

Central Graben, Assessment Unit 40250103
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	2	1.00	1,726	4,391	8,833	4,740	1,259	3,424	7,555	3,791	69	201	478	227	182	430	874	466
Gas Fields	12						3,231	9,169	19,523	10,011	148	445	1,034	500	474	1,256	3,140	1,452
Total		1.00	1,726	4,391	8,833	4,740	4,490	12,594	27,079	13,801	218	646	1,512	728				

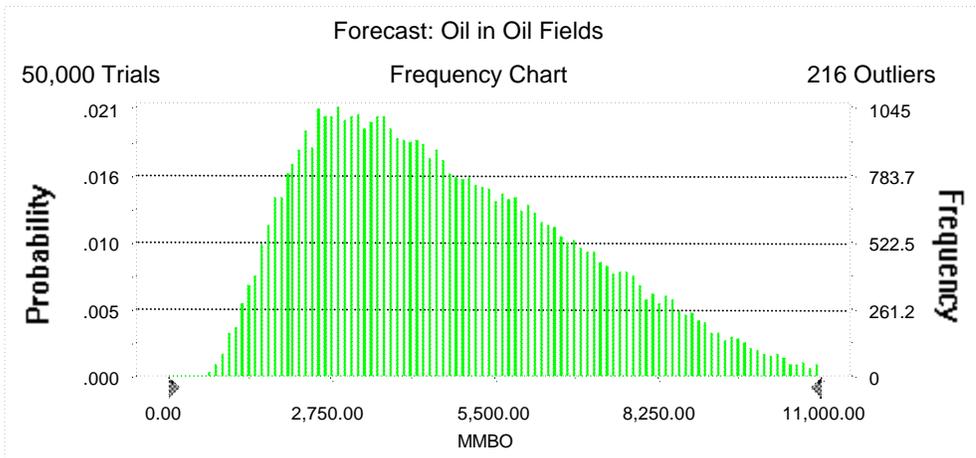
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Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 11,000.00 MMBO
Entire range is from 446.34 to 13,690.07 MMBO
After 50,000 trials, the standard error of the mean is 9.92

Statistics:	Value
Trials	50000
Mean	4,739.58
Median	4,390.75
Mode	---
Standard Deviation	2,217.16
Variance	4,915,806.15
Skewness	0.58
Kurtosis	2.72
Coefficient of Variability	0.47
Range Minimum	446.34
Range Maximum	13,690.07
Range Width	13,243.73
Mean Standard Error	9.92



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	446.34
95%	1,726.39
90%	2,106.47
85%	2,415.17
80%	2,697.23
75%	2,966.83
70%	3,240.08
65%	3,519.32
60%	3,794.93
55%	4,086.66
50%	4,390.75
45%	4,709.46
40%	5,063.30
35%	5,434.57
30%	5,819.36
25%	6,239.69
20%	6,708.77
15%	7,250.80
10%	7,915.23
5%	8,833.14
0%	13,690.07

End of Forecast

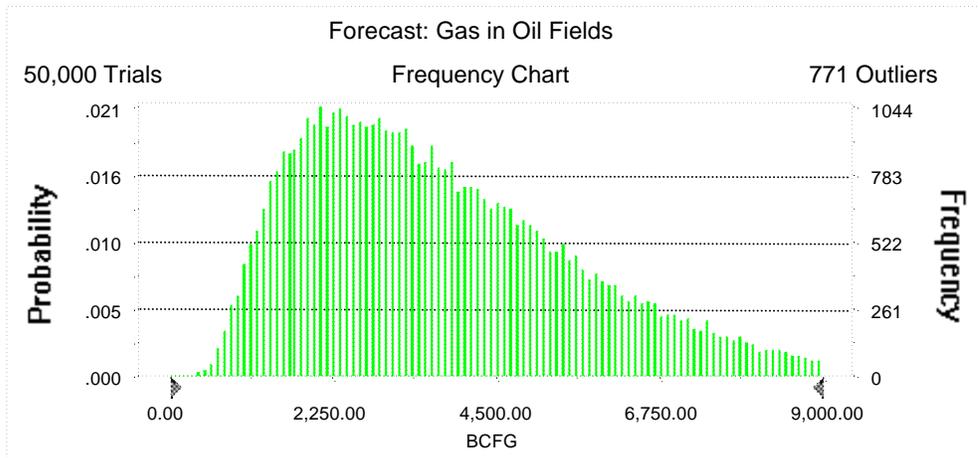
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Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 9,000.00 BCFG
Entire range is from 229.65 to 13,153.01 BCFG
After 50,000 trials, the standard error of the mean is 8.80

