

**Subsalt Jurassic, Assessment Unit 11080103  
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	7	1.00	26	79	190	90	35	117	310	137	2	7	19	8	11	26	83	34
Gas Fields	42						627	1,902	4,134	2,082	17	56	131	63	166	467	1,565	607
Total		1.00	26	79	190	90	662	2,019	4,444	2,219	19	63	150	71				

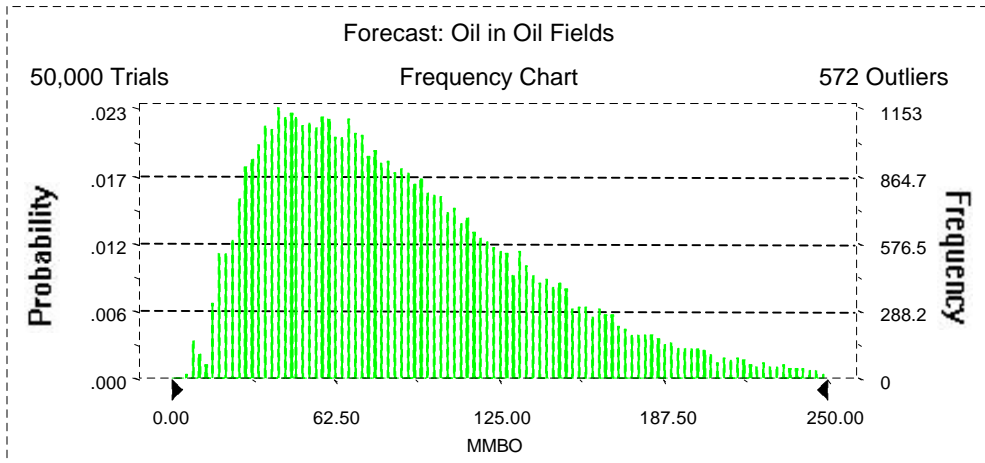
**11080103**  
**Subsalt Jurassic**  
**Monte Carlo Results**

**Forecast: Oil in Oil Fields**

Summary:

Display range is from 0.00 to 250.00 MMBO  
Entire range is from 7.07 to 458.21 MMBO  
After 50,000 trials, the standard error of the mean is 0.24

Statistics:	Value
Trials	50000
Mean	89.85
Median	79.34
Mode	---
Standard Deviation	52.62
Variance	2,768.67
Skewness	1.14
Kurtosis	4.75
Coefficient of Variability	0.59
Range Minimum	7.07
Range Maximum	458.21
Range Width	451.14
Mean Standard Error	0.24



**11080103**  
**Subsalt Jurassic**  
**Monte Carlo Results**

**Forecast: Oil in Oil Fields (cont'd)**

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	7.07
95%	25.59
90%	32.63
85%	38.64
80%	44.26
75%	49.75
70%	55.51
65%	61.15
60%	67.15
55%	72.99
50%	79.34
45%	86.07
40%	93.26
35%	100.74
30%	109.24
25%	118.73
20%	129.88
15%	143.34
10%	161.19
5%	189.74
0%	458.21

End of Forecast

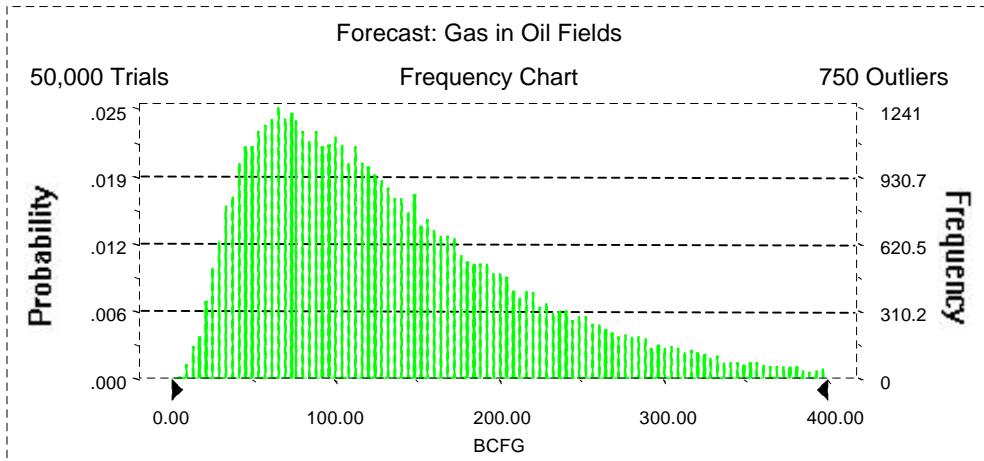
**11080103**  
**Subsalt Jurassic**  
**Monte Carlo Results**

