# Locker-Mungaroo/Barrow, Assessment Unit 39480201 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]

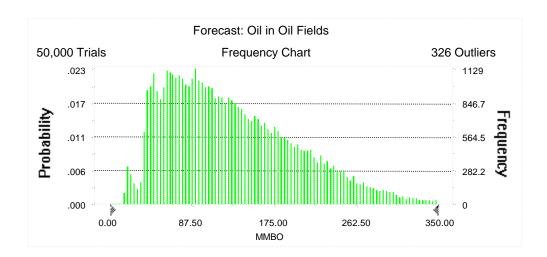
Field	MFS	FS Prob.	Undiscovered Resources							Largest Undiscovered Field								
Type			Oil (MMBO)			Gas (BCFG)			NGL (MMBNGL)			(MMBO or BCFG)						
. )   0		(0-1)	F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean
	4.5		4.4	440	205	400	4.5	40	404			_				40		
Oil Fields	15	1.00	41	119	265	132	15	48	124	55	1	3	8	3	22	40	98	47
Gas Fields	90	1.00					1,396	6,931	19,623	8,275	58	297	903	365	355	1,646	7,736	2,475
Total		1.00	41	119	265	132	1,411	6,979	19,747	8,331	59	300	911	368				

#### Forecast: Oil in Oil Fields

#### Summary:

Display range is from 0.00 to 350.00 MMBO Entire range is from 15.33 to 549.16 MMBO After 50,000 trials, the standard error of the mean is 0.32

Statistics:	<u>Value</u>
Trials	50000
Mean	131.82
Median	118.86
Mode	
Standard Deviation	71.40
Variance	5,098.24
Skewness	0.83
Kurtosis	3.46
Coefficient of Variability	0.54
Range Minimum	15.33
Range Maximum	549.16
Range Width	533.83
Mean Standard Error	0.32



Forecast: Oil in Oil Fields (cont'd)

#### Percentiles:

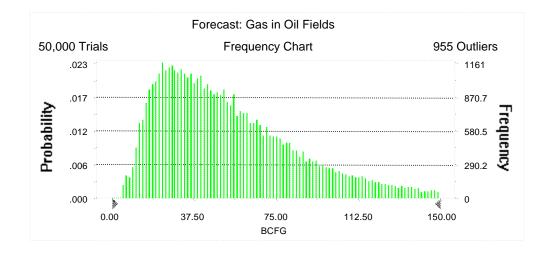
<u>Percentile</u>	MMBC
100%	15.33
95%	41.26
90%	49.79
85%	59.17
80%	67.16
75%	75.26
70%	83.66
65%	92.07
60%	100.43
55%	109.23
50%	118.86
45%	128.77
40%	139.08
35%	150.68
30%	163.08
25%	176.71
20%	191.88
15%	210.14
10%	232.03
5%	264.64
0%	549.16

#### Forecast: Gas in Oil Fields

#### Summary:

Display range is from 0.00 to 150.00 BCFG Entire range is from 4.07 to 338.18 BCFG After 50,000 trials, the standard error of the mean is 0.16

Statistics:	<u>Value</u>
Trials	50000
Mean	55.49
Median	47.74
Mode	
Standard Deviation	34.78
Variance	1,209.84
Skewness	1.29
Kurtosis	5.24
Coefficient of Variability	0.63
Range Minimum	4.07
Range Maximum	338.18
Range Width	334.11
Mean Standard Error	0.16



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

# Percentiles:

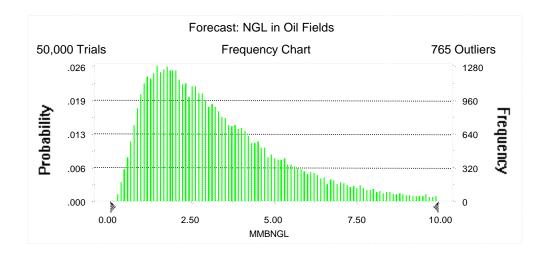
<u>Percentile</u>	<u>BCFG</u>
100%	4.07
95%	14.91
90%	19.11
85%	22.68
80%	26.02
75%	29.39
70%	32.80
65%	36.30
60%	39.98
55%	43.74
50%	47.74
45%	51.92
40%	56.35
35%	61.34
30%	66.86
25%	73.15
20%	80.53
15%	89.93
10%	102.85
5%	123.75
0%	338.18

