# Khuff Carbonates in Salt Structures, Assessment Unit 20190301 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							
Field Type MFS		Prob.	Oil (MMBO)			Gas (BCFG)			NGL (MMBNGL)			(MMBO or BCFG)						
. , , , ,		(0-1)	F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean
Oil Fields	10		0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA
Gas Fields		1.00					6,756	21,508	44,074	22,999	275	920	2,062	1,012	1,172	3,608	10,833	4,446
Total		1.00	0	0	0	0	6,756	21,508	44,074	22,999	275	920	2,062	1,012				

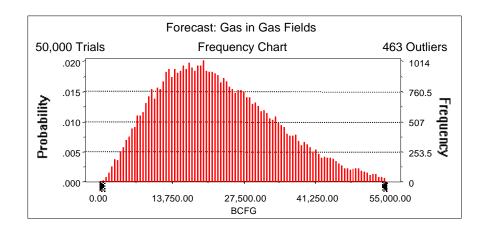
#### Forecast: Gas in Gas Fields

### Summary:

Display range is from 0.00 to 55,000.00 BCFG Entire range is from 547.46 to 85,017.42 BCFG

After 50,000 trials, the standard error of the mean is 51.47

Statistics: Trials	<u>Value</u> 50000
Mean	22,999.21
Median	21,507.87
Mode	
Standard Deviation	11,508.60
Variance	132,447,781.91
Skewness	0.65
Kurtosis	3.24
Coefficient of Variability	0.50
Range Minimum	547.46
Range Maximum	85,017.42
Range Width	84,469.97
Mean Standard Error	51.47



Forecast: Gas in Gas Fields (cont'd)

Percentiles:

**BCFG** 547.46 6,755.72 9,212.32 11,096.66 12,790.75 14,296.79 15,779.84 17,213.09 18,649.22 20,049.12 21,507.87 23,033.07 24,652.58 26,421.74 28,227.53 30,269.78 32,576.99 35,248.33 38,768.10 44,074.23 85,017.42

End of Forecast

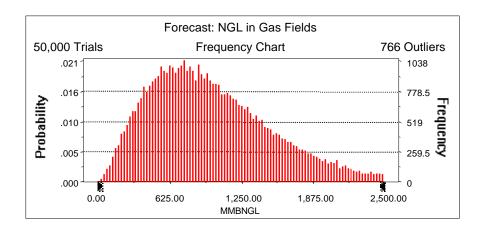
#### Forecast: NGL in Gas Fields

### Summary:

Display range is from 0.00 to 2,500.00 MMBNGL Entire range is from 26.54 to 4,793.95 MMBNGL

After 50,000 trials, the standard error of the mean is 2.48

Statistics: Trials Mean Median	<u>Value</u> 50000 1,011.67 919.55
Mode	
Standard Deviation	555.64
Variance	308,735.46
Skewness	0.91
Kurtosis	4.00
Coefficient of Variability	0.55
Range Minimum	26.54
Range Maximum	4,793.95
Range Width	4,767.41
Mean Standard Error	2.48



Forecast: NGL in Gas Fields (cont'd)

Percentiles:

Percentile	MMBNGL
100%	26.54
95%	274.98
90%	377.58
85%	457.67
80%	530.50
75%	595.17
70%	660.01
65%	725.50
60%	787.44
55%	852.92
50%	919.55
45%	989.57
40%	1,063.40
35%	1,144.87
30%	1,233.30
25%	1,331.99
20%	1,446.13
15%	1,585.83
10%	1,770.54
5%	2,061.54
0%	4,793.95

End of Forecast

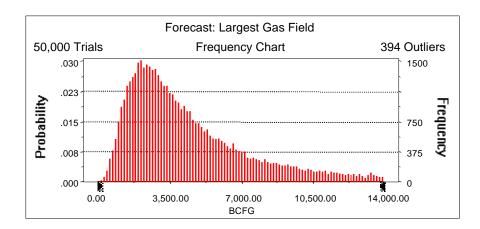
## Forecast: Largest Gas Field

### Summary:

Display range is from 0.00 to 14,000.00 BCFG Entire range is from 141.40 to 14,999.02 BCFG

After 50,000 trials, the standard error of the mean is 13.22

Statistics: Trials Mean	<u>Value</u> 50000 4,446.05
Median Mode	3,608.07
Standard Deviation	2,957.03
Variance Skewness	8,744,049.03 1.26
Kurtosis	4.21
Coefficient of Variability	0.67
Range Minimum	141.40
Range Maximum	14,999.02
Range Width	14,857.62
Mean Standard Error	13.22



Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>
100%
95%
90%
85%
80%
00,0
75%
70%
65%
60%
55%
50%
0070
45%
40%
35%
30%
25%
20%
_0,0
15%
10%
5%
0%
0,0

**BCFG** 141.40 1,171.55 1,506.19 1,785.91 2,039.62 2,275.96 2,518.00 2,765.78 3,018.84 3,305.25 3,608.07 3,941.09 4,318.68 4,733.00 5,221.18 5,820.57 6,545.87 7,449.91 8,796.65 10,832.75 14,999.02

End of Forecast

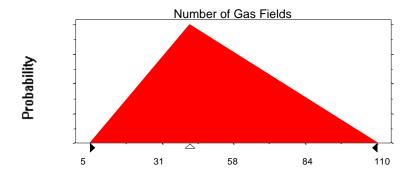
## **Assumptions**

## Assumption: Number of Gas Fields

Triangular distribution with parameters:

Minimum	5
Likeliest	41
Maximum	110

Selected range is from 5 to 110 Mean value in simulation was 52

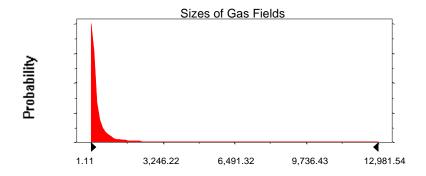


### **Assumption: Sizes of Gas Fields**

Lognormal distribution with pa	Shifted parameters	
Mean	405.96	465.96
Standard Deviation	1,312.02	1,312.02

Selected range is from 0.00 to 14,940.00 60.00 to 15,000.00 Mean value in simulation was 372.84 432.84

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

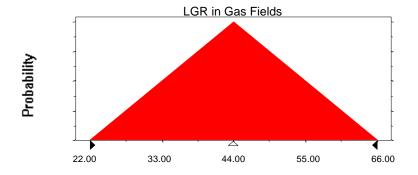


## Assumption: LGR in Gas Fields

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 43.99



# End of Assumptions

Simulation started on 12/30/99 at 10:42:20 Simulation stopped on 12/30/99 at 11:10:31