**Forecast: Gas in Oil Fields**

Summary:

Display range is from 0.00 to 400.00 BCFG  
Entire range is from 6.53 to 941.55 BCFG  
After 50,000 trials, the standard error of the mean is 0.40

Statistics:	Value
Trials	50000
Mean	137.43
Median	117.07
Mode	---
Standard Deviation	88.80
Variance	7,885.59
Skewness	1.40
Kurtosis	5.88
Coefficient of Variability	0.65
Range Minimum	6.53
Range Maximum	941.55
Range Width	935.03
Mean Standard Error	0.40



**11080103**  
**Subsalt Jurassic**  
**Monte Carlo Results**

**Forecast: Gas in Oil Fields (cont'd)**

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	6.53
95%	34.95
90%	45.75
85%	54.86
80%	63.42
75%	71.66
70%	79.97
65%	88.95
60%	97.97
55%	107.21
50%	117.07
45%	127.34
40%	138.81
35%	151.01
30%	165.08
25%	181.22
20%	200.36
15%	224.08
10%	257.03
5%	309.79
0%	941.55

End of Forecast

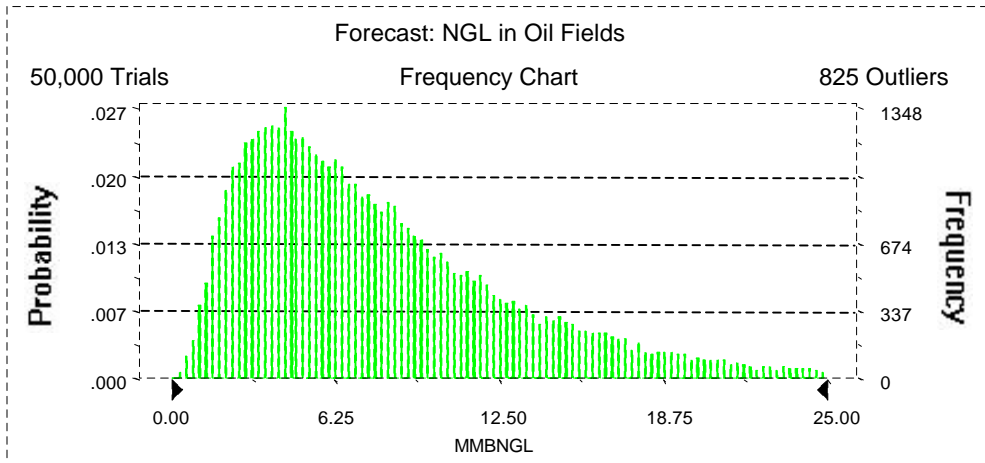
**11080103**  
**Subsalt Jurassic**  
**Monte Carlo Results**

**Forecast: NGL in Oil Fields**

Summary:

Display range is from 0.00 to 25.00 MMBNGL  
Entire range is from 0.27 to 70.33 MMBNGL  
After 50,000 trials, the standard error of the mean is 0.03

Statistics:	Value
Trials	50000
Mean	8.23
Median	6.82
Mode	---
Standard Deviation	5.69
Variance	32.41
Skewness	1.61
Kurtosis	7.18
Coefficient of Variability	0.69
Range Minimum	0.27
Range Maximum	70.33
Range Width	70.06
Mean Standard Error	0.03



