## Gulf of Suez Qaa Plain, Assessment Unit 20710102 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]

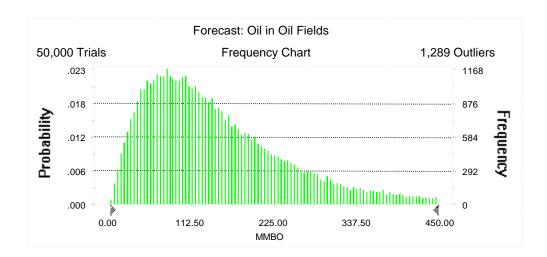
Field	MFS	IFS Prob.		Undiscovered Resources							Largest Undiscovered Field							
Type			Oil (MMBO)			Gas (BCFG)			NGL (MMBNGL)			(MMBO or BCFG)						
. )   0		(0-1)	F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean
Oil Fields	1	0.60	0	57	317	93	0	28	162	46	0	1	5	1	13	50	205	71
Gas Fields	6	0.00					0	0	0	0	0	0	0	0	NA	NA	NA	NA
Total		0.60	0	57	317	93	0	28	162	46	0	1	5	1				

### Forecast: Oil in Oil Fields

### Summary:

Display range is from 0.00 to 450.00 MMBO Entire range is from 1.34 to 1,194.09 MMBO After 50,000 trials, the standard error of the mean is 0.50

Statistics:	<u>Value</u>
Trials	50000
Mean	154.39
Median	127.12
Mode	
Standard Deviation	112.62
Variance	12,682.97
Skewness	1.64
Kurtosis	7.05
Coefficient of Variability	0.73
Range Minimum	1.34
Range Maximum	1,194.09
Range Width	1,192.76
Mean Standard Error	0.50



Forecast: Oil in Oil Fields (cont'd)

# Percentiles:

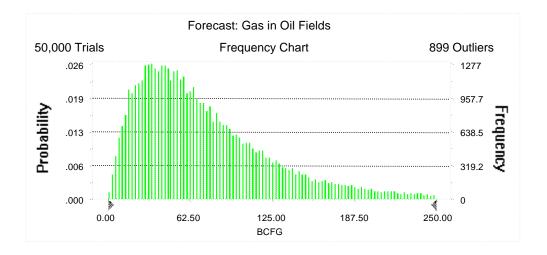
<u>Percentile</u>	MMBO
100%	1.34
95%	29.30
90%	42.43
85%	53.55
80%	64.07
75%	74.28
70%	84.14
65%	94.49
60%	104.94
55%	115.67
50%	127.12
45%	139.50
40%	152.61
35%	167.30
30%	184.57
25%	203.66
20%	227.43
15%	257.31
10%	299.41
5%	377.01
0%	1,194.09

### Forecast: Gas in Oil Fields

### Summary:

Display range is from 0.00 to 250.00 BCFG Entire range is from 0.65 to 676.29 BCFG After 50,000 trials, the standard error of the mean is 0.26

Statistics:	<u>Value</u>
Trials	50000
Mean	77.23
Median	62.56
Mode	
Standard Deviation	58.28
Variance	3,396.81
Skewness	1.77
Kurtosis	7.91
Coefficient of Variability	0.75
Range Minimum	0.65
Range Maximum	676.29
Range Width	675.64
Mean Standard Error	0.26



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

## Percentiles:

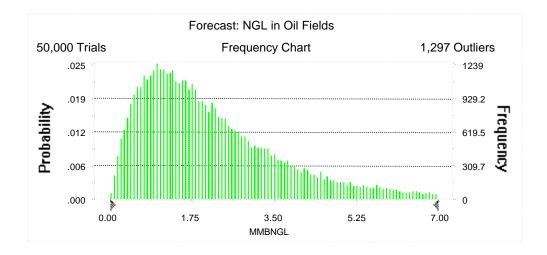
<u>Percentile</u>	<u>BCFG</u>
100%	0.65
95%	14.14
90%	20.43
85%	26.09
80%	31.20
75%	36.16
70%	41.23
65%	46.23
60%	51.50
55%	56.83
50%	62.56
45%	68.67
40%	75.51
35%	83.27
30%	91.68
25%	101.84
20%	113.98
15%	129.26
10%	151.40
5%	191.58
0%	676.29

### Forecast: NGL in Oil Fields

### Summary:

Display range is from 0.00 to 7.00 MMBNGL Entire range is from 0.02 to 21.59 MMBNGL After 50,000 trials, the standard error of the mean is 0.01

Statistics:	<u>Value</u>
Trials	50000
Mean	2.32
Median	1.85
Mode	
Standard Deviation	1.79
Variance	3.22
Skewness	1.85
Kurtosis	8.33
Coefficient of Variability	0.77
Range Minimum	0.02
Range Maximum	21.59
Range Width	21.57
Mean Standard Error	0.01