Statistics:	Value
Trials	50000
Mean	3,790.63
Median	3,424.05
Mode	---
Standard Deviation	1,968.69
Variance	3,875,736.63
Skewness	0.87
Kurtosis	3.56
Coefficient of Variability	0.52
Range Minimum	229.65
Range Maximum	13,153.01
Range Width	12,923.36
Mean Standard Error	8.80



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	229.65
95%	1,259.22
90%	1,557.94
85%	1,816.08
80%	2,047.17
75%	2,271.31
70%	2,489.16
65%	2,717.49
60%	2,944.97
55%	3,183.06
50%	3,424.05
45%	3,686.90
40%	3,961.55
35%	4,269.69
30%	4,599.18
25%	4,959.80
20%	5,380.15
15%	5,890.95
10%	6,564.38
5%	7,555.32
0%	13,153.01

End of Forecast

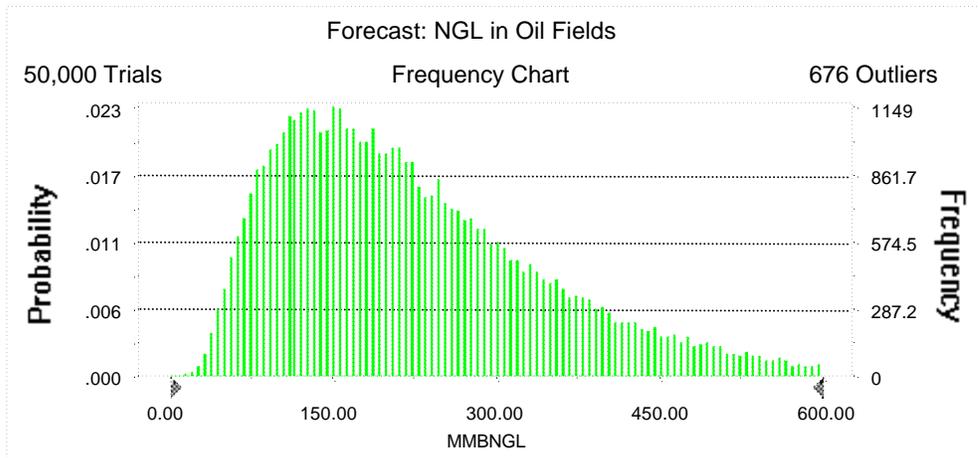
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Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 600.00 MMBNGL
Entire range is from 14.43 to 1,125.87 MMBNGL
After 50,000 trials, the standard error of the mean is 0.58

Statistics:	Value
Trials	50000
Mean	227.26
Median	200.84
Mode	---
Standard Deviation	129.01
Variance	16,643.68
Skewness	1.12
Kurtosis	4.53
Coefficient of Variability	0.57
Range Minimum	14.43
Range Maximum	1,125.87
Range Width	1,111.43
Mean Standard Error	0.58



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	14.43
95%	69.42
90%	87.42
85%	102.87
80%	116.66
75%	130.02
70%	143.66
65%	157.10
60%	171.04
55%	185.76
50%	200.84
45%	216.23
40%	233.05
35%	252.06
30%	272.89
25%	296.35
20%	324.36
15%	358.90
10%	404.22
5%	477.85
0%	1,125.87