**11080103**  
**Subsalt Jurassic**  
**Monte Carlo Results**

**Forecast: NGL in Oil Fields (cont'd)**

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.27
95%	1.93
90%	2.57
85%	3.11
80%	3.62
75%	4.12
70%	4.59
65%	5.12
60%	5.65
55%	6.24
50%	6.82
45%	7.48
40%	8.19
35%	8.93
30%	9.80
25%	10.83
20%	12.06
15%	13.63
10%	15.78
5%	19.30
0%	70.33

End of Forecast

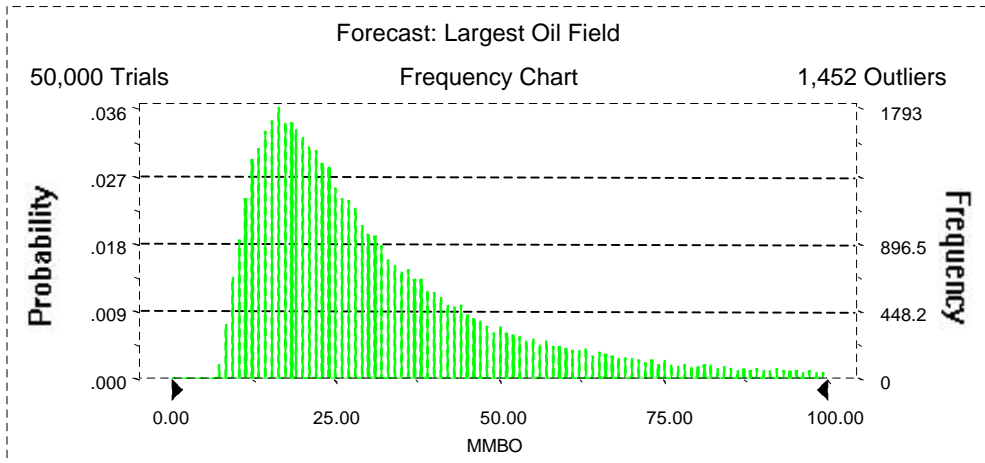
**11080103**  
**Subsalt Jurassic**  
**Monte Carlo Results**

**Forecast: Largest Oil Field**

Summary:

Display range is from 0.00 to 100.00 MMBO  
 Entire range is from 7.07 to 199.68 MMBO  
 After 50,000 trials, the standard error of the mean is 0.11

Statistics:	<u>Value</u>
Trials	50000
Mean	33.56
Median	25.85
Mode	---
Standard Deviation	25.05
Variance	627.34
Skewness	2.48
Kurtosis	11.36
Coefficient of Variability	0.75
Range Minimum	7.07
Range Maximum	199.68
Range Width	192.61
Mean Standard Error	0.11





**11080103**  
**Subsalt Jurassic**  
**Monte Carlo Results**

**Forecast: Largest Oil Field (cont'd)**

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	7.07
95%	11.39
90%	13.19
85%	14.77
80%	16.23
75%	17.66
70%	19.13
65%	20.66
60%	22.28
55%	23.99
50%	25.85
45%	27.95
40%	30.28
35%	33.04
30%	36.37
25%	40.23
20%	45.15
15%	52.19
10%	62.84
5%	82.83
0%	199.68

End of Forecast

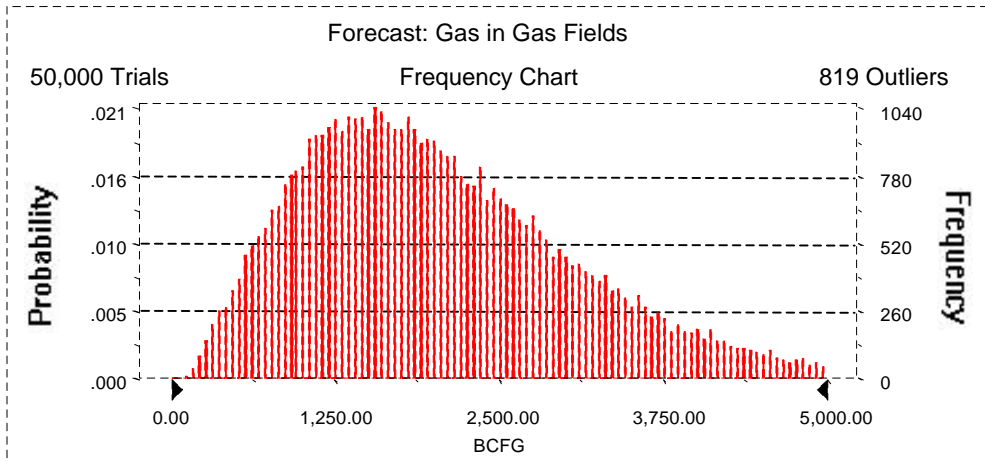
**11080103**  
**Subsalt Jurassic**  
**Monte Carlo Results**

