### East and Southeast Margins Subsalt, Assessment Unit 10160103 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]

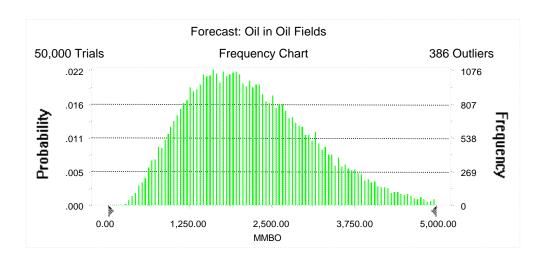
Field	MFS	Undiscovered Resources						Largest Undiscovered Field										
Field Type		Prob.	Oil (MMBO)			Gas (BCFG)			NGL (MMBNGL)			(MMBO or BCFG)						
. 7   -		(0-1)	F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean
Oil Fields	10	1.00	826	2,076	3,958	2,196	1,616	4,194	8,520	4,515	89	246	543	271	126	345	1,056	430
Gas Fields	60						741	1,995	4,760	2,267	36	99	240	113	187	562	2,207	788
Total		1.00	826	2,076	3,958	2,196	2,357	6,189	13,280	6,781	125	344	783	385				

### Forecast: Oil in Oil Fields

### Summary:

Display range is from 0.00 to 5,000.00 MMBO Entire range is from 208.61 to 7,820.40 MMBO After 50,000 trials, the standard error of the mean is 4.33

Statistics:	<u>Value</u>
Trials	50000
Mean	2,196.38
Median	2,076.04
Mode	
Standard Deviation	968.44
Variance	937,879.25
Skewness	0.67
Kurtosis	3.43
Coefficient of Variability	0.44
Range Minimum	208.61
Range Maximum	7,820.40
Range Width	7,611.79
Mean Standard Error	4.33



Forecast: Oil in Oil Fields (cont'd)

### Percentiles:

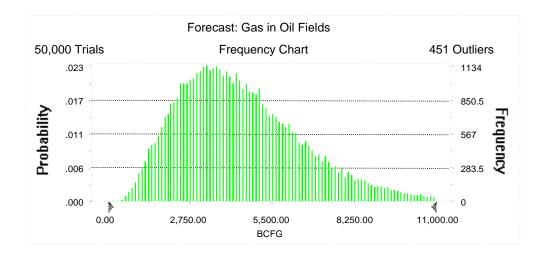
Doroontilo	MMPO
<u>Percentile</u>	MMBO
100%	208.61
95%	825.63
90%	1,039.43
85%	1,203.21
80%	1,343.96
75%	1,472.95
70%	1,595.30
65%	1,713.10
60%	1,836.14
55%	1,954.66
50%	2,076.04
45%	2,204.51
40%	2,334.57
35%	2,480.09
30%	2,632.19
25%	2,798.35
20%	2,988.59
15%	3,214.14
10%	3,514.38
5%	3,957.71
0%	7,820.40

### Forecast: Gas in Oil Fields

### Summary:

Display range is from 0.00 to 11,000.00 BCFG Entire range is from 359.30 to 21,025.31 BCFG After 50,000 trials, the standard error of the mean is 9.59

Statistics:	<u>Value</u>
Trials	50000
Mean	4,514.61
Median	4,193.59
Mode	
Standard Deviation	2,143.96
Variance	4,596,560.89
Skewness	0.89
Kurtosis	4.04
Coefficient of Variability	0.47
Range Minimum	359.30
Range Maximum	21,025.31
Range Width	20,666.01
Mean Standard Error	9.59



Forecast: Gas in Oil Fields (cont'd)

Percentiles:

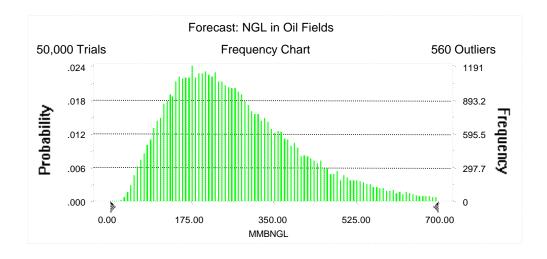
<u>BCFG</u>
359.30
1,615.76
2,046.97
2,382.56
2,663.03
2,935.97
3,191.20
3,433.17
3,682.90
3,932.37
4,193.59
4,459.98
4,740.95
5,043.07
5,366.88
5,746.76
6,174.66
6,701.24
7,392.18
8,520.18
21,025.31

### Forecast: NGL in Oil Fields

### Summary:

Display range is from 0.00 to 700.00 MMBNGL Entire range is from 19.63 to 1,560.69 MMBNGL After 50,000 trials, the standard error of the mean is 0.64

Statistics:	<u>Value</u>
Trials	50000
Mean	271.30
Median	245.54
Mode	
Standard Deviation	142.52
Variance	20,313.18
Skewness	1.11
Kurtosis	4.88
Coefficient of Variability	0.53
Range Minimum	19.63
Range Maximum	1,560.69
Range Width	1,541.06
Mean Standard Error	0.64



Forecast: NGL in Oil Fields (cont'd)

Percentiles:

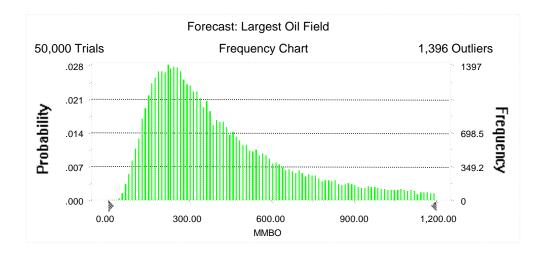
<u>Percentile</u>	<u>MMBNGI</u>
100%	19.63
95%	88.92
90%	114.13
85%	133.55
80%	150.84
75%	166.79
70%	182.2
65%	197.99
60%	213.13
55%	229.03
50%	245.54
45%	262.76
40%	280.70
35%	300.32
30%	322.75
25%	347.82
20%	377.08
15%	413.06
10%	461.6
5%	542.6
0%	1,560.69

### Forecast: Largest Oil Field

### Summary:

Display range is from 0.00 to 1,200.00 MMBO Entire range is from 28.06 to 1,499.24 MMBO After 50,000 trials, the standard error of the mean is 1.28

Statistics:	<u>Value</u>
Trials	50000
Mean	429.79
Median	344.80
Mode	
Standard Deviation	285.49
Variance	81,502.80
Skewness	1.39
Kurtosis	4.65
Coefficient of Variability	0.66
Range Minimum	28.06
Range Maximum	1,499.24
Range Width	1,471.18
Mean Standard Error	1.28



Forecast: Largest Oil Field (cont'd)

### Percentiles:

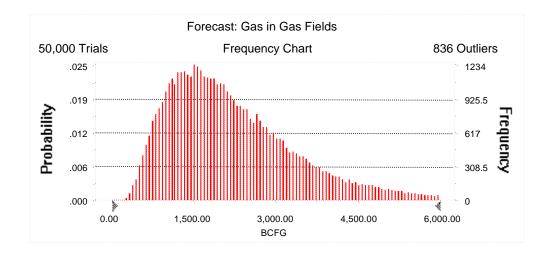
<u>Percentile</u>	MMBO
100%	28.06
95%	125.50
90%	155.77
85%	179.88
80%	202.48
75%	224.62
70%	246.66
65%	268.47
60%	292.12
55%	317.62
50%	344.80
45%	375.04
40%	411.01
35%	449.42
30%	495.05
25%	550.52
20%	618.95
15%	711.79
10%	841.35
5%	1,055.73
0%	1,499.24

### Forecast: Gas in Gas Fields

### Summary:

Display range is from 0.00 to 6,000.00 BCFG Entire range is from 221.84 to 11,752.69 BCFG After 50,000 trials, the standard error of the mean is 5.71