End of Forecast

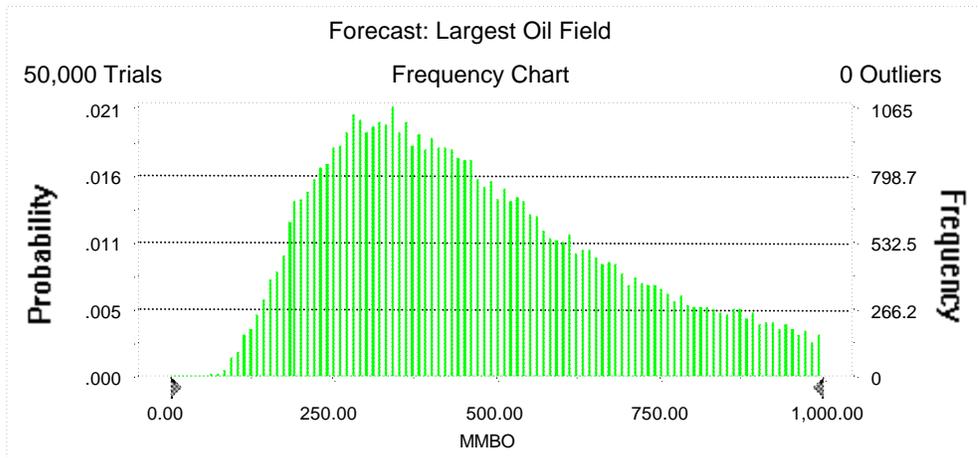
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Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 1,000.00 MMBO
Entire range is from 52.79 to 999.90 MMBO
After 50,000 trials, the standard error of the mean is 0.94

Statistics:	Value
Trials	50000
Mean	465.61
Median	430.11
Mode	---
Standard Deviation	209.99
Variance	44,095.18
Skewness	0.57
Kurtosis	2.53
Coefficient of Variability	0.45
Range Minimum	52.79
Range Maximum	999.90
Range Width	947.11
Mean Standard Error	0.94



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	52.79
95%	181.65
90%	217.52
85%	248.59
80%	275.58
75%	300.54
70%	325.48
65%	350.07
60%	376.02
55%	403.05
50%	430.11
45%	458.39
40%	489.75
35%	523.73
30%	560.40
25%	604.04
20%	653.12
15%	711.40
10%	782.54
5%	874.25
0%	999.90

End of Forecast

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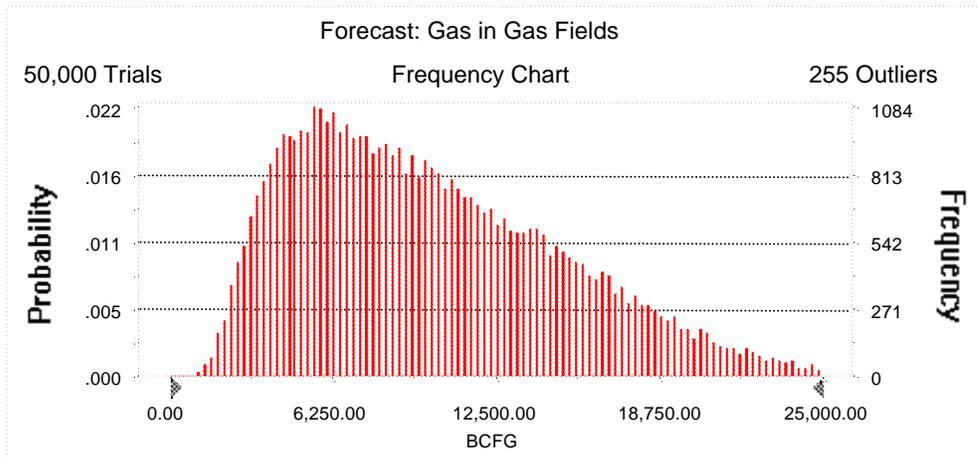
Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 25,000.00 BCFG
 Entire range is from 822.41 to 38,391.06 BCFG
 After 50,000 trials, the standard error of the mean is 22.91

Statistics:

	<u>Value</u>
Trials	50000
Mean	10,010.57
Median	9,169.46
Mode	---
Standard Deviation	5,123.35
Variance	26,248,702.96
Skewness	0.68
Kurtosis	2.97
Coefficient of Variability	0.51
Range Minimum	822.41
Range Maximum	38,391.06
Range Width	37,568.65
Mean Standard Error	22.91



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Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	822.41
95%	3,230.56
90%	4,020.71
85%	4,676.10
80%	5,318.64
75%	5,912.93
70%	6,505.88
65%	7,140.45
60%	7,784.67
55%	8,465.52
50%	9,169.46
45%	9,904.44
40%	10,664.48
35%	11,494.24
30%	12,392.04
25%	13,410.48
20%	14,470.46
15%	15,738.63
10%	17,288.45
5%	19,523.36
0%	38,391.06

