

**Cretaceous Reservoirs in South Gulf Suprasalt Structural, Assessment Unit 20190102
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	10	1.00	1,208	3,475	7,311	3,764	894	2,702	6,190	3,016	50	158	392	181	204	644	2,096	820
Gas Fields	60						332	966	2,093	1,057	14	41	97	47	145	332	946	408
Total		1.00	1,208	3,475	7,311	3,764	1,226	3,668	8,284	4,073	63	199	489	228				

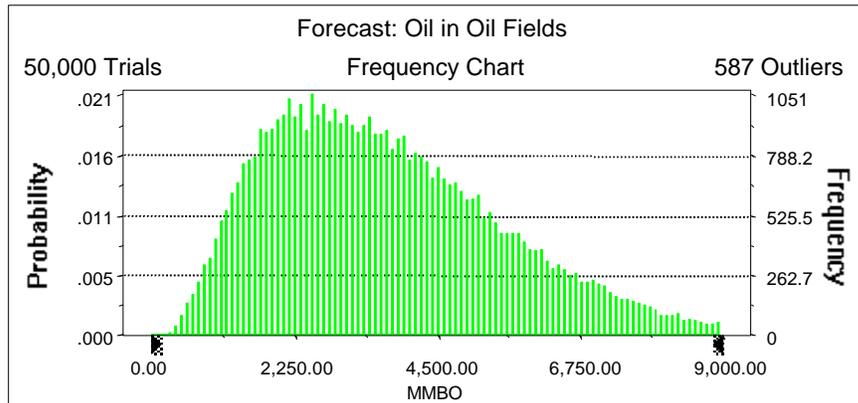
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Cretaceous Reservoirs in South Gulf Suprasalt Structural
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Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 9,000.00 MMBO
 Entire range is from 250.86 to 16,535.00 MMBO
 After 50,000 trials, the standard error of the mean is 8.53

Statistics:	<u>Value</u>
Trials	50000
Mean	3,763.51
Median	3,475.11
Mode	---
Standard Deviation	1,908.11
Variance	3,640,888.70
Skewness	0.80
Kurtosis	3.61
Coefficient of Variability	0.51
Range Minimum	250.86
Range Maximum	16,535.00
Range Width	16,284.14
Mean Standard Error	8.53



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	250.86
95%	1,208.06
90%	1,546.99
85%	1,820.88
80%	2,067.06
75%	2,293.44
70%	2,530.19
65%	2,754.52
60%	2,990.50
55%	3,229.65
50%	3,475.11
45%	3,725.91
40%	3,994.41
35%	4,272.57
30%	4,578.73
25%	4,924.70
20%	5,311.88
15%	5,785.41
10%	6,391.58
5%	7,311.50
0%	16,535.00

End of Forecast

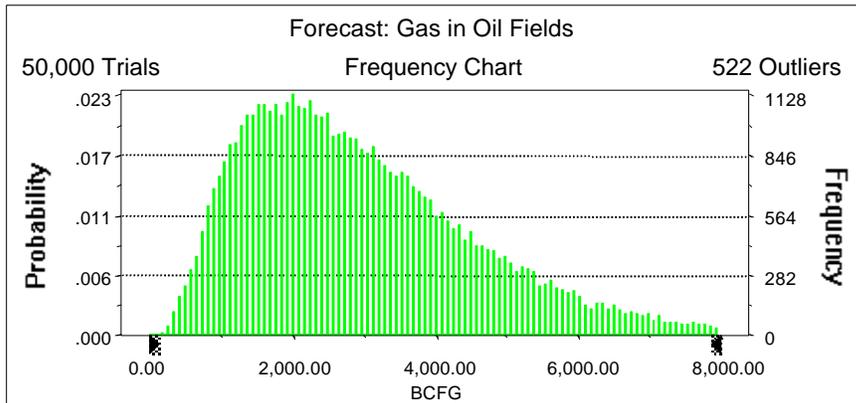
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Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 8,000.00 BCFG
Entire range is from 167.60 to 14,780.07 BCFG
After 50,000 trials, the standard error of the mean is 7.50

Statistics:	Value
Trials	50000
Mean	3,016.37
Median	2,702.12
Mode	---
Standard Deviation	1,677.37
Variance	2,813,560.54
Skewness	1.04
Kurtosis	4.41
Coefficient of Variability	0.56
Range Minimum	167.60
Range Maximum	14,780.07
Range Width	14,612.47
Mean Standard Error	7.50



