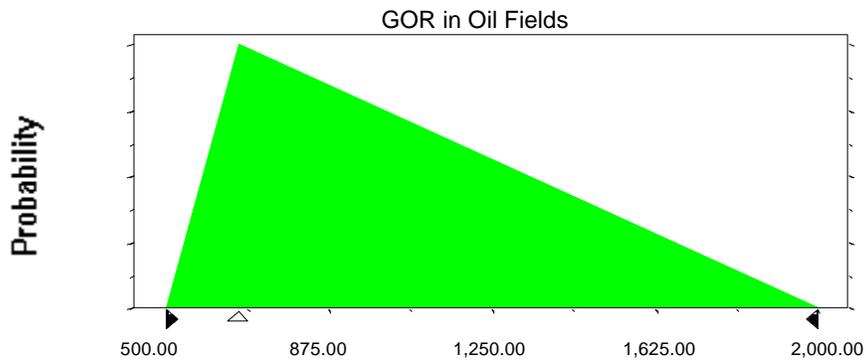
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	500.00
Likeliest	666.67
Maximum	2,000.00

Selected range is from 500.00 to 2,000.00

Mean value in simulation was 1,056.02



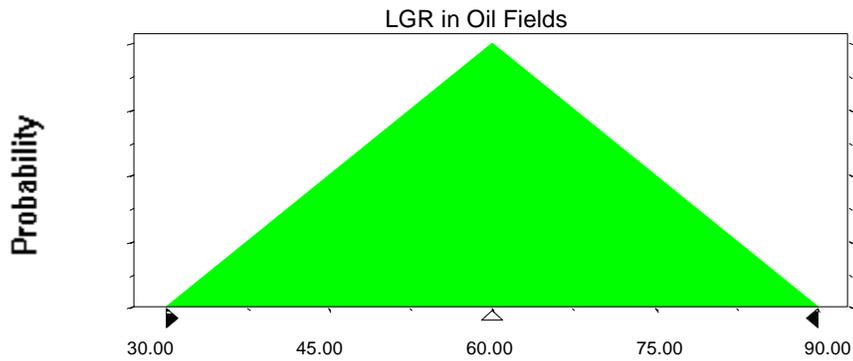
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Assumption: LGR in Oil Fields

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 59.99



Assumption: Number of Gas Fields

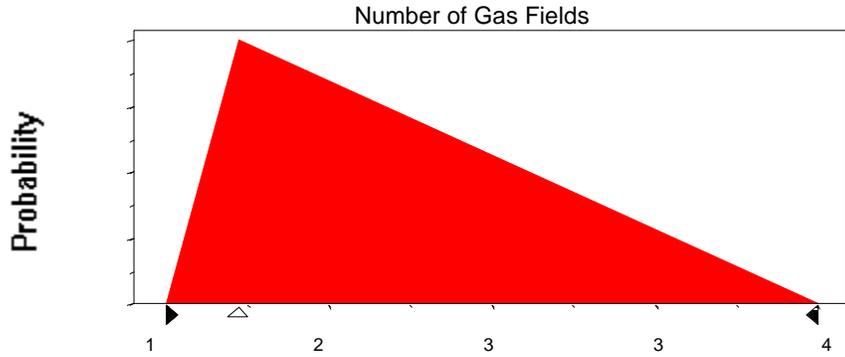
Triangular distribution with parameters:

Minimum	1
Likeliest	1
Maximum	4

Selected range is from 1 to 4
Mean value in simulation was 2

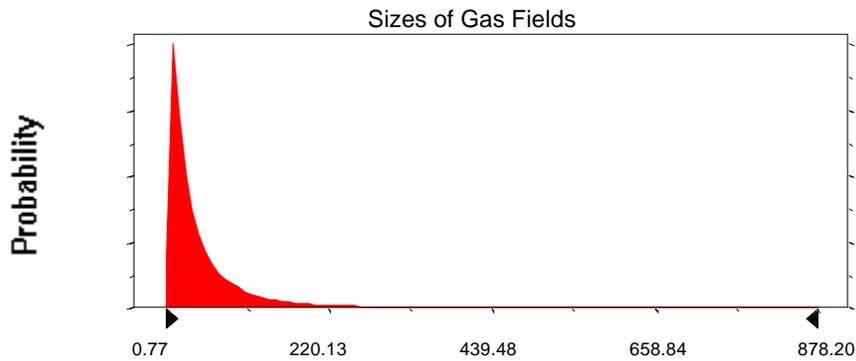
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Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	51.75	75.75
Standard Deviation	89.05	89.05
Selected range is from 0.00 to 976.00		24.00 to 1,000.00
Mean value in simulation was 50.59		74.59



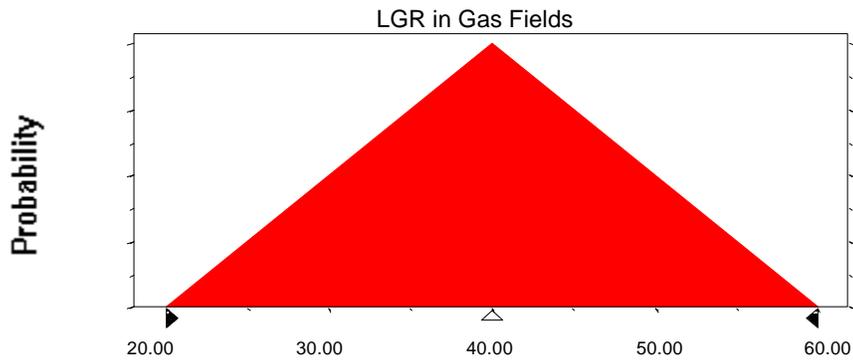
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Assumption: LGR in Gas Fields

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 39.99



End of Assumptions

Simulation started on 7/13/99 at 16:10:56
Simulation stopped on 7/13/99 at 16:27:25