# Exshaw-Rundle Gas, Assessment Unit 52430301 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]

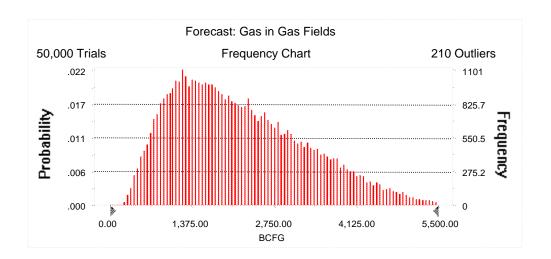
| Field      |     | FS Prob. | Undiscovered Resources |     |    |            |     |       |              |       | Largest Undiscovered Field |                |    |      |     |     |     |      |
|------------|-----|----------|------------------------|-----|----|------------|-----|-------|--------------|-------|----------------------------|----------------|----|------|-----|-----|-----|------|
| Type       | MFS |          | 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                      | 0   | 0  | 0          | 0   | 0     | 0            | 0     | 0                          | 0              | 0  | 0    | NA  | NA  | NA  | NA   |
| Gas Fields | 3   | 1.00     |                        |     |    |            | 693 | 2,013 | 4,281        | 2,197 | 13                         | 39             | 91 | 44   | 88  | 251 | 619 | 288  |
| Total      |     | 1.00     | 0                      | 0   | 0  | 0          | 693 | 2,013 | 4,281        | 2,197 | 13                         | 39             | 91 | 44   |     |     |     |      |

#### Forecast: Gas in Gas Fields

#### Summary:

Display range is from 0.00 to 5,500.00 BCFG Entire range is from 174.49 to 7,574.68 BCFG After 50,000 trials, the standard error of the mean is 5.02

| Statistics:                | <u>Value</u> |
|----------------------------|--------------|
| Trials                     | 50000        |
| Mean                       | 2,197.30     |
| Median                     | 2,013.02     |
| Mode                       |              |
| Standard Deviation         | 1,122.45     |
| Variance                   | 1,259,886.67 |
| Skewness                   | 0.65         |
| Kurtosis                   | 2.88         |
| Coefficient of Variability | 0.51         |
| Range Minimum              | 174.49       |
| Range Maximum              | 7,574.68     |
| Range Width                | 7,400.19     |
| Mean Standard Error        | 5.02         |



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

# Percentiles:

| <u>Percentile</u> | <u>BCFG</u> |
|-------------------|-------------|
| 100%              | 174.49      |
| 95%               | 692.75      |
| 90%               | 879.29      |
| 85%               | 1,032.68    |
| 80%               | 1,172.85    |
| 75%               | 1,300.90    |
| 70%               | 1,439.85    |
| 65%               | 1,577.00    |
| 60%               | 1,714.73    |
| 55%               | 1,859.34    |
| 50%               | 2,013.02    |
| 45%               | 2,176.44    |
| 40%               | 2,345.10    |
| 35%               | 2,528.08    |
| 30%               | 2,720.92    |
| 25%               | 2,939.03    |
| 20%               | 3,184.78    |
| 15%               | 3,465.34    |
| 10%               | 3,806.75    |
| 5%                | 4,280.94    |
| 0%                | 7,574.68    |
|                   |             |

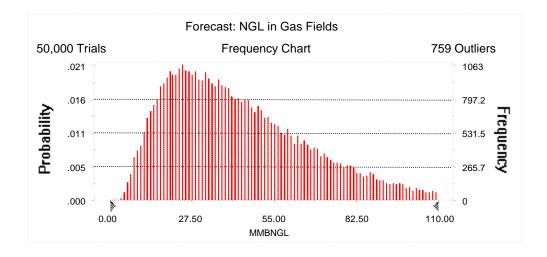
**End of Forecast** 

#### Forecast: NGL in Gas Fields

#### Summary:

Display range is from 0.00 to 110.00 MMBNGL Entire range is from 2.43 to 181.45 MMBNGL After 50,000 trials, the standard error of the mean is 0.11

| Statistics:                | <u>Value</u> |
|----------------------------|--------------|
| Trials                     | 50000        |
| Mean                       | 43.96        |
| Median                     | 39.17        |
| Mode                       |              |
| Standard Deviation         | 24.66        |
| Variance                   | 608.05       |
| Skewness                   | 0.93         |
| Kurtosis                   | 3.74         |
| Coefficient of Variability | 0.56         |
| Range Minimum              | 2.43         |
| Range Maximum              | 181.45       |
| Range Width                | 179.02       |
| Mean Standard Error        | 0.11         |



Forecast: NGL in Gas Fields (cont'd)