**Forecast: Gas in Gas Fields**

Summary:

Display range is from 0.00 to 5,000.00 BCFG  
 Entire range is from 97.53 to 9,367.10 BCFG  
 After 50,000 trials, the standard error of the mean is 4.90

Statistics:	<u>Value</u>
Trials	50000
Mean	2,081.63
Median	1,901.99
Mode	---
Standard Deviation	1,095.99
Variance	1,201,196.93
Skewness	0.95
Kurtosis	4.25
Coefficient of Variability	0.53
Range Minimum	97.53
Range Maximum	9,367.10
Range Width	9,269.57
Mean Standard Error	4.90



**11080103**  
**Subsalt Jurassic**  
**Monte Carlo Results**

**Forecast: Gas in Gas Fields (cont'd)**

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	97.53
95%	626.57
90%	836.90
85%	998.23
80%	1,138.71
75%	1,270.44
70%	1,396.96
65%	1,522.17
60%	1,645.61
55%	1,774.74
50%	1,901.99
45%	2,038.43
40%	2,182.16
35%	2,345.11
30%	2,513.22
25%	2,704.56
20%	2,923.83
15%	3,200.96
10%	3,561.05
5%	4,134.11
0%	9,367.10

End of Forecast

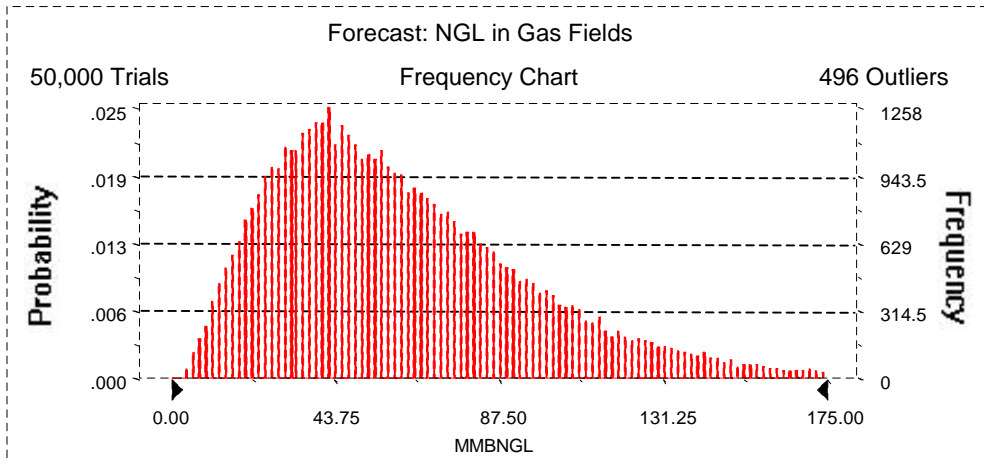
**11080103**  
**Subsalt Jurassic**  
**Monte Carlo Results**

**Forecast: NGL in Gas Fields**

Summary:

Display range is from 0.00 to 175.00 MMBNGL  
 Entire range is from 1.66 to 316.69 MMBNGL  
 After 50,000 trials, the standard error of the mean is 0.16

Statistics:	<u>Value</u>
Trials	50000
Mean	62.55
Median	55.69
Mode	---
Standard Deviation	35.92
Variance	1,290.36
Skewness	1.19
Kurtosis	5.16
Coefficient of Variability	0.57
Range Minimum	1.66
Range Maximum	316.69
Range Width	315.03
Mean Standard Error	0.16



