

Central, Assessment Unit 60960101
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	273	1,113	3,032	1,312	250	1,101	3,458	1,384	14	64	215	83	64	295	1,281	426
Gas Fields	6						100	596	2,195	796	4	26	100	36	62	298	1,361	449
Total		1.00	273	1,113	3,032	1,312	351	1,698	5,653	2,180	18	91	315	119				

60960101
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Monte Carlo Results

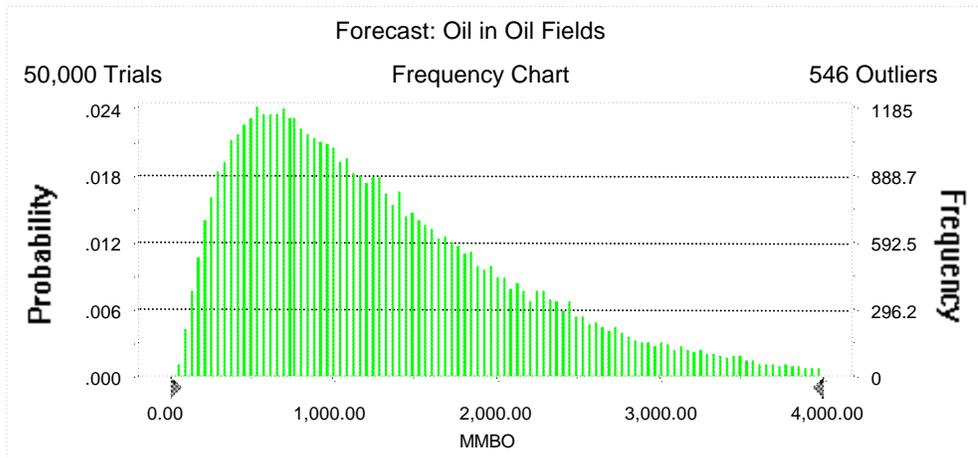
Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 4,000.00 MMBO
Entire range is from 34.36 to 7,594.37 MMBO
After 50,000 trials, the standard error of the mean is 3.93

Statistics:

	<u>Value</u>
Trials	50000
Mean	1,312.25
Median	1,112.64
Mode	---
Standard Deviation	879.36
Variance	773,275.49
Skewness	1.21
Kurtosis	4.85
Coefficient of Variability	0.67
Range Minimum	34.36
Range Maximum	7,594.37
Range Width	7,560.02
Mean Standard Error	3.93



**60960101
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Monte Carlo Results**

Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	34.36
95%	272.71
90%	378.96
85%	471.57
80%	558.53
75%	644.85
70%	731.09
65%	818.50
60%	912.96
55%	1,009.95
50%	1,112.64
45%	1,225.67
40%	1,340.91
35%	1,469.56
30%	1,614.75
25%	1,780.26
20%	1,973.09
15%	2,215.14
10%	2,514.80
5%	3,031.93
0%	7,594.37

End of Forecast

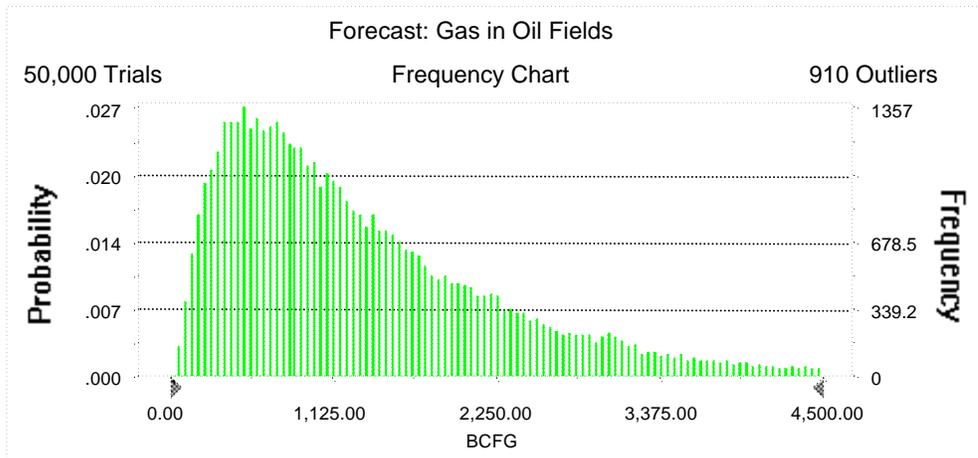
60960101
Central
Monte Carlo Results

Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 4,500.00 BCFG
Entire range is from 19.12 to 10,734.97 BCFG
After 50,000 trials, the standard error of the mean is 4.76

