

Maturin Sub-Basin, Assessment Unit 60980103
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	834	1,868	3,147	1,919	760	1,816	3,413	1,917	42	106	219	115	62	128	227	134
Gas Fields	6						309	1,198	2,845	1,341	13	51	132	59	83	275	900	350
Total		1.00	834	1,868	3,147	1,919	1,069	3,014	6,257	3,258	54	157	351	174				

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Monte Carlo Results

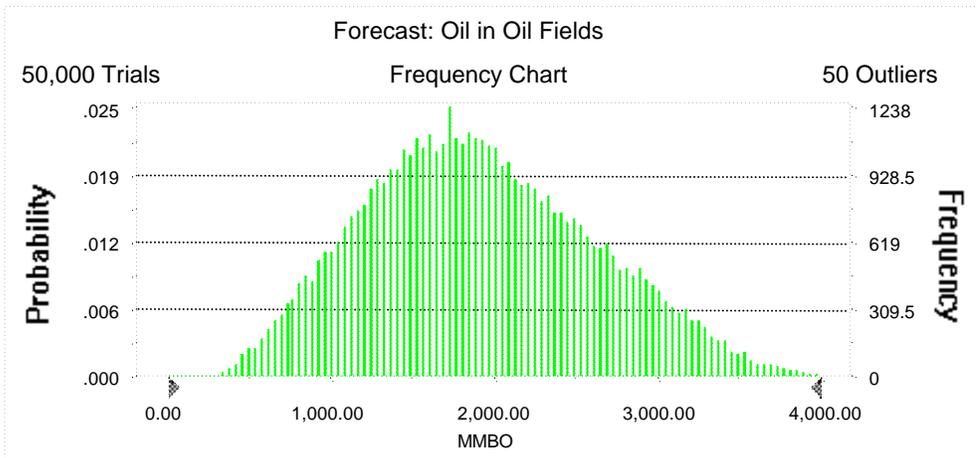
Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 4,000.00 MMBO
Entire range is from 267.50 to 4,415.97 MMBO
After 50,000 trials, the standard error of the mean is 3.13

Statistics:

	<u>Value</u>
Trials	50000
Mean	1,918.83
Median	1,868.25
Mode	---
Standard Deviation	699.23
Variance	488,924.46
Skewness	0.28
Kurtosis	2.59
Coefficient of Variability	0.36
Range Minimum	267.50
Range Maximum	4,415.97
Range Width	4,148.48
Mean Standard Error	3.13



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	267.50
95%	833.80
90%	1,028.70
85%	1,176.01
80%	1,295.67
75%	1,405.43
70%	1,505.57
65%	1,598.35
60%	1,691.48
55%	1,777.87
50%	1,868.25
45%	1,960.33
40%	2,055.83
35%	2,161.13
30%	2,274.80
25%	2,398.84
20%	2,537.09
15%	2,698.57
10%	2,890.11
5%	3,146.92
0%	4,415.97

End of Forecast

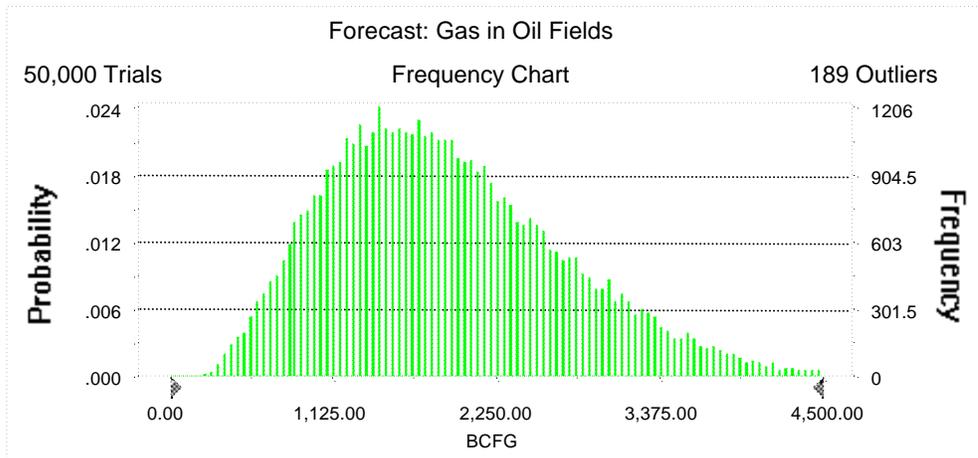
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Monte Carlo Results

Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 4,500.00 BCFG
Entire range is from 223.94 to 5,835.17 BCFG
After 50,000 trials, the standard error of the mean is 3.65

Statistics:	<u>Value</u>
Trials	50000
Mean	1,916.89
Median	1,816.22
Mode	---
Standard Deviation	815.12
Variance	664,428.73
Skewness	0.62
Kurtosis	3.18
Coefficient of Variability	0.43
Range Minimum	223.94
Range Maximum	5,835.17
Range Width	5,611.24
Mean Standard Error	3.65



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	223.94
95%	759.69
90%	939.60
85%	1,081.77
80%	1,200.19
75%	1,308.04
70%	1,413.46
65%	1,510.05
60%	1,612.69
55%	1,715.72
50%	1,816.22
45%	1,921.68
40%	2,032.13
35%	2,149.39
30%	2,277.59
25%	2,424.27
20%	2,589.03
15%	2,791.59
10%	3,043.87
5%	3,412.51
0%	5,835.17

End of Forecast

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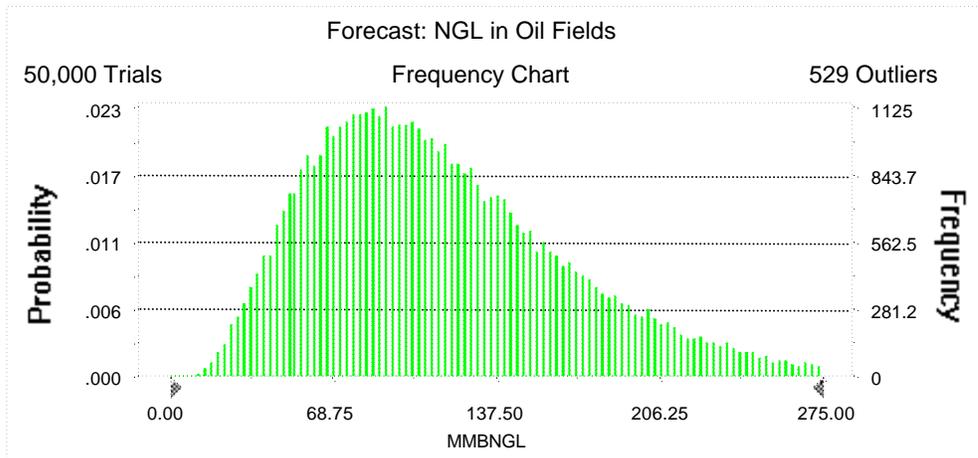
Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 275.00 MMBNGL
Entire range is from 9.04 to 419.25 MMBNGL
After 50,000 trials, the standard error of the mean is 0.25

Statistics:

	<u>Value</u>
Trials	50000
Mean	115.05
Median	106.03
Mode	---
Standard Deviation	55.11
Variance	3,037.37
Skewness	0.89
Kurtosis	3.90
Coefficient of Variability	0.48
Range Minimum	9.04
Range Maximum	419.25
Range Width	410.21
Mean Standard Error	0.25



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	9.04
95%	41.54
90%	52.11
85%	60.22
80%	67.67
75%	74.22
70%	80.59
65%	86.85
60%	93.05
55%	99.51
50%	106.03
45%	112.89
40%	120.22
35%	128.09
30%	136.95
25%	146.42
20%	158.12
15%	172.06
10%	190.63
5%	219.47
0%	419.25

End of Forecast

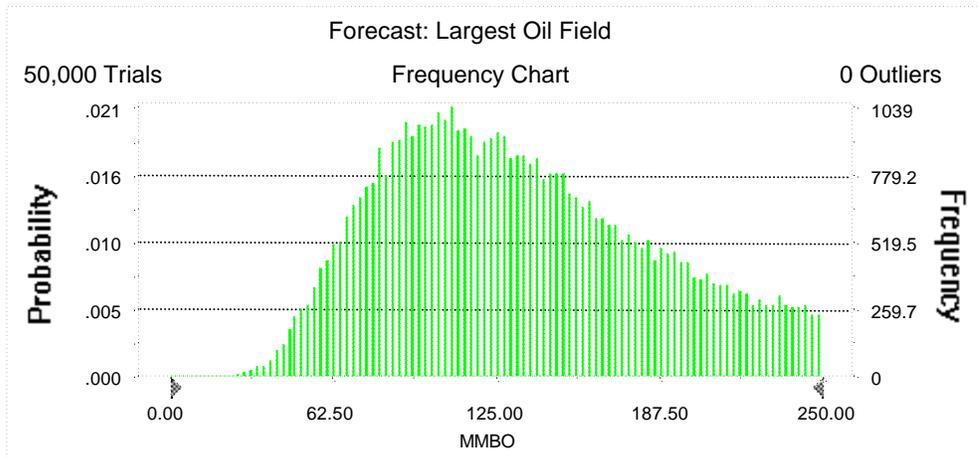
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Monte Carlo Results

Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 250.00 MMBO
Entire range is from 21.49 to 250.00 MMBO
After 50,000 trials, the standard error of the mean is 0.22

Statistics:	Value
Trials	50000
Mean	133.97
Median	127.68
Mode	---
Standard Deviation	49.97
Variance	2,497.46
Skewness	0.38
Kurtosis	2.34
Coefficient of Variability	0.37
Range Minimum	21.49
Range Maximum	250.00
Range Width	228.51
Mean Standard Error	0.22



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	21.49
95%	61.76
90%	72.73
85%	81.12
80%	88.44
75%	94.99
70%	101.41
65%	107.69
60%	113.98
55%	120.94
50%	127.68
45%	134.83
40%	142.22
35%	150.27
30%	158.94
25%	168.94
20%	180.24
15%	193.14
10%	208.03
5%	227.06
0%	250.00

End of Forecast

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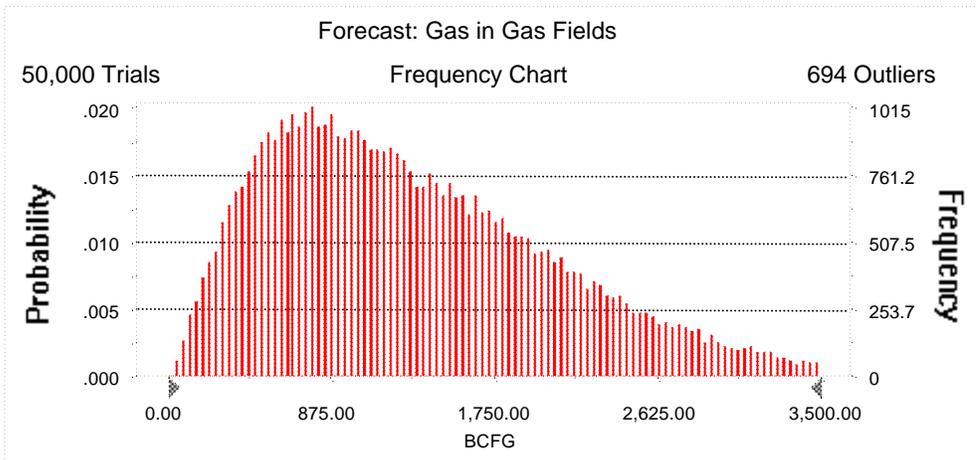
Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 3,500.00 BCFG
 Entire range is from 19.45 to 6,669.16 BCFG
 After 50,000 trials, the standard error of the mean is 3.57

Statistics:

	<u>Value</u>
Trials	50000
Mean	1,341.28
Median	1,197.69
Mode	---
Standard Deviation	798.82
Variance	638,110.41
Skewness	0.90
Kurtosis	3.84
Coefficient of Variability	0.60
Range Minimum	19.45
Range Maximum	6,669.16
Range Width	6,649.70
Mean Standard Error	3.57



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Monte Carlo Results

Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	19.45
95%	309.40
90%	436.20
85%	538.86
80%	633.04
75%	725.15
70%	812.30
65%	903.10
60%	999.22
55%	1,095.57
50%	1,197.69
45%	1,303.18
40%	1,421.21
35%	1,543.58
30%	1,675.24
25%	1,819.14
20%	1,985.91
15%	2,184.88
10%	2,441.30
5%	2,844.73
0%	6,669.16

