## Petrel, Assessment Unit 39100201 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]

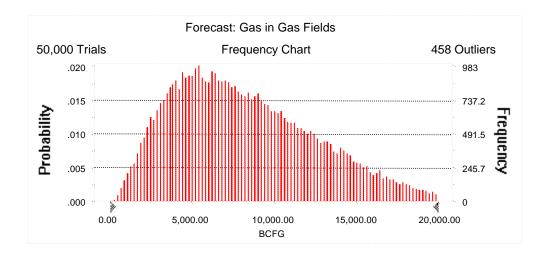
Field			Undiscovered Resources								Largest Undiscovered Field							
Type	MFS	Prob.		Oil (N	MBO)			Gas (E	BCFG)			NGL (MI	MBNGL)			(MMBO	or BCFG)	
. 7 -		(0-1)	F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean
	4.0			_	_											Ī	I	
Oil Fields	10	1.00	0	0	0	0	0	U	0	0	U	U	U	0	NA	NA	NA	NA
Gas Fields	60	1.00					2,284	7,671	16,498	8,328	93	328	770	367	542	1,343	3,375	1,560
				_	_													
Total		1.00	0	0	0	0	2,284	7,671	16,498	8,328	93	328	770	367				

#### Forecast: Gas in Gas Fields

#### Summary:

Display range is from 0.00 to 20,000.00 BCFG Entire range is from 208.26 to 28,912.65 BCFG After 50,000 trials, the standard error of the mean is 19.71

Statistics:	<u>Value</u>
Trials	50000
Mean	8,327.70
Median	7,671.06
Mode	
Standard Deviation	4,406.77
Variance	19,419,663.76
Skewness	0.63
Kurtosis	2.94
Coefficient of Variability	0.53
Range Minimum	208.26
Range Maximum	28,912.65
Range Width	28,704.39
Mean Standard Error	19.71



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

## Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	208.26
95%	2,283.94
90%	3,082.92
85%	3,741.04
80%	4,331.69
75%	4,891.07
70%	5,416.81
65%	5,966.08
60%	6,526.15
55%	7,080.09
50%	7,671.06
45%	8,295.83
40%	8,949.82
35%	9,625.64
30%	10,379.58
25%	11,213.33
20%	12,163.49
15%	13,230.99
10%	14,541.10
5%	16,497.57
0%	28,912.65

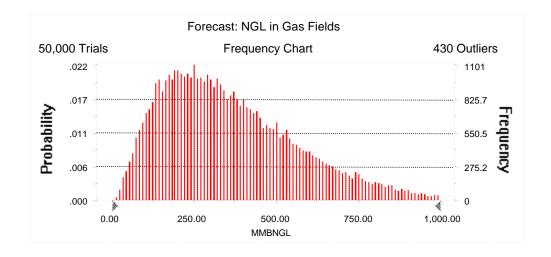
End of Forecast

#### Forecast: NGL in Gas Fields

#### Summary:

Display range is from 0.00 to 1,000.00 MMBNGL Entire range is from 7.16 to 1,684.32 MMBNGL After 50,000 trials, the standard error of the mean is 0.95

Statistics:	<u>Value</u>
Trials	50000
Mean	366.55
Median	328.30
Mode	
Standard Deviation	211.96
Variance	44,928.02
Skewness	0.92
Kurtosis	3.82
Coefficient of Variability	0.58
Range Minimum	7.16
Range Maximum	1,684.32
Range Width	1,677.16
Mean Standard Error	0.95



Forecast: NGL in Gas Fields (cont'd)

# Percentiles:

<u>Percentile</u>	MMBNGL
100%	7.16
95%	93.36
90%	127.56
85%	153.62
80%	179.86
75%	203.94
70%	228.23
65%	252.61
60%	276.87
55%	302.11
50%	328.30
45%	355.93
40%	384.97
35%	416.36
30%	450.89
25%	491.35
20%	535.54
15%	589.64
10%	660.94
5%	770.13
0%	1,684.32

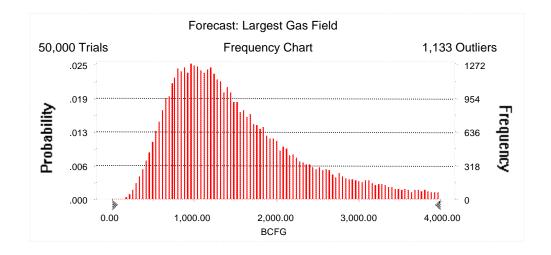
End of Forecast

## Forecast: Largest Gas Field

#### Summary:

Display range is from 0.00 to 4,000.00 BCFG Entire range is from 121.96 to 4,999.28 BCFG After 50,000 trials, the standard error of the mean is 3.92

Statistics:	<u>Value</u>
Trials	50000
Mean	1,559.83
Median	1,343.06
Mode	
Standard Deviation	876.91
Variance	768,968.64
Skewness	1.27
Kurtosis	4.60
Coefficient of Variability	0.56
Range Minimum	121.96
Range Maximum	4,999.28
Range Width	4,877.33
Mean Standard Error	3.92



# Forecast: Largest Gas Field (cont'd)

## Percentiles:

Doroontilo	DCEC
Percentile 4000/	BCFG
100%	121.96
95%	541.85
90%	665.71
85%	764.12
80%	847.60
75%	929.67
70%	1,010.43
65%	1,091.19
60%	1,174.66
55%	1,256.52
50%	1,343.06
45%	1,439.65
40%	1,543.99
35%	1,666.26
30%	1,800.38
25%	1,959.55
20%	2,153.61
15%	2,416.67
10%	2,786.54
5%	3,374.89
0%	4,999.28
	·

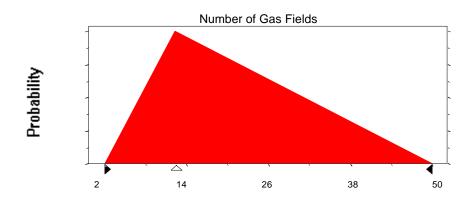
End of Forecast

### **Assumptions**

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

Triangular distribution with parameters:	
Minimum	2
Likeliest	13
Maximum	50

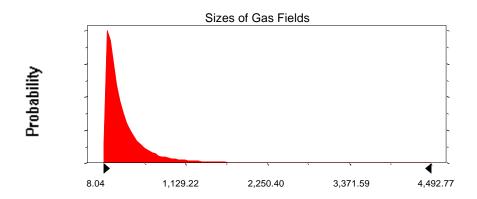
Selected range is from 2 to 50 Mean value in simulation was 22



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

Lognormal distribution with para	Shifted parameters	
Mean	331.26	391.26
Standard Deviation	473.10	473.1
Selected range is from 0.00 to 4,	60.00 to 5,000.00	
Mean value in simulation was 32	384.09	

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

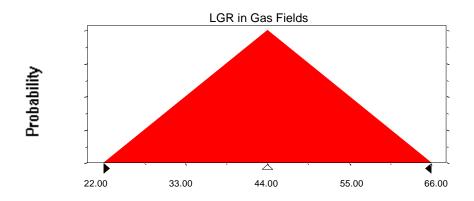


## Assumption: LGR in Gas Fields

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 44.00



#### **End of Assumptions**

Simulation started on 4/26/99 at 15:44:21 Simulation stopped on 4/26/99 at 16:02:25