Statistics:	<u>Value</u>
Trials	50000
Mean	2,266.58
Median	1,995.03
Mode	
Standard Deviation	1,277.80
Variance	1,632,775.02
Skewness	1.36
Kurtosis	5.67
Coefficient of Variability	0.56
Range Minimum	221.84
Range Maximum	11,752.69
Range Width	11,530.85
Mean Standard Error	5.71



Forecast: Gas in Gas Fields (cont'd)

Percentiles:

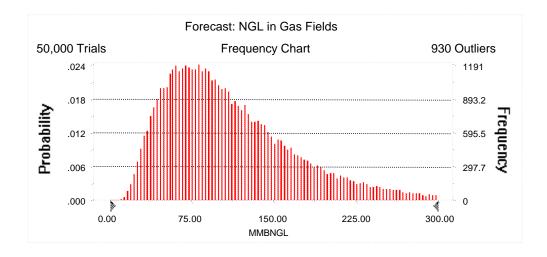
Percentile	BCFG
100%	221.84
95%	740.98
90%	926.27
85%	1,075.06
80%	1,213.77
75%	1,340.75
70%	1,470.50
65%	1,595.88
60%	1,723.67
55%	1,856.67
50%	1,995.03
45%	2,139.72
40%	2,301.11
35%	2,474.36
30%	2,672.94
25%	2,889.91
20%	3,148.18
15%	3,481.79
10%	3,942.80
5%	4,759.97
0%	11,752.69

### Forecast: NGL in Gas Fields

### Summary:

Display range is from 0.00 to 300.00 MMBNGL Entire range is from 9.43 to 718.07 MMBNGL After 50,000 trials, the standard error of the mean is 0.29

Statistics:	<u>Value</u>
Trials	50000
Mean	113.38
Median	98.79
Mode	
Standard Deviation	65.92
Variance	4,346.07
Skewness	1.46
Kurtosis	6.35
Coefficient of Variability	0.58
Range Minimum	9.43
Range Maximum	718.07
Range Width	708.64
Mean Standard Error	0.29



Forecast: NGL in Gas Fields (cont'd)

### Percentiles:

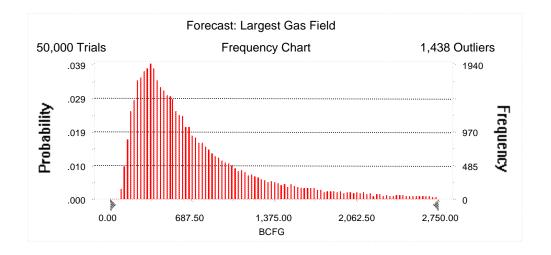
<u>Percentile</u>	MMBNGL
100%	9.43
95%	36.06
90%	45.19
85%	52.79
80%	59.51
75%	65.99
70%	72.38
65%	78.82
60%	85.34
55%	91.80
50%	98.79
45%	106.30
40%	114.43
35%	123.44
30%	133.56
25%	144.55
20%	158.33
15%	175.56
10%	199.55
5%	240.37
0%	718.07

### Forecast: Largest Gas Field

### Summary:

Display range is from 0.00 to 2,750.00 BCFG Entire range is from 75.32 to 4,999.46 BCFG After 50,000 trials, the standard error of the mean is 3.13

Statistics:	<u>Value</u>
Trials	50000
Mean	788.17
Median	562.24
Mode	
Standard Deviation	700.50
Variance	490,694.43
Skewness	2.42
Kurtosis	10.36
Coefficient of Variability	0.89
Range Minimum	75.32
Range Maximum	4,999.46
Range Width	4,924.14
Mean Standard Error	3.13



Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	75.32
95%	186.96
90%	233.32
85%	273.12
80%	310.28
75%	347.00
70%	382.77
65%	422.94
60%	466.82
55%	512.75
50%	562.24
45%	617.93
40%	682.14
35%	757.97
30%	846.90
25%	958.75
20%	1,102.46
15%	1,301.15
10%	1,617.85
5%	2,207.01
0%	4,999.46