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	167.60
95%	893.95
90%	1,155.29
85%	1,370.37
80%	1,559.86
75%	1,747.14
70%	1,936.96
65%	2,120.70
60%	2,304.12
55%	2,495.36
50%	2,702.12
45%	2,917.19
40%	3,144.96
35%	3,393.09
30%	3,656.28
25%	3,954.04
20%	4,314.33
15%	4,745.83
10%	5,315.99
5%	6,190.28
0%	14,780.07

End of Forecast

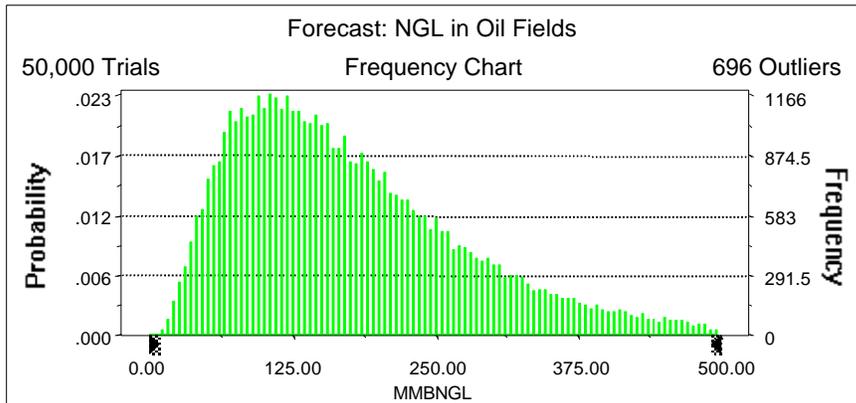
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Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 500.00 MMBNGL
Entire range is from 7.03 to 949.21 MMBNGL
After 50,000 trials, the standard error of the mean is 0.49

Statistics:	Value
Trials	50000
Mean	181.01
Median	157.73
Mode	---
Standard Deviation	109.05
Variance	11,892.39
Skewness	1.27
Kurtosis	5.33
Coefficient of Variability	0.60
Range Minimum	7.03
Range Maximum	949.21
Range Width	942.19
Mean Standard Error	0.49



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	7.03
95%	49.82
90%	65.22
85%	77.40
80%	88.87
75%	100.20
70%	111.25
65%	122.45
60%	133.62
55%	145.74
50%	157.73
45%	171.25
40%	185.58
35%	200.54
30%	217.64
25%	237.28
20%	260.34
15%	289.08
10%	326.99
5%	391.58
0%	949.21

End of Forecast

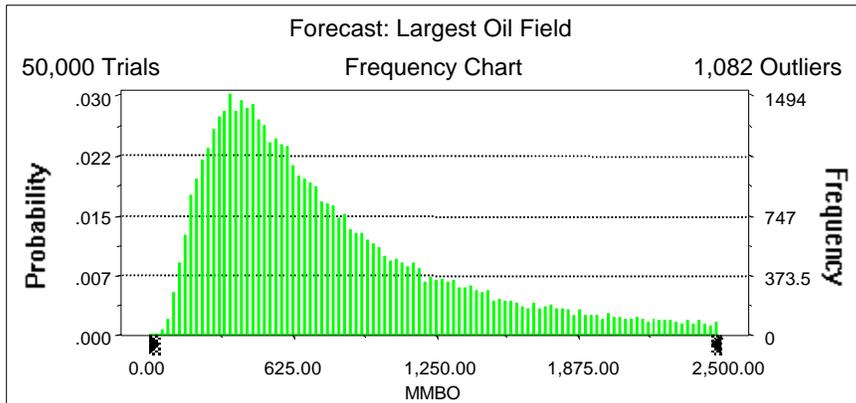
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Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 2,500.00 MMBO
Entire range is from 42.15 to 2,999.76 MMBO
After 50,000 trials, the standard error of the mean is 2.60

Statistics:	Value
Trials	50000
Mean	820.21
Median	643.59
Mode	---
Standard Deviation	581.95
Variance	338,660.32
Skewness	1.39
Kurtosis	4.65
Coefficient of Variability	0.71
Range Minimum	42.15
Range Maximum	2,999.76
Range Width	2,957.61
Mean Standard Error	2.60



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	42.15
95%	204.11
90%	262.72
85%	311.05
80%	357.01
75%	400.08
70%	443.81
65%	488.03
60%	536.77
55%	588.58
50%	643.59
45%	707.59
40%	777.89
35%	859.21
30%	951.69
25%	1,068.21
20%	1,211.29
15%	1,397.90
10%	1,664.65
5%	2,095.63
0%	2,999.76