# Percentiles:

| <u>Percentile</u> | MMBNGL |
|-------------------|--------|
| 100%              | 2.43   |
| 95%               | 12.70  |
| 90%               | 16.48  |
| 85%               | 19.48  |
| 80%               | 22.23  |
| 75%               | 24.91  |
| 70%               | 27.60  |
| 65%               | 30.40  |
| 60%               | 33.23  |
| 55%               | 36.19  |
| 50%               | 39.17  |
| 45%               | 42.44  |
| 40%               | 45.94  |
| 35%               | 49.63  |
| 30%               | 53.63  |
| 25%               | 58.33  |
| 20%               | 63.75  |
| 15%               | 70.11  |
| 10%               | 78.63  |
| 5%                | 91.31  |
| 0%                | 181.45 |
|                   |        |

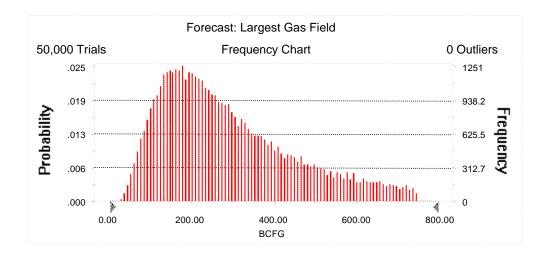
**End of Forecast** 

# Forecast: Largest Gas Field

#### Summary:

Display range is from 0.00 to 800.00 BCFG Entire range is from 19.96 to 749.95 BCFG After 50,000 trials, the standard error of the mean is 0.72

| Statistics:                | <u>Value</u> |
|----------------------------|--------------|
| Trials                     | 50000        |
| Mean                       | 288.14       |
| Median                     | 251.35       |
| Mode                       |              |
| Standard Deviation         | 160.66       |
| Variance                   | 25,812.92    |
| Skewness                   | 0.83         |
| Kurtosis                   | 2.99         |
| Coefficient of Variability | 0.56         |
| Range Minimum              | 19.96        |
| Range Maximum              | 749.95       |
| Range Width                | 729.99       |
| Mean Standard Error        | 0.72         |



# Forecast: Largest Gas Field (cont'd)

# Percentiles:

| Doroontilo          | BCFG   |
|---------------------|--------|
| Percentile<br>1000/ |        |
| 100%                | 19.96  |
| 95%                 | 87.54  |
| 90%                 | 111.04 |
| 85%                 | 130.25 |
| 80%                 | 147.45 |
| 75%                 | 163.85 |
| 70%                 | 180.08 |
| 65%                 | 197.17 |
| 60%                 | 214.30 |
| 55%                 | 231.98 |
| 50%                 | 251.35 |
| 45%                 | 272.33 |
| 40%                 | 294.57 |
| 35%                 | 320.38 |
| 30%                 | 348.53 |
| 25%                 | 381.76 |
| 20%                 | 421.27 |
| 15%                 | 470.25 |
| 10%                 | 532.78 |
| 5%                  | 619.35 |
| 0%                  | 749.95 |
|                     |        |

**End of Forecast** 

## **Assumptions**

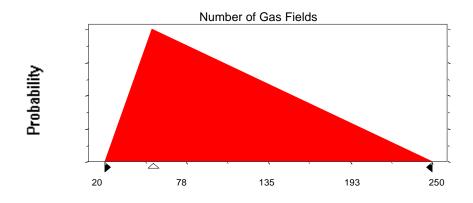
## **Assumption: Number of Gas Fields**

Triangular distribution with parameters:

Minimum

| Minimum   | 20  |
|-----------|-----|
| Likeliest | 54  |
| Maximum   | 250 |

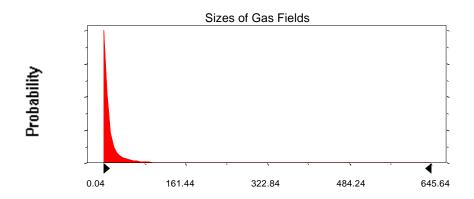
Selected range is from 20 to 250 Mean value in simulation was 108



# **Assumption: Sizes of Gas Fields**

| Lognormal distribution with parameters | :<br>: | Shifted parameters |
|--|--------|--------------------|
| Mean                                   | 18.58  | 21.58              |
| Standard Deviation                     | 66.49  | 66.49              |
| Selected range is from 0.00 to 747.00  |        | 3.00 to 750.00     |
| Mean value in simulation was 17.13     | 20.13  |                    |

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

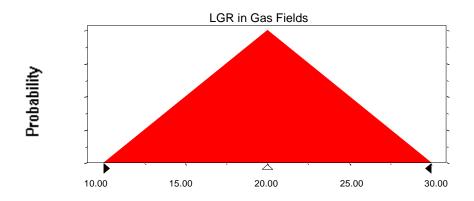


# Assumption: LGR in Gas Fields

Triangular distribution with parameters:

| Minimum   | 10.00 |
|-----------|-------|
| Likeliest | 20.00 |
| Maximum   | 30.00 |

Selected range is from 10.00 to 30.00 Mean value in simulation was 20.00



#### **End of Assumptions**

Simulation started on 8/11/99 at 9:42:60 Simulation stopped on 8/11/99 at 10:40:08