End of Forecast

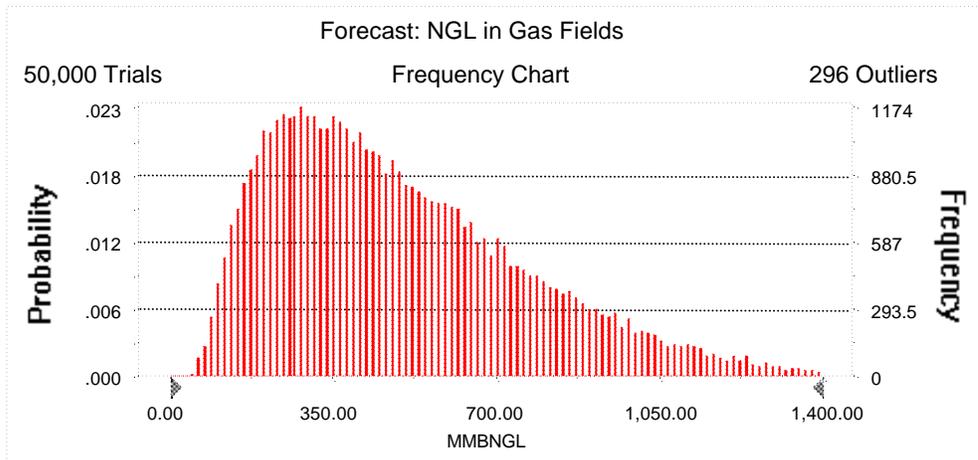
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Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 1,400.00 MMBNGL
Entire range is from 31.75 to 2,058.67 MMBNGL
After 50,000 trials, the standard error of the mean is 1.25

Statistics:	Value
Trials	50000
Mean	500.35
Median	444.69
Mode	---
Standard Deviation	279.88
Variance	78,333.69
Skewness	0.95
Kurtosis	3.82
Coefficient of Variability	0.56
Range Minimum	31.75
Range Maximum	2,058.67
Range Width	2,026.91
Mean Standard Error	1.25



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	31.75
95%	148.35
90%	188.19
85%	221.67
80%	252.81
75%	283.35
70%	313.94
65%	345.50
60%	377.02
55%	410.37
50%	444.69
45%	482.10
40%	522.22
35%	566.48
30%	611.97
25%	663.25
20%	724.16
15%	798.81
10%	892.96
5%	1,034.49
0%	2,058.67

End of Forecast

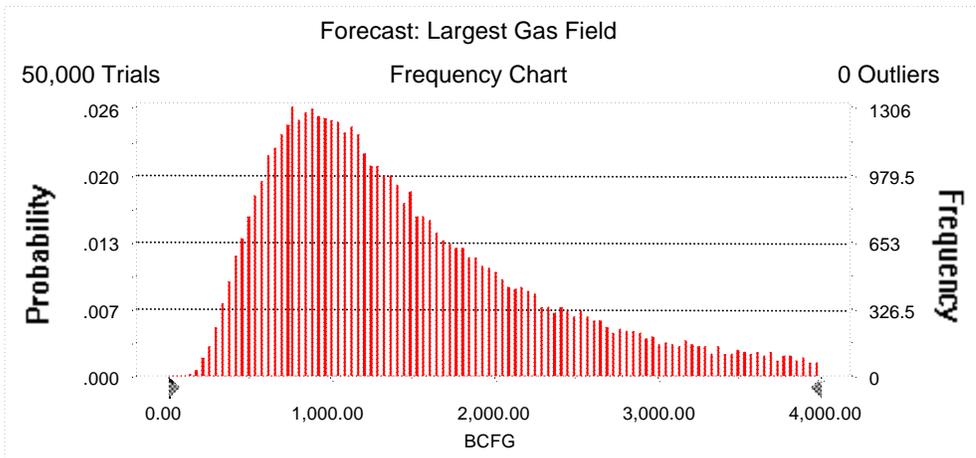
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Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 4,000.00 BCFG
 Entire range is from 129.09 to 3,999.80 BCFG
 After 50,000 trials, the standard error of the mean is 3.60

Statistics:	<u>Value</u>
Trials	50000
Mean	1,452.25
Median	1,256.31
Mode	---
Standard Deviation	805.53
Variance	648,883.03
Skewness	0.98
Kurtosis	3.43
Coefficient of Variability	0.55
Range Minimum	129.09
Range Maximum	3,999.80
Range Width	3,870.71
Mean Standard Error	3.60