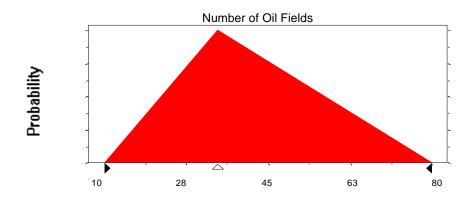
### **Assumptions**

### **Assumption: Number of Oil Fields**

I riangular distribution w	ith parameters:
Minimum	

Minimum	10
Likeliest	34
Maximum	80

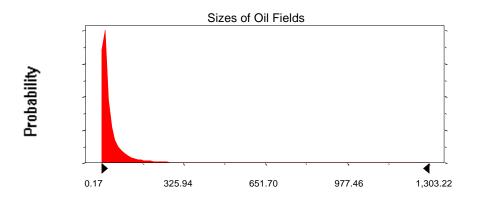
Selected range is from 10 to 80 Mean value in simulation was 41



### **Assumption: Sizes of Oil Fields**

Lognormal distribution with paran	neters:	Shifted parameters
Mean	45.39	55.39
Standard Deviation	129.66	129.66
Selected range is from 0.00 to 1,4	190.00	10.00 to 1,500.00
Mean value in simulation was 42.8	38	52.88

### Assumption: Sizes of Oil Fields (cont'd)



### Assumption: GOR in Oil Fields

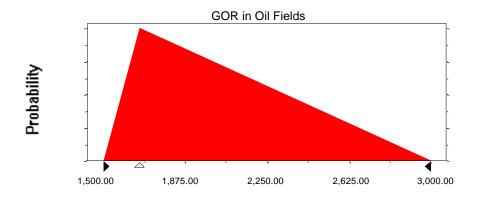
Triangular distribution with parameters:

 Minimum
 1,500.00

 Likeliest
 1,666.67

 Maximum
 3,000.00

Selected range is from 1,500.00 to 3,000.00 Mean value in simulation was 2,055.58

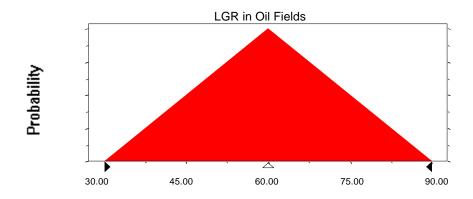


### Assumption: LGR in Oil Fields

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 60.08



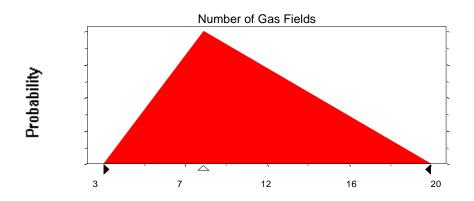
### **Assumption: Number of Gas Fields**

Triangular distribution with parameters:

Minimum	3
Likeliest	8
Maximum	20

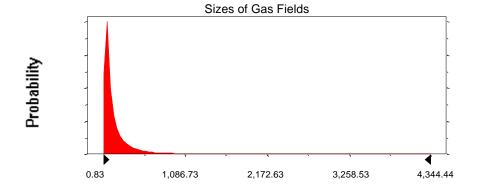
Selected range is from 3 to 20 Mean value in simulation was 10

### Assumption: Number of Gas Fields (cont'd)



### **Assumption: Sizes of Gas Fields**

Lognormal distribution with parar	neters:	Shifted parameters
Mean	166.19	226.19
Standard Deviation	429.27	429.27
Selected range is from 0.00 to 4,9	940.00	60.00 to 5,000.00
Mean value in simulation was 156	5.72	216.72

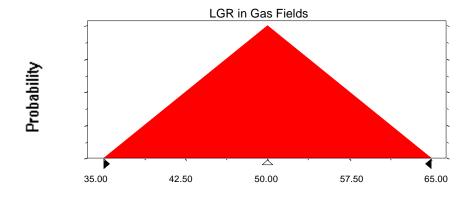


### Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	35.00
Likeliest	50.00
Maximum	65.00

Selected range is from 35.00 to 65.00 Mean value in simulation was 50.03



### End of Assumptions

Simulation started on 1/20/99 at 10:29:04 Simulation stopped on 1/20/99 at 10:56:26