End of Forecast

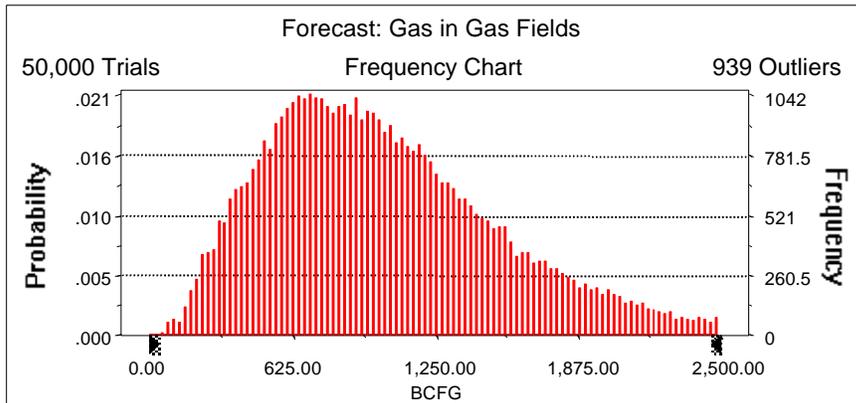
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Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 2,500.00 BCFG
Entire range is from 62.69 to 4,400.61 BCFG
After 50,000 trials, the standard error of the mean is 2.46

Statistics:	Value
Trials	50000
Mean	1,056.86
Median	965.67
Mode	---
Standard Deviation	550.87
Variance	303,459.57
Skewness	1.02
Kurtosis	4.49
Coefficient of Variability	0.52
Range Minimum	62.69
Range Maximum	4,400.61
Range Width	4,337.92
Mean Standard Error	2.46



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Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	62.69
95%	332.39
90%	436.69
85%	519.71
80%	591.33
75%	654.44
70%	715.09
65%	775.05
60%	839.00
55%	902.25
50%	965.67
45%	1,032.21
40%	1,104.59
35%	1,180.15
30%	1,260.60
25%	1,356.98
20%	1,468.63
15%	1,603.69
10%	1,794.73
5%	2,093.31
0%	4,400.61

End of Forecast

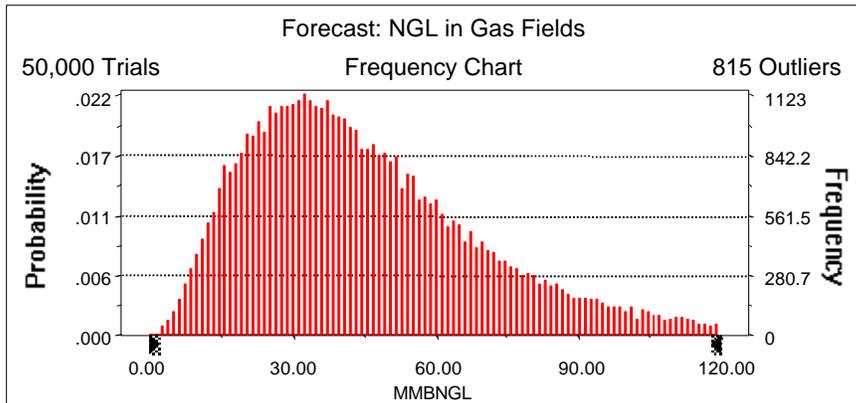
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Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 120.00 MMBNGL
Entire range is from 1.96 to 241.11 MMBNGL
After 50,000 trials, the standard error of the mean is 0.12

Statistics:	Value
Trials	50000
Mean	46.53
Median	41.39
Mode	---
Standard Deviation	26.46
Variance	700.27
Skewness	1.23
Kurtosis	5.34
Coefficient of Variability	0.57
Range Minimum	1.96
Range Maximum	241.11
Range Width	239.15
Mean Standard Error	0.12



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	1.96
95%	13.59
90%	17.79
85%	21.31
80%	24.43
75%	27.34
70%	30.18
65%	32.88
60%	35.61
55%	38.45
50%	41.39
45%	44.45
40%	47.91
35%	51.52
30%	55.49
25%	60.10
20%	65.55
15%	72.34
10%	81.74
5%	97.17
0%	241.11