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Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	129.09
95%	473.69
90%	591.26
85%	684.11
80%	767.34
75%	845.48
70%	922.69
65%	1,001.93
60%	1,082.48
55%	1,166.04
50%	1,256.31
45%	1,355.29
40%	1,462.83
35%	1,584.33
30%	1,723.76
25%	1,887.92
20%	2,078.24
15%	2,323.66
10%	2,648.46
5%	3,140.22
0%	3,999.80

End of Forecast

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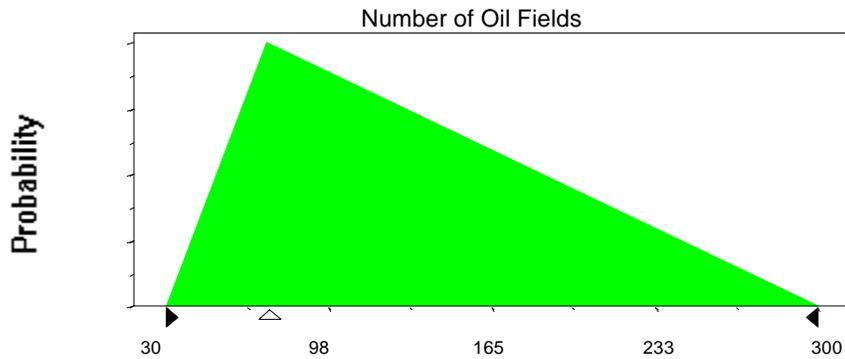
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	30
Likeliest	73
Maximum	300

Selected range is from 30 to 300
Mean value in simulation was 134



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	34.87
Standard Deviation	86.80

Shifted parameters

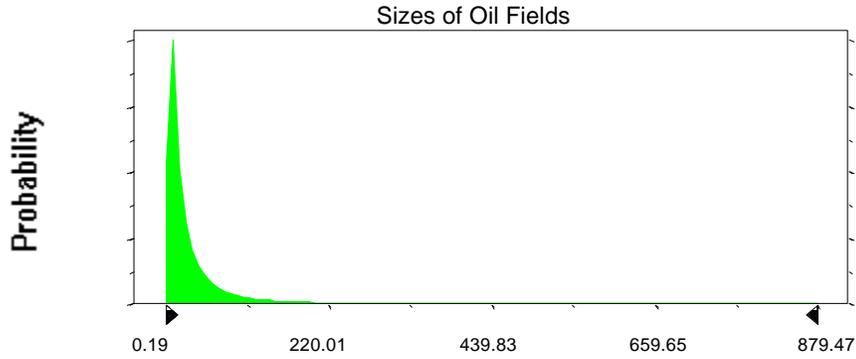
36.87
86.8

Selected range is from 0.00 to 998.00
Mean value in simulation was 33.19

2.00 to 1,000.00
35.19

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Assumption: Sizes of Oil Fields (cont'd)



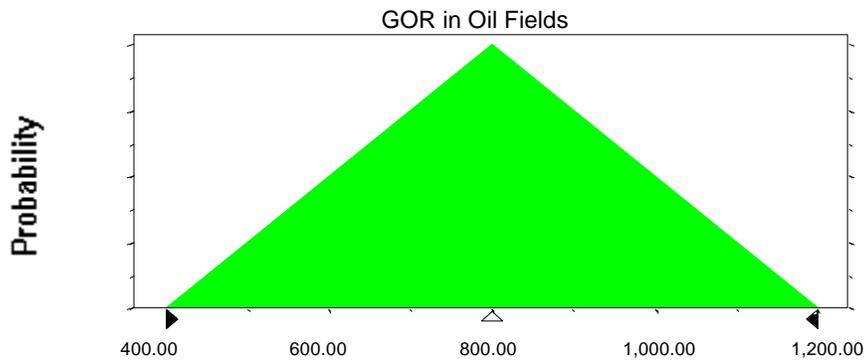
Assumption: GOR in Oil Fields

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 799.72



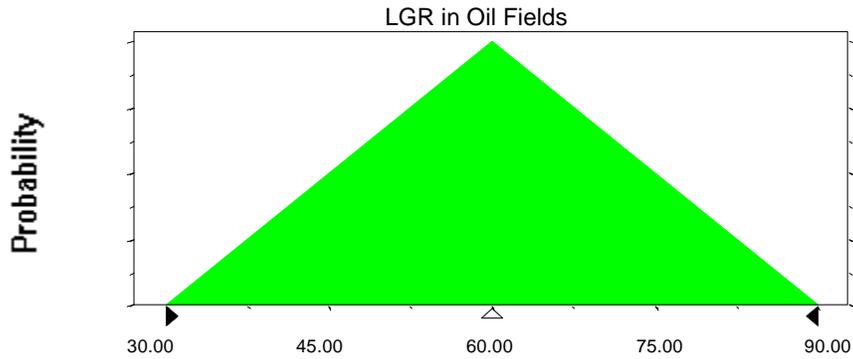
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Assumption: LGR in Oil Fields