Statistics:	Value
Trials	50000
Mean	1,383.59
Median	1,101.44
Mode	---
Standard Deviation	1,063.88
Variance	1,131,848.24
Skewness	1.70
Kurtosis	7.30
Coefficient of Variability	0.77
Range Minimum	19.12
Range Maximum	10,734.97
Range Width	10,715.84
Mean Standard Error	4.76



60960101
Central
Monte Carlo Results

Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	19.12
95%	250.49
90%	355.09
85%	442.64
80%	528.47
75%	616.01
70%	705.60
65%	795.24
60%	891.03
55%	992.13
50%	1,101.44
45%	1,217.01
40%	1,349.74
35%	1,495.20
30%	1,657.37
25%	1,853.01
20%	2,088.63
15%	2,375.72
10%	2,792.19
5%	3,458.14
0%	10,734.97

End of Forecast

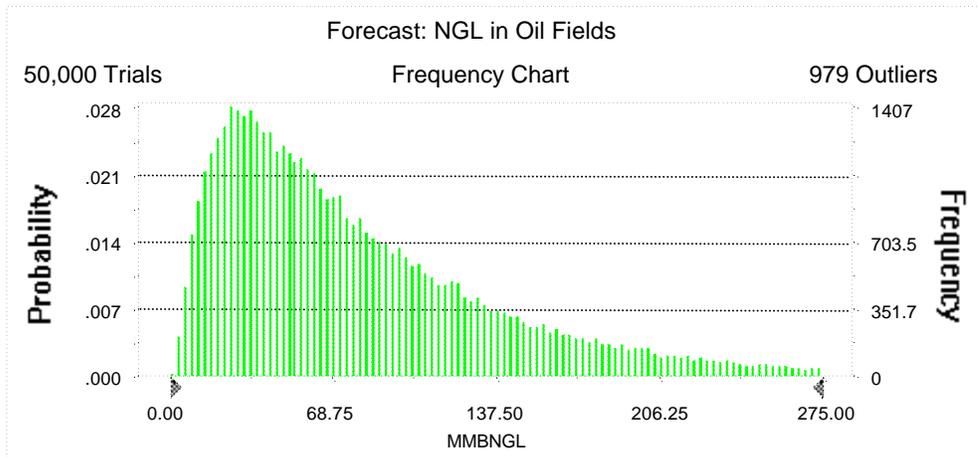
60960101
Central
Monte Carlo Results

Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 275.00 MMBNGL
Entire range is from 1.07 to 793.29 MMBNGL
After 50,000 trials, the standard error of the mean is 0.30

Statistics:	Value
Trials	50000
Mean	83.11
Median	64.43
Mode	---
Standard Deviation	67.32
Variance	4,532.13
Skewness	1.92
Kurtosis	8.98
Coefficient of Variability	0.81
Range Minimum	1.07
Range Maximum	793.29
Range Width	792.21
Mean Standard Error	0.30



60960101
Central
Monte Carlo Results

Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	1.07
95%	14.13
90%	20.15
85%	25.42
80%	30.36
75%	35.33
70%	40.56
65%	46.08
60%	51.88
55%	57.95
50%	64.43
45%	71.75
40%	79.81
35%	88.83
30%	98.96
25%	110.94
20%	125.26
15%	143.68
10%	170.11
5%	214.58
0%	793.29

End of Forecast

60960101
Central
Monte Carlo Results

Forecast: Largest Oil Field

Summary:

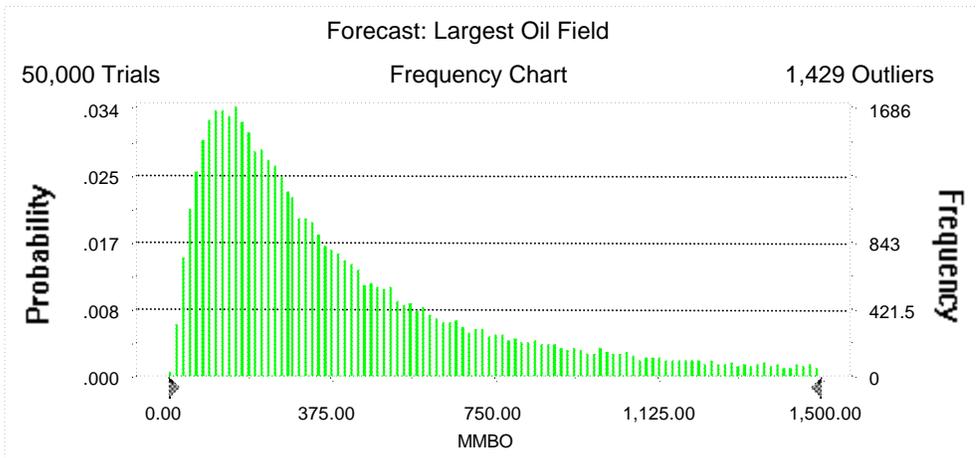
Display range is from 0.00 to 1,500.00 MMBO