#### Forecast: NGL in Oil Fields

#### Summary:

Display range is from 0.00 to 10.00 MMBNGL Entire range is from 0.16 to 26.03 MMBNGL After 50,000 trials, the standard error of the mean is 0.01

Statistics:	<u>Value</u>
Trials	50000
Mean	3.33
Median	2.79
Mode	
Standard Deviation	2.23
Variance	4.98
Skewness	1.50
Kurtosis	6.36
Coefficient of Variability	0.67
Range Minimum	0.16
Range Maximum	26.03
Range Width	25.87
Mean Standard Error	0.01



Forecast: NGL in Oil Fields (cont'd)

#### Percentiles:

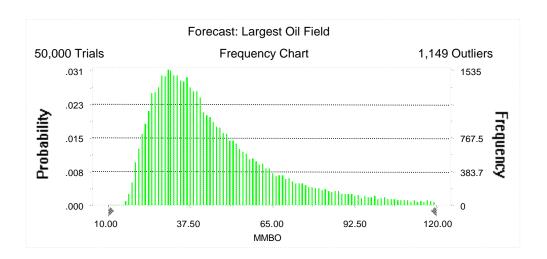
<u>Percentile</u>	MMBNGL
100%	0.16
95%	0.83
90%	1.08
85%	1.29
80%	1.49
75%	1.69
70%	1.89
65%	2.10
60%	2.32
55%	2.55
50%	2.79
45%	3.04
40%	3.32
35%	3.63
30%	3.99
25%	4.37
20%	4.85
15%	5.47
10%	6.30
5%	7.71
0%	26.03

# Forecast: Largest Oil Field

#### Summary:

Display range is from 10.00 to 120.00 MMBO Entire range is from 15.33 to 199.43 MMBO After 50,000 trials, the standard error of the mean is 0.11

Statistics:	<u>Value</u>
Trials	50000
Mean	47.48
Median	40.42
Mode	
Standard Deviation	25.12
Variance	631.08
Skewness	2.03
Kurtosis	8.62
Coefficient of Variability	0.53
Range Minimum	15.33
Range Maximum	199.43
Range Width	184.10
Mean Standard Error	0.11



# Forecast: Largest Oil Field (cont'd)

# Percentiles:

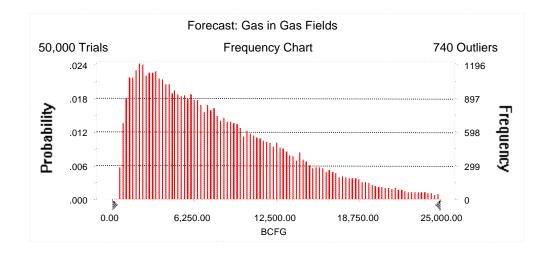
<u>Percentile</u>	MMBO
100%	15.33
95%	22.24
90%	24.83
85%	26.96
80%	28.88
75%	30.73
70%	32.51
65%	34.42
60%	36.35
55%	38.30
50%	40.42
45%	42.76
40%	45.51
35%	48.53
30%	52.03
25%	56.15
20%	61.38
15%	68.30
10%	78.69
5%	97.53
0%	199.43

#### Forecast: Gas in Gas Fields

#### Summary:

Display range is from 0.00 to 25,000.00 BCFG Entire range is from 393.72 to 59,174.89 BCFG After 50,000 trials, the standard error of the mean is 26.50

Statistics:	<u>Value</u>
Trials	50000
Mean	8,275.26
Median	6,930.99
Mode	
Standard Deviation	5,924.90
Variance	35,104,461.89
Skewness	1.20
Kurtosis	4.84
Coefficient of Variability	0.72
Range Minimum	393.72
Range Maximum	59,174.89
Range Width	58,781.16
Mean Standard Error	26.50