End of Forecast

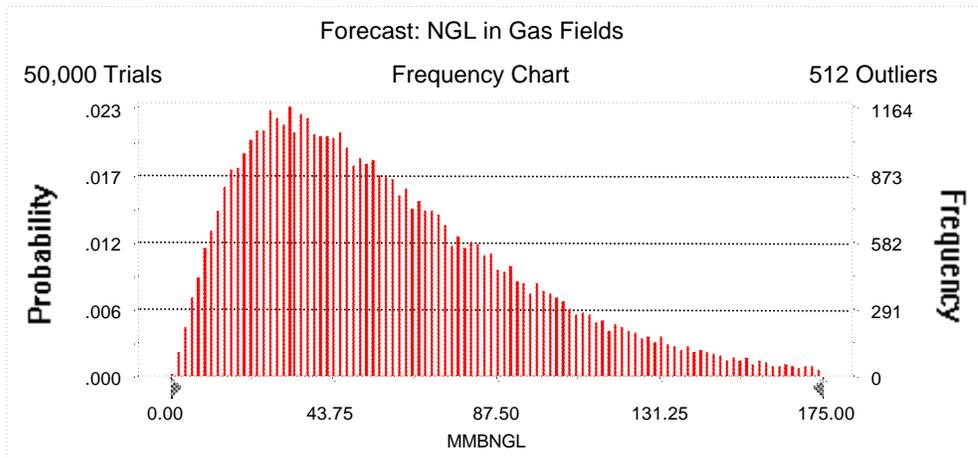
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Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 175.00 MMBNGL
 Entire range is from 0.59 to 367.12 MMBNGL
 After 50,000 trials, the standard error of the mean is 0.17

Statistics:	<u>Value</u>
Trials	50000
Mean	59.10
Median	51.23
Mode	---
Standard Deviation	37.95
Variance	1,440.01
Skewness	1.16
Kurtosis	4.83
Coefficient of Variability	0.64
Range Minimum	0.59
Range Maximum	367.12
Range Width	366.53
Mean Standard Error	0.17



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.59
95%	12.74
90%	17.99
85%	22.51
80%	26.60
75%	30.44
70%	34.42
65%	38.34
60%	42.51
55%	46.69
50%	51.23
45%	55.95
40%	61.00
35%	66.65
30%	72.65
25%	79.81
20%	87.69
15%	97.94
10%	110.99
5%	132.01
0%	367.12

End of Forecast

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Monte Carlo Results

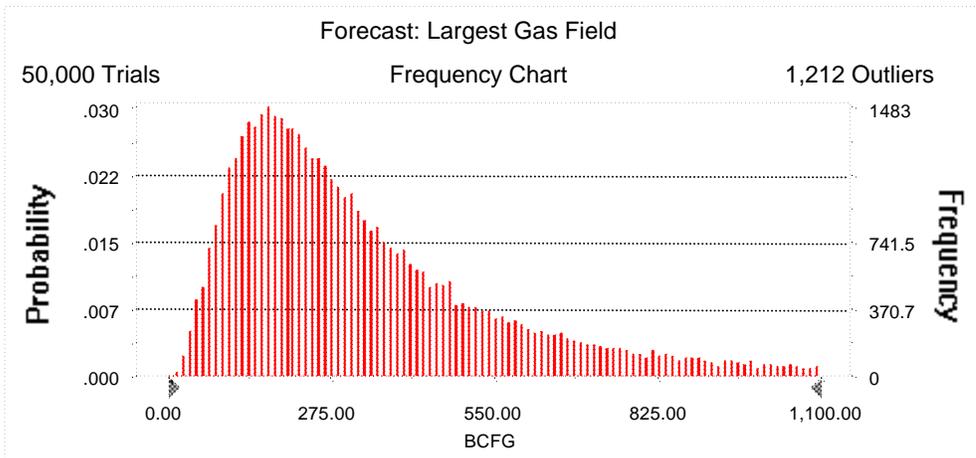
Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 1,100.00 BCFG
 Entire range is from 8.36 to 1,499.38 BCFG
 After 50,000 trials, the standard error of the mean is 1.15

Statistics:

	<u>Value</u>
Trials	50000
Mean	349.69
Median	274.52
Mode	---
Standard Deviation	258.26
Variance	66,699.90
Skewness	1.65
Kurtosis	5.96
Coefficient of Variability	0.74
Range Minimum	8.36
Range Maximum	1,499.38
Range Width	1,491.02
Mean Standard Error	1.15