Forecast: NGL in Oil Fields (cont'd)

# Percentiles:

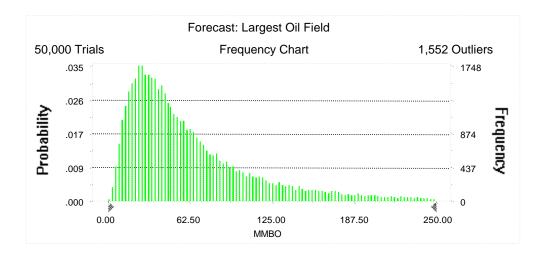
<u>Percentile</u>	MMBNGL
100%	0.02
95%	0.41
90%	0.60
85%	0.76
80%	0.92
75%	1.06
70%	1.21
65%	1.36
60%	1.52
55%	1.68
50%	1.85
45%	2.04
40%	2.25
35%	2.48
30%	2.74
25%	3.05
20%	3.42
15%	3.90
10%	4.59
5%	5.82
0%	21.59

# Forecast: Largest Oil Field

### Summary:

Display range is from 0.00 to 250.00 MMBO Entire range is from 1.34 to 498.43 MMBO After 50,000 trials, the standard error of the mean is 0.30

Statistics:	<u>Value</u>
Trials	50000
Mean	71.09
Median	49.91
Mode	
Standard Deviation	67.32
Variance	4,531.95
Skewness	2.47
Kurtosis	10.92
Coefficient of Variability	0.95
Range Minimum	1.34
Range Maximum	498.43
Range Width	497.09
Mean Standard Error	0.30



# Forecast: Largest Oil Field (cont'd)

# Percentiles:

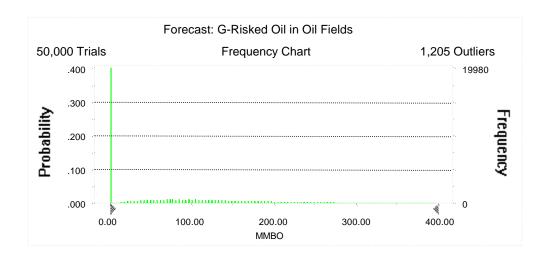
<u>Percentile</u>	MMBO
100%	1.34
95%	12.58
90%	17.31
85%	21.33
80%	25.01
75%	28.66
70%	32.49
65%	36.37
60%	40.55
55%	44.91
50%	49.91
45%	55.55
40%	61.76
35%	68.70
30%	77.13
25%	87.73
20%	101.63
15%	120.08
10%	149.49
5%	205.49
0%	498.43

### Forecast: G-Risked Oil in Oil Fields

### Summary:

Display range is from 0.00 to 400.00 MMBO Entire range is from 0.00 to 1,194.09 MMBO After 50,000 trials, the standard error of the mean is 0.52

Statistics:	<u>Value</u>
Trials	50000
Mean	92.67
Median	57.23
Mode	0.00
Standard Deviation	115.26
Variance	13,284.97
Skewness	1.71
Kurtosis	7.04
Coefficient of Variability	1.24
Range Minimum	0.00
Range Maximum	1,194.09
Range Width	1,194.09
Mean Standard Error	0.52



# Forecast: G-Risked Oil in Oil Fields (cont'd)

## Percentiles:

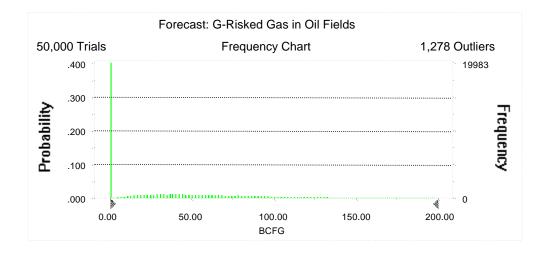
<u>Percentile</u>	MMBO
100%	0.00
95%	0.00
90%	0.00
85%	0.00
80%	0.00
75%	0.00
70%	0.00
65%	0.00
60%	5.21
55%	39.22
50%	57.23
45%	74.28
40%	90.90
35%	108.24
30%	127.27
25%	148.22
20%	173.06
15%	204.57
10%	246.92
5%	316.62
0%	1,194.09

### Forecast: G-Risked Gas in Oil Fields

### Summary:

Display range is from 0.00 to 200.00 BCFG Entire range is from 0.00 to 676.29 BCFG After 50,000 trials, the standard error of the mean is 0.26