Entire range is from 5.67 to 1,999.93 MMBO

After 50,000 trials, the standard error of the mean is 1.71

Statistics:

	<u>Value</u>
Trials	50000
Mean	425.67
Median	294.97
Mode	---
Standard Deviation	383.42
Variance	147,011.81
Skewness	1.70
Kurtosis	5.76
Coefficient of Variability	0.90
Range Minimum	5.67
Range Maximum	1,999.93
Range Width	1,994.26
Mean Standard Error	1.71



60960101
Central
Monte Carlo Results

Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	5.67
95%	64.32
90%	90.74
85%	113.89
80%	136.08
75%	158.68
70%	182.03
65%	207.26
60%	234.43
55%	262.86
50%	294.97
45%	332.44
40%	374.46
35%	423.54
30%	483.20
25%	556.85
20%	651.15
15%	779.12
10%	966.03
5%	1,281.41
0%	1,999.93

End of Forecast

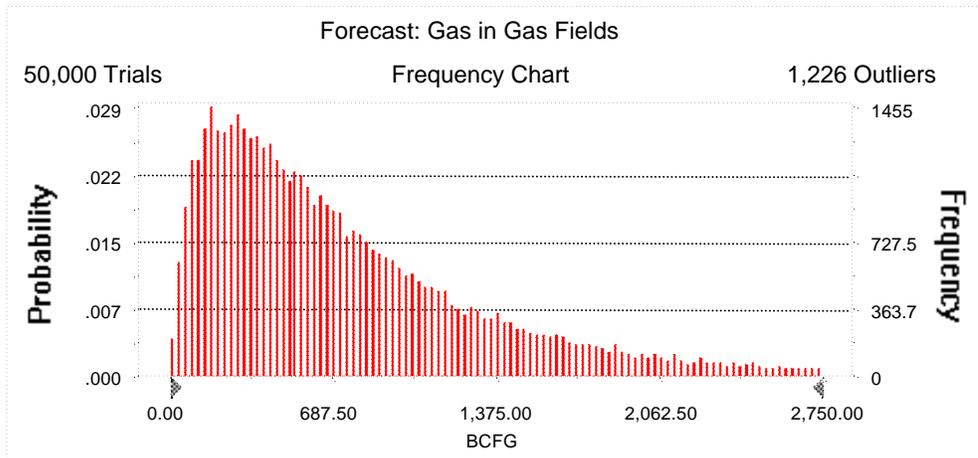
60960101
Central
Monte Carlo Results

Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 2,750.00 BCFG
Entire range is from 7.47 to 8,233.67 BCFG
After 50,000 trials, the standard error of the mean is 3.17

Statistics:	Value
Trials	50000
Mean	796.44
Median	596.27
Mode	---
Standard Deviation	709.07
Variance	502,786.39
Skewness	2.07
Kurtosis	9.37
Coefficient of Variability	0.89
Range Minimum	7.47
Range Maximum	8,233.67
Range Width	8,226.20
Mean Standard Error	3.17



**60960101
Central
Monte Carlo Results**

Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	7.47
95%	100.14
90%	156.74
85%	204.73
80%	256.09
75%	305.78
70%	358.10
65%	412.57
60%	469.21
55%	532.00
50%	596.27
45%	667.56
40%	743.99
35%	833.83
30%	935.31
25%	1,054.71
20%	1,201.93
15%	1,400.53
10%	1,679.60
5%	2,195.14
0%	8,233.67