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 59.97



Assumption: Number of Gas Fields

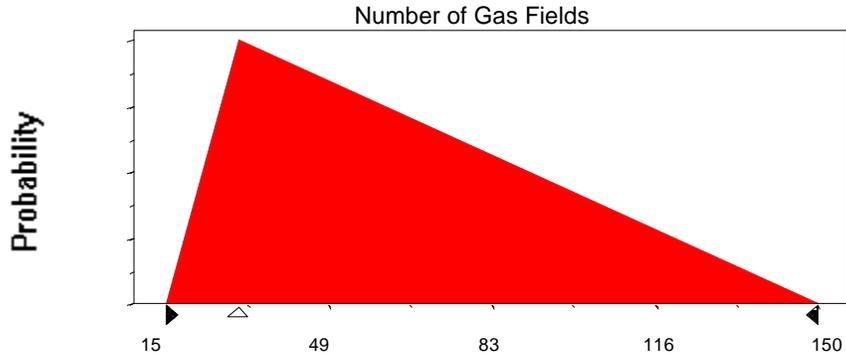
Triangular distribution with parameters:

Minimum	15
Likeliest	30
Maximum	150

Selected range is from 15 to 150
Mean value in simulation was 65

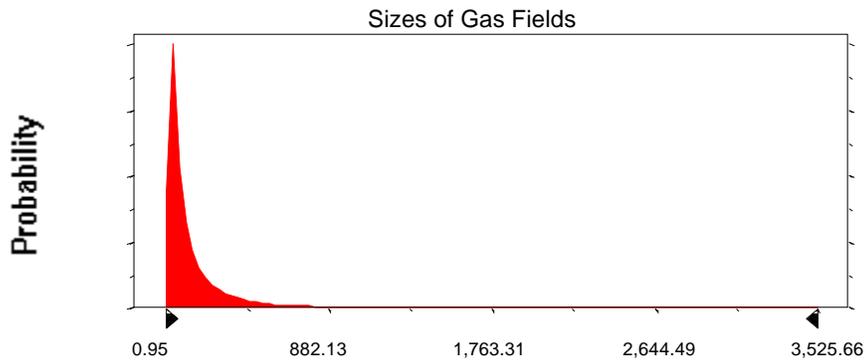
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Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	148.07	160.07
Standard Deviation	347.81	347.81
Selected range is from 0.00 to 3,988.00		12.00 to 4,000.00
Mean value in simulation was 141.06		153.06



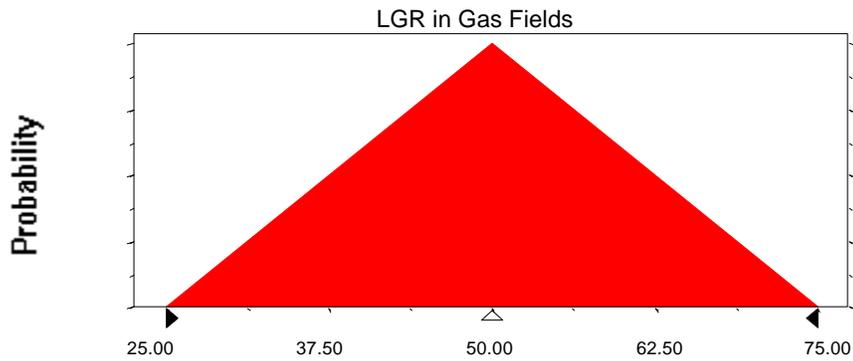
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Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	25.00
Likeliest	50.00
Maximum	75.00

Selected range is from 25.00 to 75.00
Mean value in simulation was 50.01



End of Assumptions

Simulation started on 8/6/99 at 9:58:24
Simulation stopped on 8/6/99 at 11:30:59