**11080103**  
**Subsalt Jurassic**  
**Monte Carlo Results**

**Forecast: NGL in Gas Fields (cont'd)**

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	1.66
95%	17.44
90%	23.38
85%	28.05
80%	32.29
75%	36.32
70%	40.02
65%	43.63
60%	47.45
55%	51.44
50%	55.69
45%	59.99
40%	64.77
35%	69.83
30%	75.40
25%	81.70
20%	89.00
15%	98.09
10%	110.09
5%	130.86
0%	316.69

End of Forecast

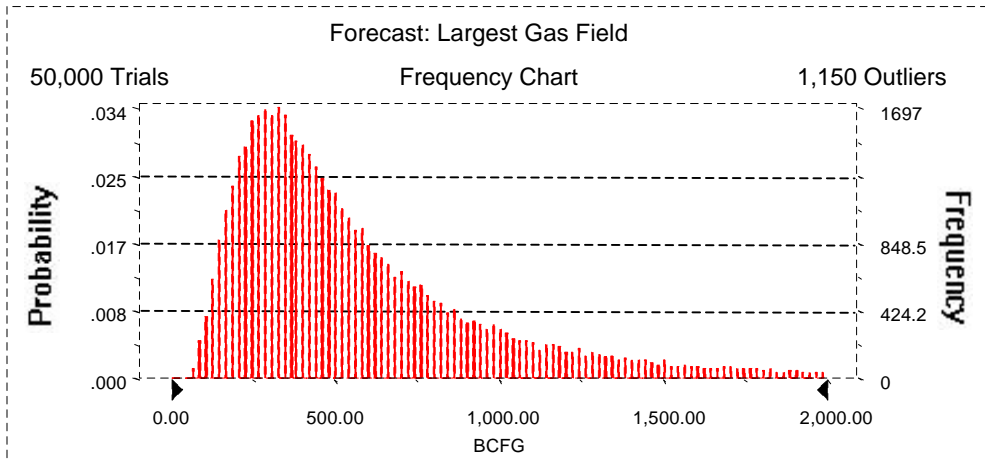
**11080103**  
**Subsalt Jurassic**  
**Monte Carlo Results**

**Forecast: Largest Gas Field**

Summary:

Display range is from 0.00 to 2,000.00 BCFG  
 Entire range is from 51.05 to 2,988.87 BCFG  
 After 50,000 trials, the standard error of the mean is 2.05

Statistics:	<u>Value</u>
Trials	50000
Mean	607.27
Median	467.26
Mode	---
Standard Deviation	458.85
Variance	210,547.82
Skewness	1.99
Kurtosis	7.74
Coefficient of Variability	0.76
Range Minimum	51.05
Range Maximum	2,988.87
Range Width	2,937.81
Mean Standard Error	2.05



**11080103**  
**Subsalt Jurassic**  
**Monte Carlo Results**

**Forecast: Largest Gas Field (cont'd)**

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	51.05
95%	166.48
90%	207.82
85%	242.10
80%	273.05
75%	303.11
70%	332.59
65%	362.84
60%	396.21
55%	430.71
50%	467.26
45%	509.32
40%	556.23
35%	609.81
30%	674.47
25%	752.67
20%	850.56
15%	985.94
10%	1,186.63
5%	1,565.21
0%	2,988.87

End of Forecast

11080103  
Subsalt Jurassic  
Monte Carlo Results

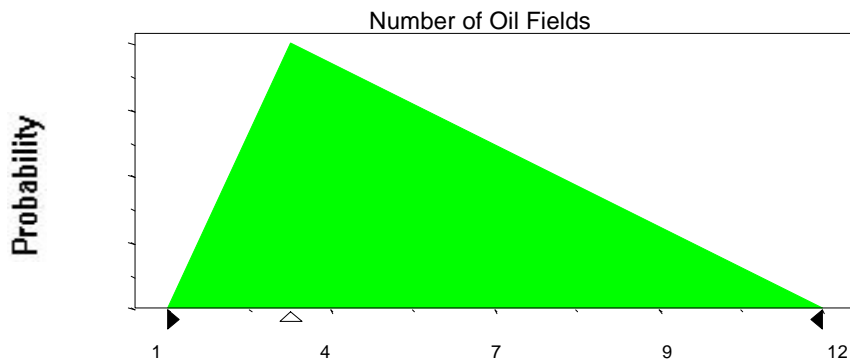
Assumptions

**Assumption: Number of Oil Fields**

Triangular distribution with parameters:

Minimum	1
Likeliest	3
Maximum	12

Selected range is from 1 to 12  
Mean value in simulation was 5



**Assumption: Sizes of Oil Fields**

Lognormal distribution with parameters:

Mean	10.06
Standard Deviation	17.55

Shifted parameters

17.06
17.55

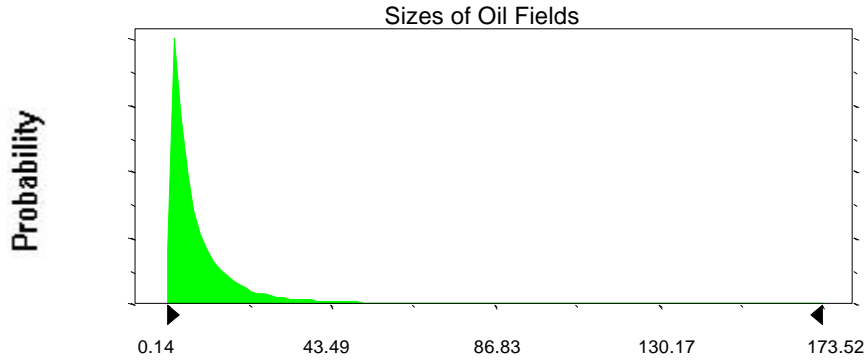
Selected range is from 0.00 to 193.00  
Mean value in simulation was 9.78

7.00 to 200.00  
16.78



11080103  
Subsalt Jurassic  
Monte Carlo Results

Assumption: Sizes of Oil Fields (cont'd)



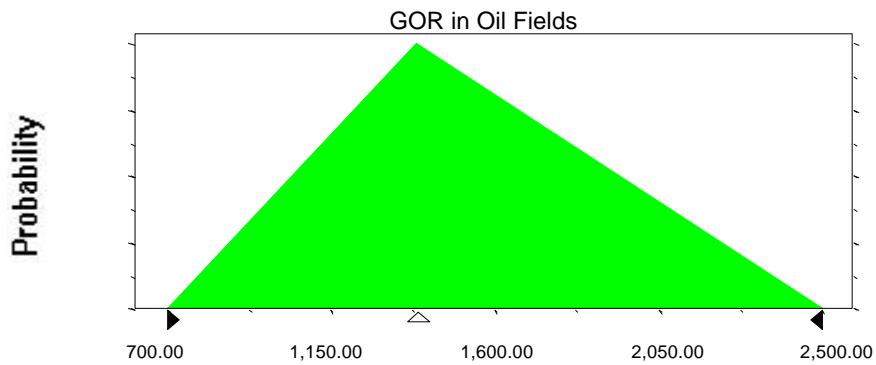
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	700.00
Likeliest	1,388.89
Maximum	2,500.00

Selected range is from 700.00 to 2,500.00

Mean value in simulation was 1,530.19



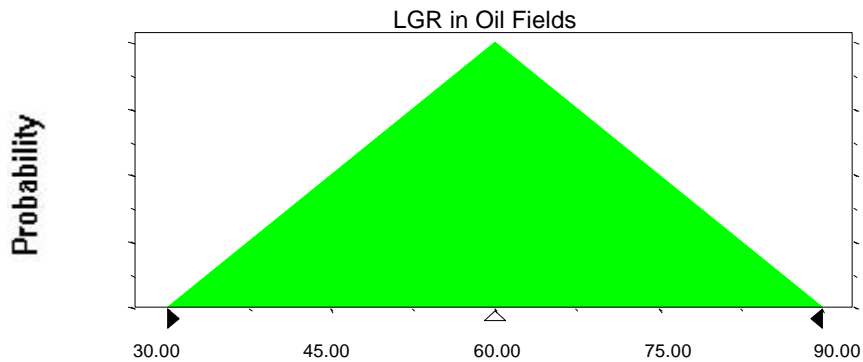
**11080103**  
**Subsalt Jurassic**  
**Monte Carlo Results**