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

#### Percentiles:

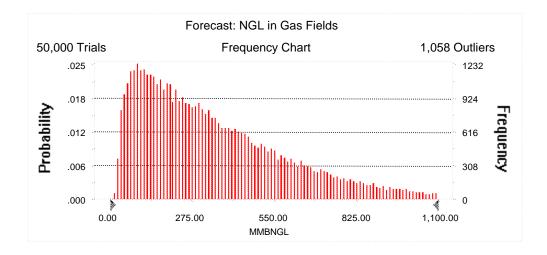
<u>Percentile</u>	<u>BCFG</u>
100%	393.72
95%	1,396.12
90%	1,964.40
85%	2,492.71
80%	3,054.35
75%	3,613.33
70%	4,212.81
65%	4,847.88
60%	5,520.76
55%	6,205.80
50%	6,930.99
45%	7,706.08
40%	8,548.52
35%	9,450.67
30%	10,460.32
25%	11,565.37
20%	12,846.76
15%	14,386.12
10%	16,444.39
5%	19,623.42
0%	59,174.89

#### Forecast: NGL in Gas Fields

#### Summary:

Display range is from 0.00 to 1,100.00 MMBNGL Entire range is from 14.00 to 3,517.93 MMBNGL After 50,000 trials, the standard error of the mean is 1.24

Statistics:	<u>Value</u>
Trials	50000
Mean	364.54
Median	296.83
Mode	
Standard Deviation	276.89
Variance	76,665.70
Skewness	1.44
Kurtosis	6.14
Coefficient of Variability	0.76
Range Minimum	14.00
Range Maximum	3,517.93
Range Width	3,503.93
Mean Standard Error	1.24



Forecast: NGL in Gas Fields (cont'd)

#### Percentiles:

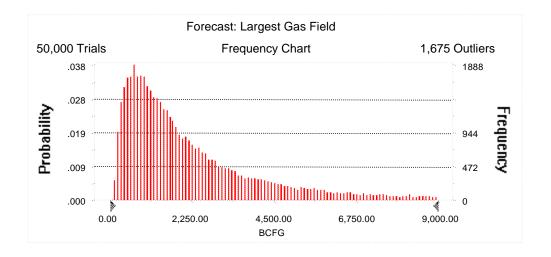
<u>Percentile</u>	<u>MMBNGL</u>
100%	14.00
95%	58.34
90%	82.30
85%	105.10
80%	128.86
75%	152.83
70%	178.72
65%	205.02
60%	234.27
55%	264.58
50%	296.83
45%	330.15
40%	366.36
35%	408.32
30%	452.56
25%	504.50
20%	564.11
15%	640.65
10%	739.51
5%	902.98
0%	3,517.93

# Forecast: Largest Gas Field

#### Summary:

Display range is from 0.00 to 9,000.00 BCFG Entire range is from 101.17 to 14,999.84 BCFG After 50,000 trials, the standard error of the mean is 10.93

Statistics:	<u>Value</u>
Trials	50000
Mean	2,474.64
Median	1,645.67
Mode	
Standard Deviation	2,443.43
Variance	5,970,371.14
Skewness	2.13
Kurtosis	8.17
Coefficient of Variability	0.99
Range Minimum	101.17
Range Maximum	14,999.84
Range Width	14,898.67
Mean Standard Error	10.93



# Forecast: Largest Gas Field (cont'd)

# Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	101.17
95%	354.64
90%	492.33
85%	622.71
80%	745.34
75%	874.59
70%	1,005.43
65%	1,147.87
60%	1,301.91
55%	1,467.29
50%	1,645.67
45%	1,848.90
40%	2,097.87
35%	2,372.30
30%	2,698.57
25%	3,120.14
20%	3,669.23
15%	4,419.28
10%	5,574.11
5%	7,736.43
0%	14,999.84