End of Forecast

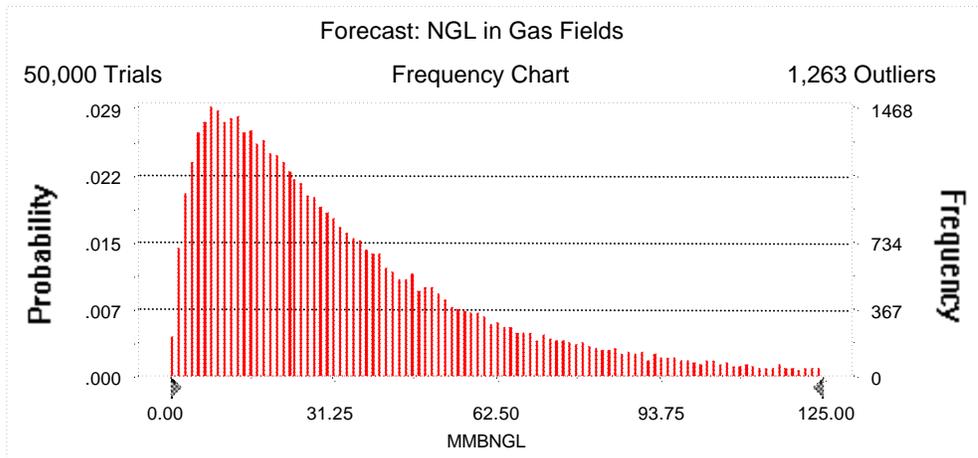
60960101
Central
Monte Carlo Results

Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 125.00 MMBNGL
Entire range is from 0.26 to 435.62 MMBNGL
After 50,000 trials, the standard error of the mean is 0.15

Statistics:	Value
Trials	50000
Mean	35.79
Median	26.19
Mode	---
Standard Deviation	33.04
Variance	1,091.94
Skewness	2.24
Kurtosis	10.84
Coefficient of Variability	0.92
Range Minimum	0.26
Range Maximum	435.62
Range Width	435.36
Mean Standard Error	0.15



60960101
Central
Monte Carlo Results

Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.26
95%	4.36
90%	6.77
85%	8.93
80%	11.11
75%	13.34
70%	15.64
65%	18.02
60%	20.58
55%	23.26
50%	26.19
45%	29.42
40%	32.91
35%	36.95
30%	41.60
25%	47.25
20%	54.01
15%	63.14
10%	76.68
5%	100.30
0%	435.62

End of Forecast

**60960101
Central
Monte Carlo Results**

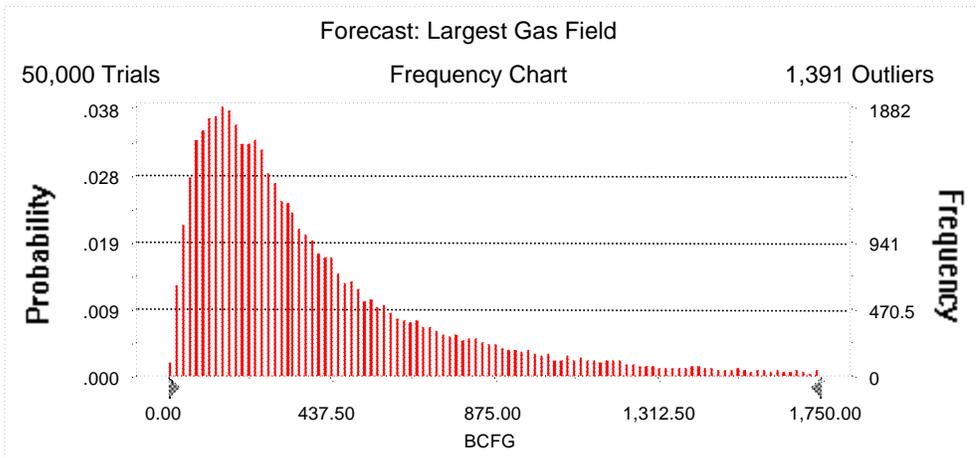
Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 1,750.00 BCFG
 Entire range is from 7.47 to 3,998.76 BCFG
 After 50,000 trials, the standard error of the mean is 2.12

Statistics:

	<u>Value</u>
Trials	50000
Mean	448.72
Median	297.68
Mode	---
Standard Deviation	475.14
Variance	225,754.26
Skewness	2.85
Kurtosis	14.15
Coefficient of Variability	1.06
Range Minimum	7.47
Range Maximum	3,998.76
Range Width	3,991.29
Mean Standard Error	2.12