**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 59.88



**Assumption: Number of Gas Fields**

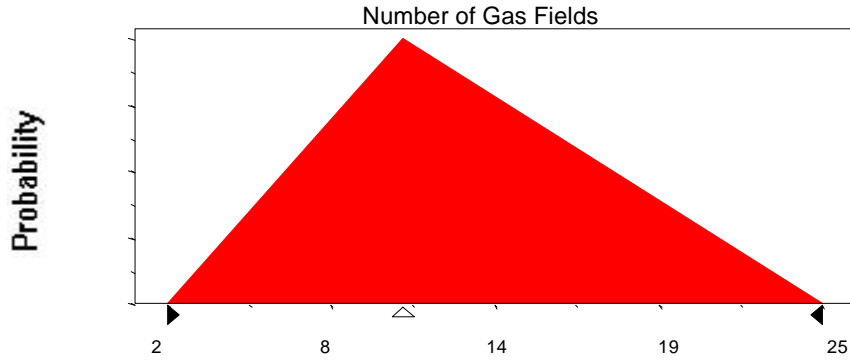
Triangular distribution with parameters:

Minimum	2
Likeliest	10
Maximum	25

Selected range is from 2 to 25  
Mean value in simulation was 12

11080103  
Subsalt Jurassic  
Monte Carlo Results

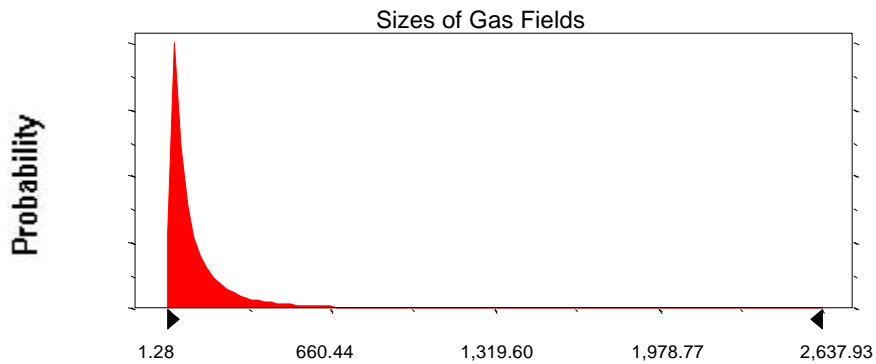
Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:	Shifted parameters	
Mean	130.32	172.32
Standard Deviation	262.21	262.21

Selected range is from 0.00 to 2,958.00                      42.00 to 3,000.00  
Mean value in simulation was 124.48                              166.48



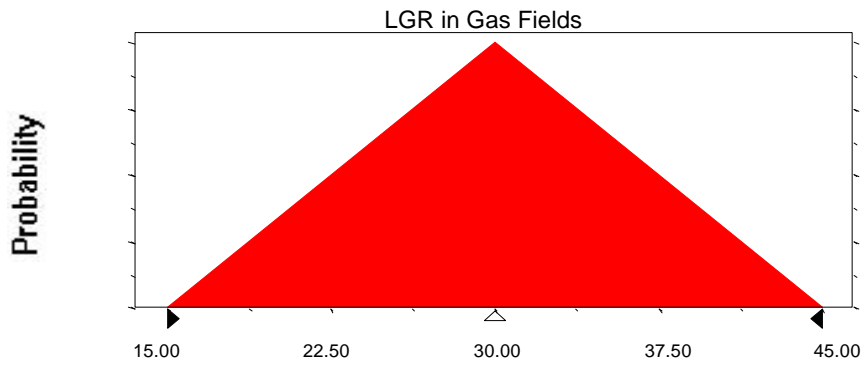
11080103  
Subsalt Jurassic  
Monte Carlo Results

**Assumption: LGR in Gas Fields**

Triangular distribution with parameters:

Minimum	15.00
Likeliest	30.00
Maximum	45.00

Selected range is from 15.00 to 45.00  
Mean value in simulation was 30.05



End of Assumptions

Simulation started on 6/25/99 at 14:27:06  
Simulation stopped on 6/25/99 at 14:45:30