Statistics:	<u>Value</u>
Trials	50000
Mean	46.37
Median	28.01
Mode	0.00
Standard Deviation	58.93
Variance	3,473.24
Skewness	1.86
Kurtosis	8.08
Coefficient of Variability	1.27
Range Minimum	0.00
Range Maximum	676.29
Range Width	676.29
Mean Standard Error	0.26



# Forecast: G-Risked Gas in Oil Fields (cont'd)

## Percentiles:

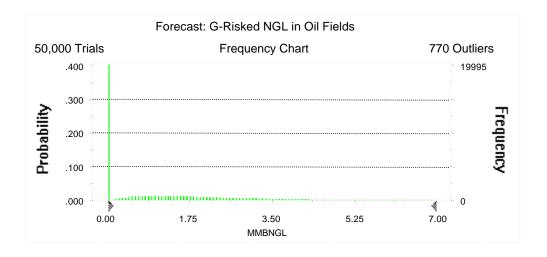
<u>Percentile</u>	<u>BCFG</u>
100%	0.00
95%	0.00
90%	0.00
85%	0.00
80%	0.00
75%	0.00
70%	0.00
65%	0.00
60%	2.48
55%	18.57
50%	28.01
45%	36.23
40%	44.50
35%	53.22
30%	62.68
25%	73.36
20%	85.95
15%	101.86
10%	123.56
5%	162.12
0%	676.29

### Forecast: G-Risked NGL in Oil Fields

### Summary:

Display range is from 0.00 to 7.00 MMBNGL Entire range is from 0.00 to 21.59 MMBNGL After 50,000 trials, the standard error of the mean is 0.01

Statistics:	<u>Value</u>
Trials	50000
Mean	1.39
Median	0.82
Mode	0.00
Standard Deviation	1.79
Variance	3.22
Skewness	1.95
Kurtosis	8.65
Coefficient of Variability	1.29
Range Minimum	0.00
Range Maximum	21.59
Range Width	21.59
Mean Standard Error	0.01



# Forecast: G-Risked NGL in Oil Fields (cont'd)

## Percentiles:

<u>Percentile</u>	MMBNGL
100%	0.00
95%	0.00
90%	0.00
85%	0.00
80%	0.00
75%	0.00
70%	0.00
65%	0.00
60%	0.07
55%	0.55
50%	0.82
45%	1.06
40%	1.31
35%	1.57
30%	1.85
25%	2.18
20%	2.57
15%	3.06
10%	3.72
5%	4.88
0%	21.59

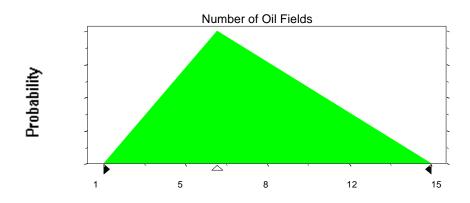
# **Assumptions**

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

Triangular	distribution	with	parameters:
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Minimum	1
Likeliest	6
Maximum	15

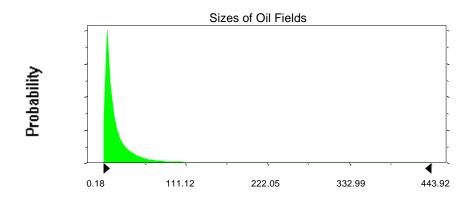
Selected range is from 1 to 15 Mean value in simulation was 7



# **Assumption: Sizes of Oil Fields**

Lognormal distribution with parameters:		Shifted parameters
Mean	20.94	21.94
Standard Deviation	43.98	43.98
Selected range is from 0.00 to 499.00		1.00 to 500.00
Mean value in simulation was 20.03	21.03	

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

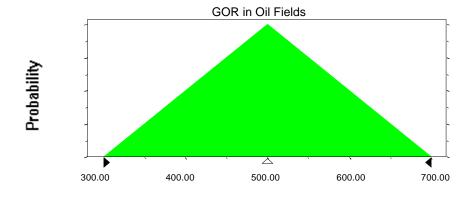


## Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	300.00
Likeliest	500.00
Maximum	700.00

Selected range is from 300.00 to 700.00 Mean value in simulation was 500.49



# Assumption: LGR in Oil Fields

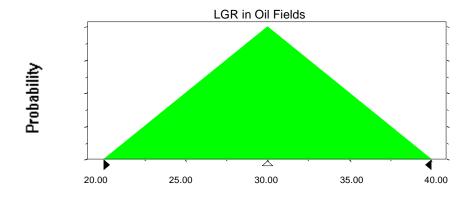
Triangular distribution with parameters:

 Minimum
 20.00

 Likeliest
 30.00

 Maximum
 40.00

Selected range is from 20.00 to 40.00 Mean value in simulation was 29.97



## **End of Assumptions**

Simulation started on 12/2/98 at 18:12:51 Simulation stopped on 12/2/98 at 18:25:42