**60960101
Central
Monte Carlo Results**

Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	7.47
95%	61.55
90%	88.93
85%	114.17
80%	138.04
75%	161.46
70%	185.71
65%	211.60
60%	238.83
55%	265.72
50%	297.68
45%	333.58
40%	374.01
35%	421.27
30%	477.60
25%	549.61
20%	645.76
15%	774.45
10%	966.49
5%	1,360.55
0%	3,998.76

End of Forecast

60960101
Central
Monte Carlo Results

Assumptions

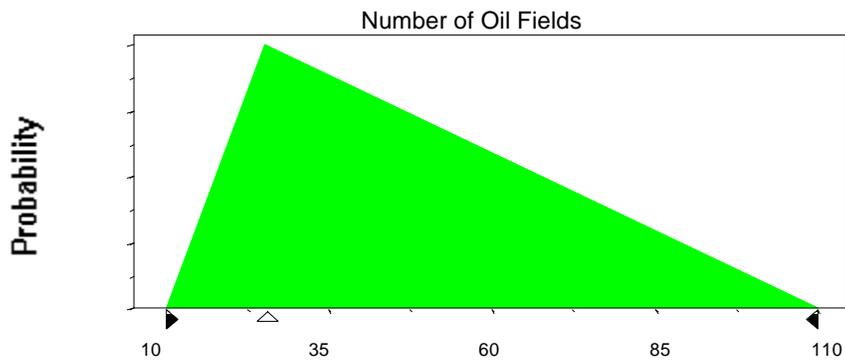
Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	10
Likeliest	26
Maximum	110

Selected range is from 10 to 110

Mean value in simulation was 49



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	30.22
Standard Deviation	226.27

Shifted parameters

31.22
226.27

Selected range is from 0.00 to 1,999.00

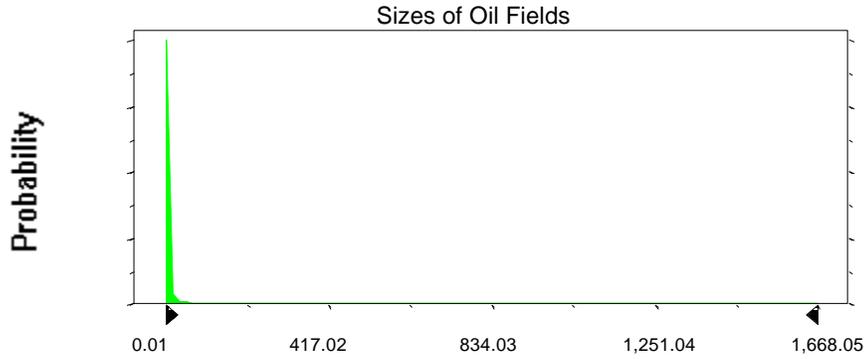
Mean value in simulation was 25.48

1.00 to 2,000.00

26.48

60960101
Central
Monte Carlo Results

Assumption: Sizes of Oil Fields (cont'd)