End of Forecast

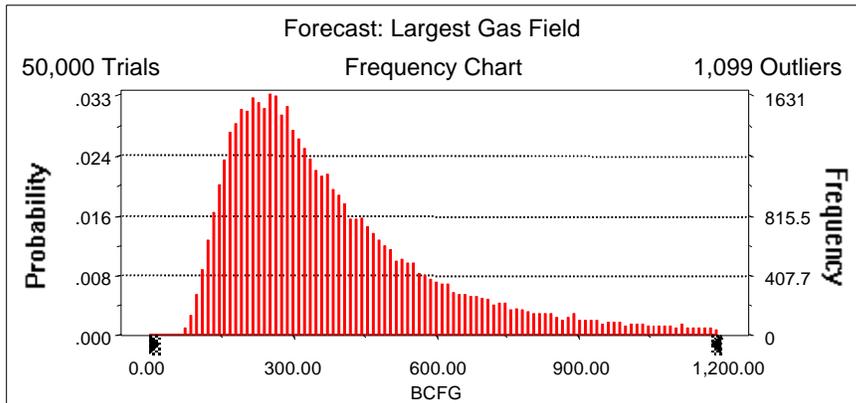
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Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 1,200.00 BCFG
 Entire range is from 62.69 to 1,998.63 BCFG
 After 50,000 trials, the standard error of the mean is 1.19

Statistics:	<u>Value</u>
Trials	50000
Mean	408.13
Median	331.66
Mode	---
Standard Deviation	267.13
Variance	71,359.27
Skewness	2.05
Kurtosis	8.59
Coefficient of Variability	0.65
Range Minimum	62.69
Range Maximum	1,998.63
Range Width	1,935.93
Mean Standard Error	1.19



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Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	62.69
95%	144.96
90%	171.51
85%	192.51
80%	212.09
75%	231.16
70%	250.27
65%	268.89
60%	288.27
55%	308.47
50%	331.66
45%	356.56
40%	384.19
35%	415.73
30%	452.77
25%	496.31
20%	551.66
15%	626.35
10%	738.44
5%	945.66
0%	1,998.63

End of Forecast

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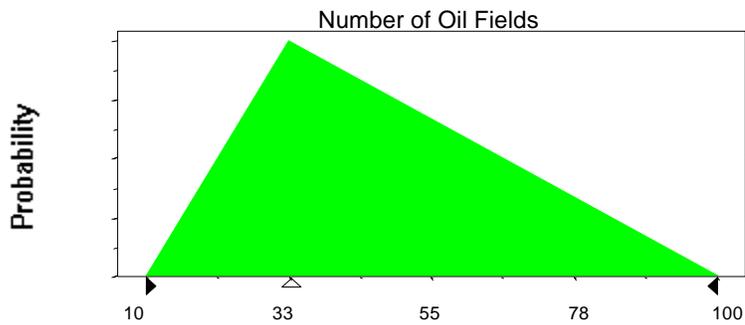
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	10
Likeliest	33
Maximum	100

Selected range is from 10 to 100
Mean value in simulation was 48



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	74.35
Standard Deviation	266.17

Shifted parameters

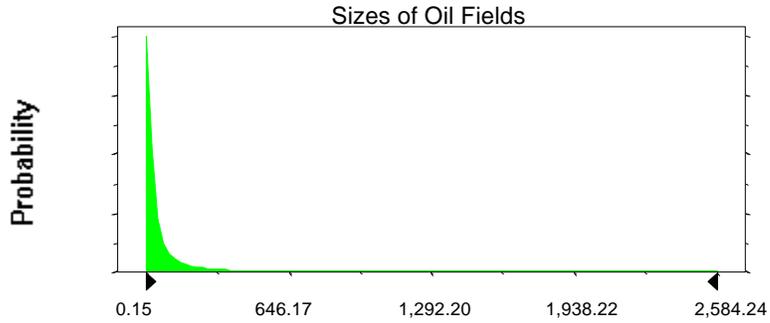
84.35
266.17

Selected range is from 0.00 to 2,990.00
Mean value in simulation was 69.46

10.00 to 3,000.00
79.46

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Assumption: Sizes of Oil Fields (cont'd)



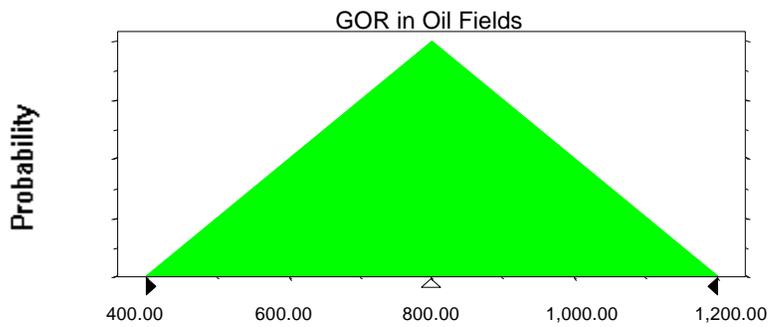
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	400.00
Likeliest	800.00
Maximum	1,200.00