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Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	8.36
95%	83.24
90%	109.84
85%	131.54
80%	151.46
75%	170.33
70%	189.20
65%	209.01
60%	229.28
55%	251.21
50%	274.52
45%	300.50
40%	329.05
35%	361.74
30%	400.38
25%	446.14
20%	504.52
15%	583.86
10%	695.80
5%	899.63
0%	1,499.38

End of Forecast

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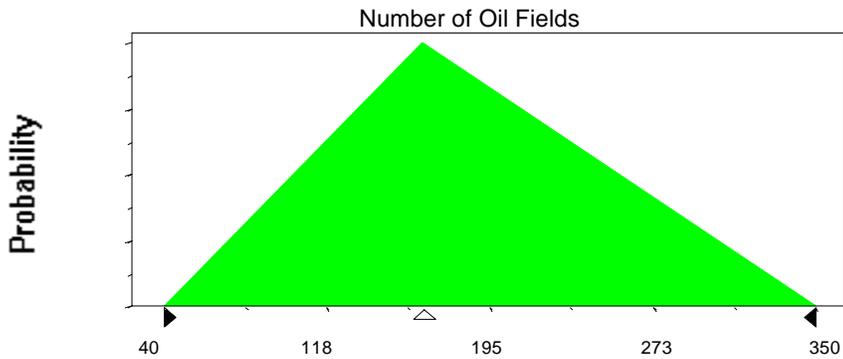
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	40
Likeliest	164
Maximum	350

Selected range is from 40 to 350
Mean value in simulation was 185



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	9.78
Standard Deviation	21.80

Shifted parameters

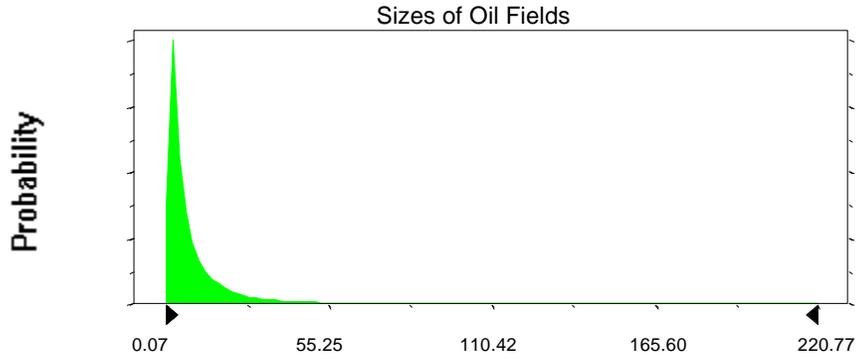
10.78
21.8

Selected range is from 0.00 to 249.00
Mean value in simulation was 9.49

1.00 to 250.00
10.49

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Assumption: Sizes of Oil Fields (cont'd)



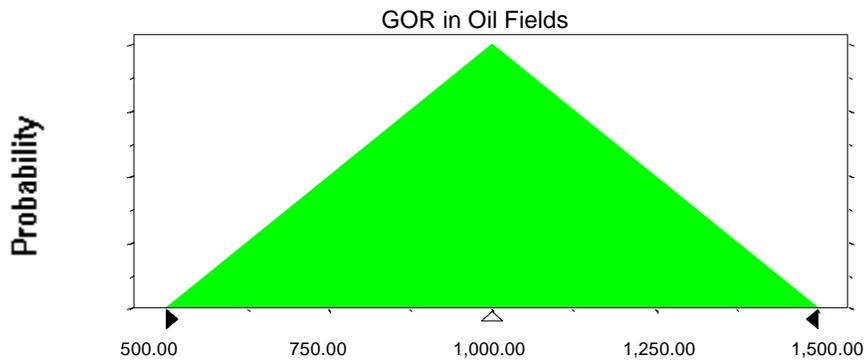
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	500.00
Likeliest	1,000.00
Maximum	1,500.00