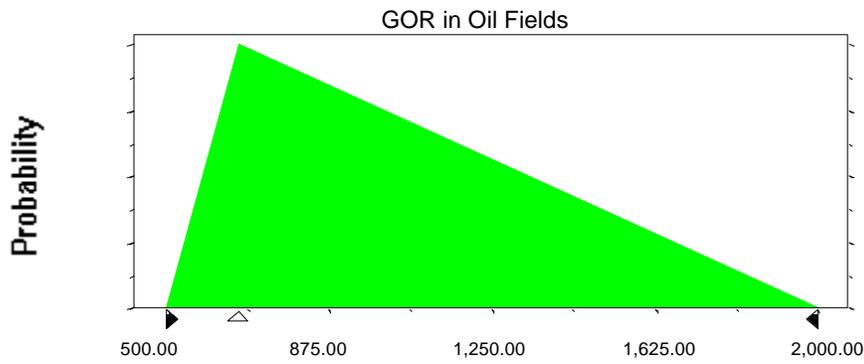
Assumption: GOR in Oil Fields

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 1,054.66



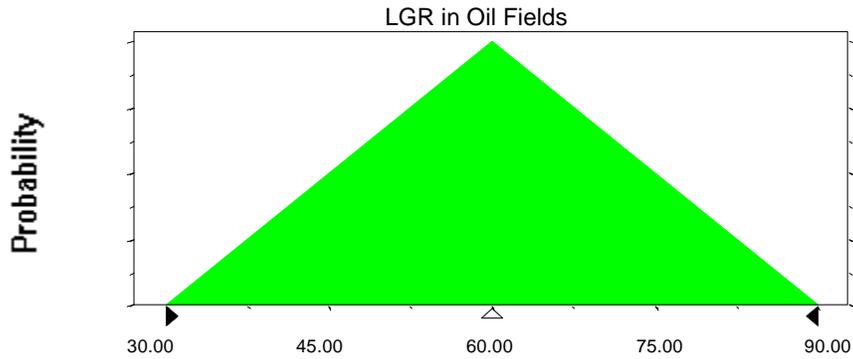
60960101
Central
Monte Carlo Results

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 60.06



Assumption: Number of Gas Fields

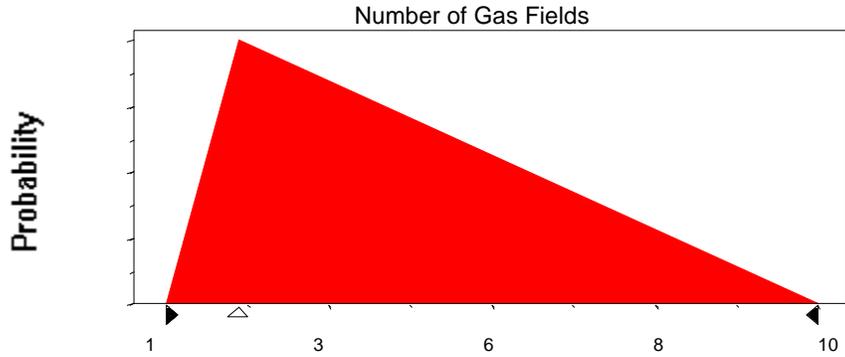
Triangular distribution with parameters:

Minimum	1
Likeliest	2
Maximum	10

Selected range is from 1 to 10
Mean value in simulation was 4

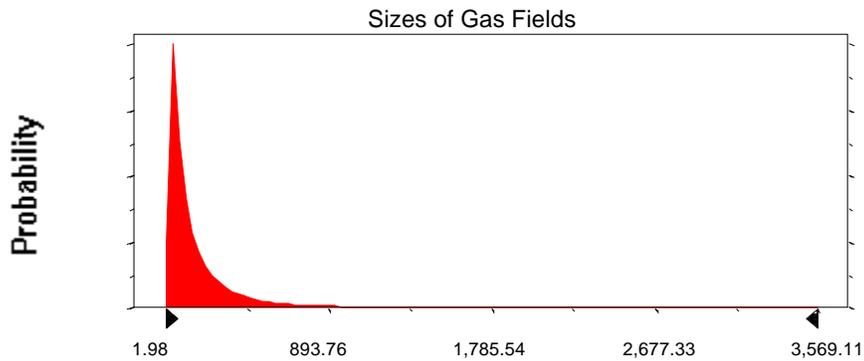
60960101
Central
Monte Carlo Results

Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	183.42	189.42
Standard Deviation	356.02	356.02
Selected range is from 0.00 to 3,994.00		6.00 to 4,000.00
Mean value in simulation was 180.77		186.77



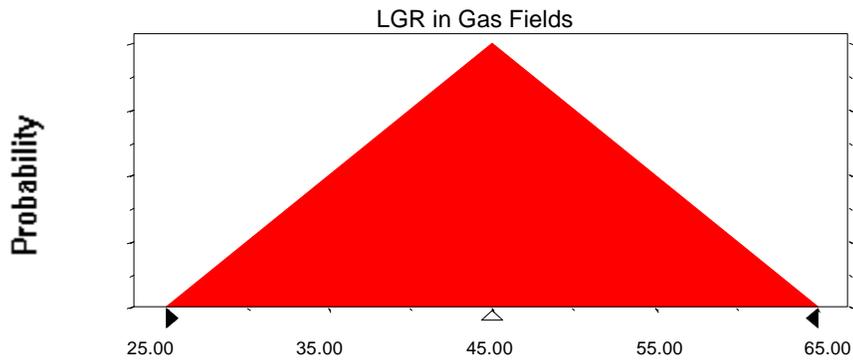
60960101
Central
Monte Carlo Results

Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	25.00
Likeliest	45.00
Maximum	65.00

Selected range is from 25.00 to 65.00
Mean value in simulation was 44.96



End of Assumptions

Simulation started on 7/13/99 at 16:31:13
Simulation stopped on 7/13/99 at 17:01:26