Selected range is from 400.00 to 1,200.00

Mean value in simulation was 801.12



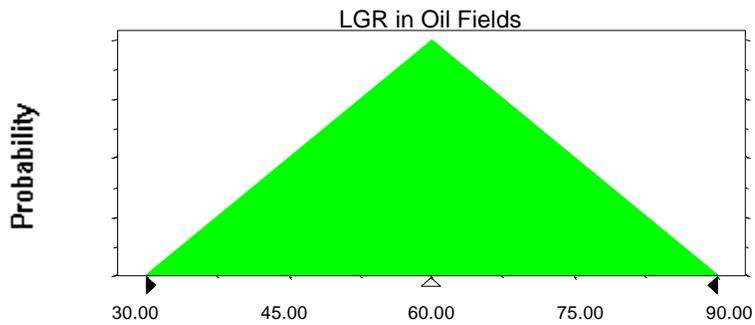
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Assumption: LGR in Oil Fields

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 60.04



Assumption: Number of Gas Fields

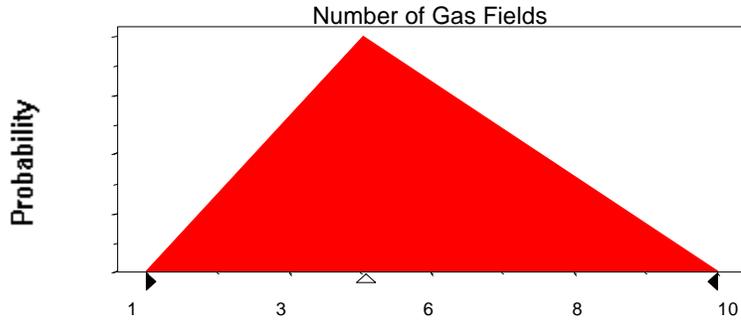
Triangular distribution with parameters:

Minimum	1
Likeliest	4
Maximum	10

Selected range is from 1 to 10
Mean value in simulation was 5

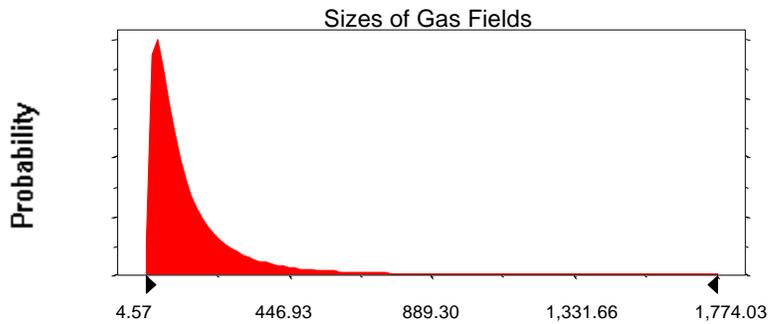
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Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:	147.46	Shifted parameters	207.46
Mean	147.46	Standard Deviation	191.39
Standard Deviation	191.39		
Selected range is from 0.00 to 1,940.00		60.00 to 2,000.00	
Mean value in simulation was 145.12		205.12	



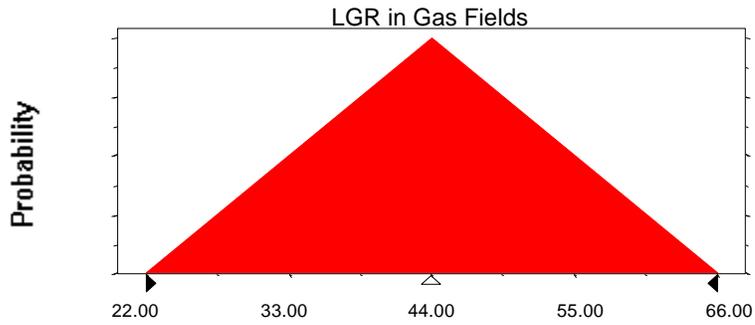
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Assumption: LGR in Gas Fields

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 44.02



End of Assumptions

Simulation started on 12/28/99 at 14:26:05
Simulation stopped on 12/28/99 at 14:54:21