Selected range is from 500.00 to 1,500.00

Mean value in simulation was 998.45



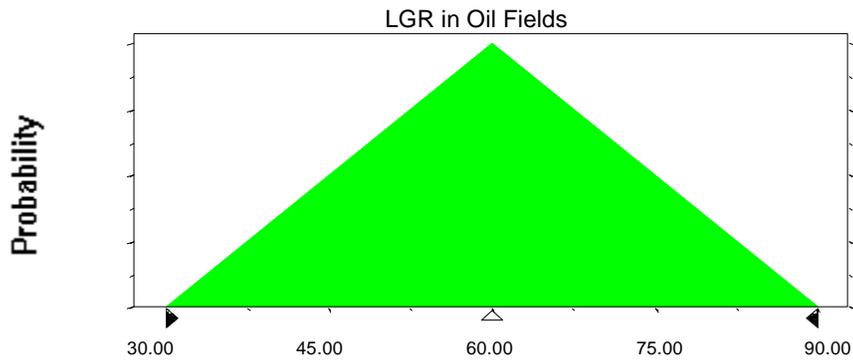
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Assumption: LGR in Oil Fields

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

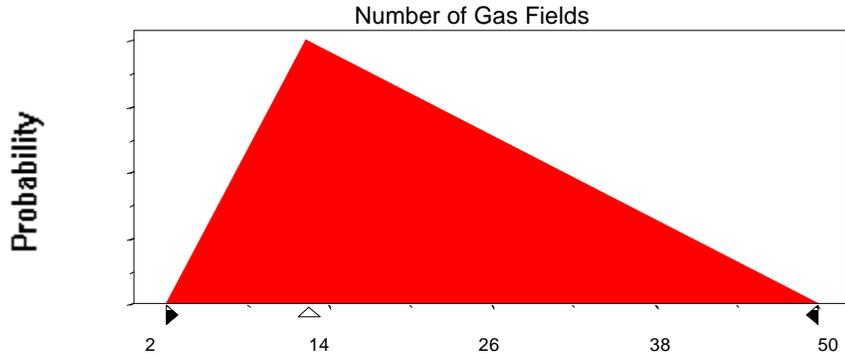
Triangular distribution with parameters:

Minimum	2
Likeliest	13
Maximum	50

Selected range is from 2 to 50
Mean value in simulation was 21

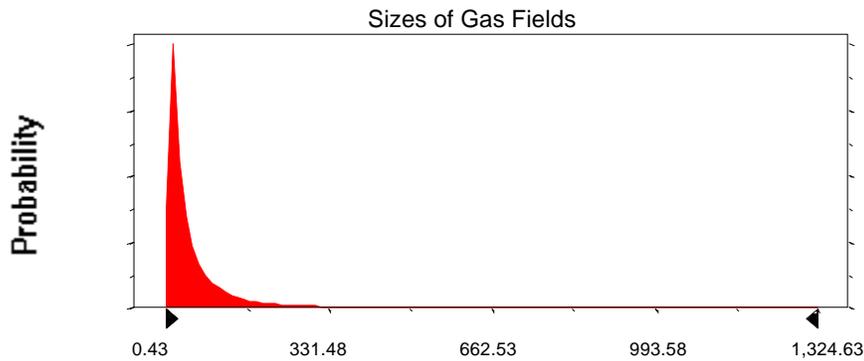
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Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	58.66	64.66
Standard Deviation	130.83	130.83
Selected range is from 0.00 to 1,494.00		6.00 to 1,500.00
Mean value in simulation was 56.41		62.41



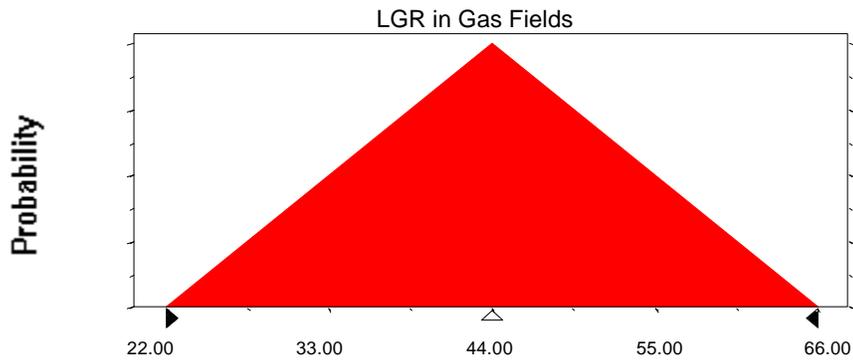
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Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	22.00
Likeliest	44.00
Maximum	66.00

Selected range is from 22.00 to 66.00
Mean value in simulation was 44.05



End of Assumptions

Simulation started on 7/16/99 at 12:26:26
Simulation stopped on 7/16/99 at 13:55:33