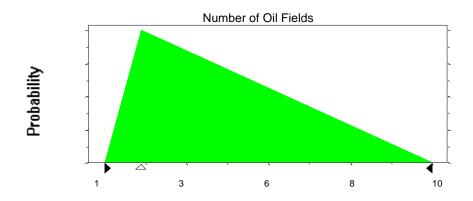
#### **Assumptions**

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

Triangular	distribution	with	parameters:
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Minimum	1
Likeliest	2
Maximum	10

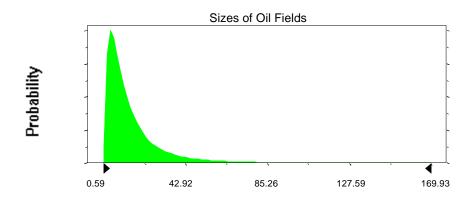
Selected range is from 1 to 10 Mean value in simulation was 4



# **Assumption: Sizes of Oil Fields**

Lognormal distribution with parameters:		Shifted parameters	
Mean	15.62		30.62
Standard Deviation	18.74		18.74
Calastad san as is from 0.00 to 405.00		45.00 to	000 00
Selected range is from 0.00 to 185.00		15.00 to 2	200.00
Mean value in simulation was 15 38		30.38	

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

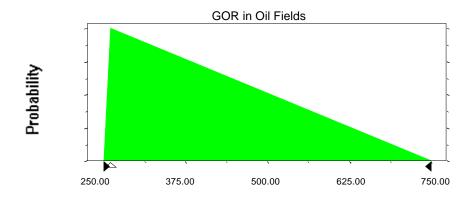


## Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	250.00
Likeliest	260.00
Maximum	750.00

Selected range is from 250.00 to 750.00 Mean value in simulation was 420.84

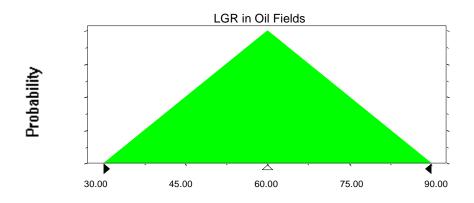


#### Assumption: LGR in Oil Fields

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 59.96



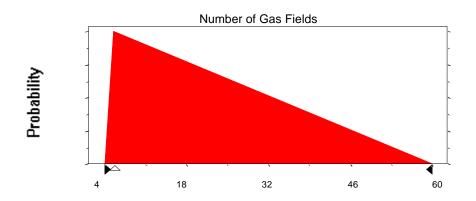
# **Assumption: Number of Gas Fields**

Triangular distribution with parameters:

Minimum	4
Likeliest	6
Maximum	60

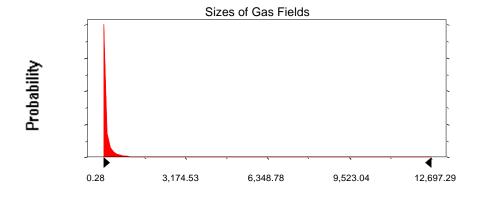
Selected range is from 4 to 60 Mean value in simulation was 23

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



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

Lognormal distribution with parameters:		Shifted parameters
Mean	295.11	385.11
Standard Deviation	1,421.15	1,421.15
Selected range is from 0.00 to 1	90.00 to 15,000.00	
Mean value in simulation was 26	353.11	

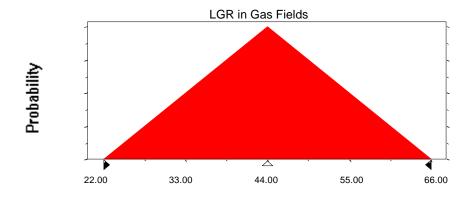


# Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	22.00
Likeliest	44.00
Maximum	66.00

Selected range is from 22.00 to 66.00 Mean value in simulation was 44.02



# End of Assumptions

Simulation started on 12/8/98 at 16:43:26 Simulation stopped on 12/8/98 at 17:05:33